

ГОСТ 4401—81

МЕЖГОСУДАРСТВЕННЫЙ СТАНДАРТ

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**АТМОСФЕРА СТАНДАРТНАЯ**  
**ПАРАМЕТРЫ**

Издание официальное

БЗ 11—2003

ИПК ИЗДАТЕЛЬСТВО СТАНДАРТОВ  
Москва

## АТМОСФЕРА СТАНДАРТНАЯ

## Параметры

Standard atmosphere.  
ParametersГОСТ  
4401—81МКС 07.040  
ОКСТУ 7502

Дата введения 01.07.82

Настоящий стандарт устанавливает числовые значения основных параметров атмосферы для высот от минус 2000 до 1200000 м. Данные табл. 1 — 4 устанавливают средние значения параметров атмосферы для широты  $45^{\circ}32'33''$ , соответствующие среднему уровню солнечной активности.

Стандарт предназначен для использования при расчетах и проектировании летательных аппаратов, при обработке результатов геофизических и метеорологических наблюдений и для приведения результатов испытаний летательных аппаратов и их элементов к одинаковым условиям и не предназначен для баллистических расчетов искусственных спутников Земли.

Стандарт соответствует МС ИСО 2533.

(Измененная редакция, Изм. № 1).

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Температура, давление, плотность воздуха и ускорение свободного падения  
От -2000 до -50 м

| Геометриче-<br>ская высота<br>А, м | Величины в функции геометрической высоты |             |        |            |            |                       |
|------------------------------------|------------------------------------------|-------------|--------|------------|------------|-----------------------|
|                                    | геометри-<br>ческая<br>высота<br>Н, м    | температура |        | давление р |            | плотность<br>ρ, кг/м³ |
|                                    |                                          | Т, К        | t, °C  | Па         | мм рт. ст. |                       |
| -2000                              | -2001                                    | 301,154     | 28,004 | 1,27783+5  | 9,58450+2  | 1,47816 0             |
| -1950                              | -1951                                    | 300,829     | 27,679 | 1,27059    | 9,53023    | 1,47138               |
| -1900                              | -1901                                    | 300,504     | 27,354 | 1,26339    | 9,47621    | 1,46462               |
| -1850                              | -1851                                    | 300,179     | 27,029 | 1,25622    | 9,42243    | 1,45789               |
| -1800                              | -1801                                    | 299,853     | 26,703 | 1,24908    | 9,36891    | 1,45118               |
| -1750                              | -1750                                    | 299,528     | 26,378 | 1,24198    | 9,31563    | 1,44449               |
| -1700                              | -1700                                    | 299,203     | 26,053 | 1,23491    | 9,26260    | 1,43783               |
| -1650                              | -1650                                    | 298,878     | 25,728 | 1,22787    | 9,20981    | 1,43119               |
| -1600                              | -1600                                    | 298,553     | 25,403 | 1,22087    | 9,15727    | 1,42458               |
| -1550                              | -1550                                    | 298,227     | 25,077 | 1,21390    | 9,10497    | 1,41799               |
| -1500                              | -1500                                    | 297,902     | 24,752 | 1,20696+5  | 9,05292+2  | 1,41142 0             |
| -1450                              | -1450                                    | 297,577     | 24,427 | 1,20005    | 9,00111    | 1,40487               |
| -1400                              | -1400                                    | 297,252     | 24,102 | 1,19317    | 8,94953    | 1,39835               |
| -1350                              | -1350                                    | 296,927     | 23,777 | 1,18633    | 8,89820    | 1,39185               |
| -1300                              | -1300                                    | 296,602     | 23,452 | 1,17952    | 8,84711    | 1,38538               |
| -1250                              | -1250                                    | 296,277     | 23,127 | 1,17274    | 8,79626    | 1,37893               |
| -1200                              | -1200                                    | 295,951     | 22,801 | 1,16599    | 8,74564    | 1,37250               |
| -1150                              | -1150                                    | 295,626     | 22,476 | 1,15927    | 8,69526    | 1,36609               |
| -1100                              | -1100                                    | 295,301     | 22,151 | 1,15259    | 8,64512    | 1,35971               |
| -1050                              | -1050                                    | 294,976     | 21,826 | 1,14593    | 8,59521    | 1,35335               |
| -1000                              | -1000                                    | 294,651     | 21,501 | 1,13931+5  | 8,54554+2  | 1,34702 0             |
| -950                               | -950                                     | 294,326     | 21,176 | 1,13272    | 8,49610    | 1,34070               |
| -900                               | -900                                     | 294,001     | 20,851 | 1,12616    | 8,44689    | 1,33441               |
| -850                               | -850                                     | 293,676     | 20,526 | 1,11963    | 8,39792    | 1,32814               |
| -800                               | -800                                     | 293,351     | 20,201 | 1,11313    | 8,34917    | 1,32190               |
| -750                               | -750                                     | 293,026     | 19,876 | 1,10666    | 8,30066    | 1,31567               |
| -700                               | -700                                     | 292,701     | 19,551 | 1,10023    | 8,25238    | 1,30947               |
| -650                               | -650                                     | 292,375     | 19,225 | 1,09382    | 8,20432    | 1,30330               |
| -600                               | -600                                     | 292,050     | 18,900 | 1,08744    | 8,15649    | 1,29714               |
| -550                               | -550                                     | 291,725     | 18,575 | 1,08110    | 8,10889    | 1,29101               |
| -500                               | -500                                     | 291,400     | 18,250 | 1,07478+5  | 8,06151+2  | 1,28490 0             |
| -450                               | -450                                     | 291,075     | 17,925 | 1,06849    | 8,01436    | 1,27881               |
| -400                               | -400                                     | 290,750     | 17,600 | 1,06224    | 7,96744    | 1,27274               |
| -350                               | -350                                     | 290,425     | 17,275 | 1,05601    | 7,92073    | 1,26670               |
| -300                               | -300                                     | 290,100     | 16,950 | 1,04981    | 7,87425    | 1,26067               |
| -250                               | -250                                     | 289,775     | 16,625 | 1,04365    | 7,82799    | 1,25467               |
| -200                               | -200                                     | 289,450     | 16,300 | 1,03751    | 7,78196    | 1,24869               |
| -150                               | -150                                     | 289,125     | 15,975 | 1,03140    | 7,73614    | 1,24274               |
| -100                               | -100                                     | 288,800     | 15,650 | 1,02532    | 7,69054    | 1,23680               |
| -50                                | -50                                      | 288,475     | 15,325 | 1,01927    | 7,64516    | 1,23089               |

в функции геометрической и геопотенциальной высот

Таблица 1

| Геопотенциальная<br>высота $H$ , м | Геометрическая<br>высота $h$ , м | Величины в функции геопотенциальной высоты |          |              |            |                                         |                                                                |
|------------------------------------|----------------------------------|--------------------------------------------|----------|--------------|------------|-----------------------------------------|----------------------------------------------------------------|
|                                    |                                  | температура                                |          | давление $p$ |            | плотность<br>$\rho$ , кг/м <sup>3</sup> | ускорение<br>свободно-<br>го падения<br>$g$ , м/с <sup>2</sup> |
|                                    |                                  | $T$ , К                                    | $t$ , °С | Па           | мм рт. ст. |                                         |                                                                |
| —2000                              | —1999                            | 301,150                                    | 28,000   | 1,27774+5    | 9,58382+2  | 1,47808 0                               | 9,8128                                                         |
| —1950                              | —1949                            | 300,825                                    | 27,675   | 1,27051      | 9,52958    | 1,47130                                 | 9,8127                                                         |
| —1900                              | —1899                            | 300,500                                    | 27,350   | 1,26331      | 9,47559    | 1,46455                                 | 9,8125                                                         |
| —1850                              | —1849                            | 300,175                                    | 27,025   | 1,25614      | 9,42186    | 1,45782                                 | 9,8124                                                         |
| —1800                              | —1799                            | 299,850                                    | 26,700   | 1,24901      | 9,36836    | 1,45111                                 | 9,8122                                                         |
| —1750                              | —1750                            | 299,525                                    | 26,375   | 1,24191      | 9,31512    | 1,44443                                 | 9,8121                                                         |
| —1700                              | —1700                            | 299,200                                    | 26,050   | 1,23485      | 9,26212    | 1,43777                                 | 9,8119                                                         |
| —1650                              | —1650                            | 298,875                                    | 25,725   | 1,22781      | 9,20936    | 1,43114                                 | 9,8117                                                         |
| —1600                              | —1600                            | 298,550                                    | 25,400   | 1,22081      | 9,15685    | 1,42452                                 | 9,8116                                                         |
| —1550                              | —1550                            | 298,225                                    | 25,075   | 1,21384      | 9,10458    | 1,41794                                 | 9,8114                                                         |
| —1500                              | —1500                            | 297,900                                    | 24,750   | 1,20691+5    | 9,05255+2  | 1,41137 0                               | 9,8113                                                         |
| —1450                              | —1450                            | 297,575                                    | 24,425   | 1,20000      | 9,00076    | 1,40483                                 | 9,8111                                                         |
| —1400                              | —1400                            | 297,250                                    | 24,100   | 1,19313      | 8,94922    | 1,39831                                 | 9,8110                                                         |
| —1350                              | —1350                            | 296,925                                    | 23,775   | 1,18629      | 8,89791    | 1,39182                                 | 9,8108                                                         |
| —1300                              | —1300                            | 296,600                                    | 23,450   | 1,17948      | 8,84684    | 1,38535                                 | 9,8107                                                         |
| —1250                              | —1250                            | 296,275                                    | 23,125   | 1,17270      | 8,79601    | 1,37890                                 | 9,8105                                                         |
| —1200                              | —1200                            | 295,950                                    | 22,800   | 1,16596      | 8,74541    | 1,37247                                 | 9,8104                                                         |
| —1150                              | —1150                            | 295,625                                    | 22,475   | 1,15924      | 8,69505    | 1,36607                                 | 9,8102                                                         |
| —1100                              | —1100                            | 295,300                                    | 22,150   | 1,15256      | 8,64493    | 1,35969                                 | 9,8100                                                         |
| —1050                              | —1050                            | 294,975                                    | 21,825   | 1,14591      | 8,59504    | 1,35333                                 | 9,8099                                                         |
| —1000                              | —1000                            | 294,650                                    | 21,500   | 1,13929+5    | 8,54538+2  | 1,34700 0                               | 9,8097                                                         |
| —950                               | —950                             | 294,325                                    | 21,175   | 1,13270      | 8,49596    | 1,34068                                 | 9,8096                                                         |
| —900                               | —900                             | 294,000                                    | 20,850   | 1,12614      | 8,44677    | 1,33439                                 | 9,8094                                                         |
| —850                               | —850                             | 293,675                                    | 20,525   | 1,11961      | 8,39781    | 1,32813                                 | 9,8093                                                         |
| —800                               | —800                             | 293,350                                    | 20,200   | 1,11312      | 8,34908    | 1,32188                                 | 9,8091                                                         |
| —750                               | —750                             | 293,025                                    | 19,875   | 1,10665      | 8,30058    | 1,31566                                 | 9,8090                                                         |
| —700                               | —700                             | 292,700                                    | 19,550   | 1,10022      | 8,25230    | 1,30946                                 | 9,8088                                                         |
| —650                               | —650                             | 292,375                                    | 19,225   | 1,09381      | 8,20426    | 1,30329                                 | 9,8087                                                         |
| —600                               | —600                             | 292,050                                    | 18,900   | 1,08744      | 8,15644    | 1,29713                                 | 9,8085                                                         |
| —550                               | —550                             | 291,725                                    | 18,575   | 1,08109      | 8,10884    | 1,29100                                 | 9,8083                                                         |
| —500                               | —500                             | 291,400                                    | 18,250   | 1,07477+5    | 8,06148+2  | 1,28489 0                               | 9,8082                                                         |
| —450                               | —450                             | 291,075                                    | 17,925   | 1,06849      | 8,01433    | 1,27880                                 | 9,8080                                                         |
| —400                               | —400                             | 290,750                                    | 17,600   | 1,06223      | 7,96741    | 1,27274                                 | 9,8079                                                         |
| —350                               | —350                             | 290,425                                    | 17,275   | 1,05601      | 7,92072    | 1,26669                                 | 9,8077                                                         |
| —300                               | —300                             | 290,100                                    | 16,950   | 1,04981      | 7,87424    | 1,26067                                 | 9,8076                                                         |
| —250                               | —250                             | 289,775                                    | 16,625   | 1,04364      | 7,82798    | 1,25467                                 | 9,8074                                                         |
| —200                               | —200                             | 289,450                                    | 16,300   | 1,03751      | 7,78195    | 1,24869                                 | 9,8073                                                         |
| —150                               | —150                             | 289,125                                    | 15,975   | 1,03140      | 7,73613    | 1,24274                                 | 9,8071                                                         |
| —100                               | —100                             | 288,800                                    | 15,650   | 1,02532      | 7,69054    | 1,23680                                 | 9,8070                                                         |
| —50                                | —50                              | 288,475                                    | 15,325   | 1,01927      | 7,64516    | 1,23089                                 | 9,8068                                                         |



От 0 до 1950 м

| Геометричес-<br>кая высота<br>$h$ , м | Величины и функции геометрической высоты   |             |          |              |            |                                         | ускорение<br>свободно-<br>го паде-<br>ния $g$ , м/с <sup>2</sup> |        |
|---------------------------------------|--------------------------------------------|-------------|----------|--------------|------------|-----------------------------------------|------------------------------------------------------------------|--------|
|                                       | геопотен-<br>циальная<br>высота<br>$H$ , м | температура |          | давление $p$ |            | плотность<br>$\rho$ , кг/м <sup>3</sup> |                                                                  |        |
|                                       |                                            | $T$ , К     | $t$ , °C | Па           | мм рт. ст. |                                         |                                                                  |        |
| 0                                     | 0                                          | 288,150     | 15,000   | 1,01325+5    | 7,60000+2  | 1,22500                                 | 0                                                                | 9,8066 |
| 50                                    | 50                                         | 287,825     | 14,675   | 1,00726      | 7,55506    | 1,21913                                 |                                                                  | 9,8065 |
| 100                                   | 100                                        | 287,500     | 14,350   | 1,00129      | 7,51033    | 1,21328                                 |                                                                  | 9,8063 |
| 150                                   | 150                                        | 287,175     | 14,025   | 9,95360+4    | 7,46581    | 1,20746                                 |                                                                  | 9,8062 |
| 200                                   | 200                                        | 286,850     | 13,700   | 9,89454      | 7,42152    | 1,20165                                 |                                                                  | 9,8060 |
| 250                                   | 250                                        | 286,525     | 13,375   | 9,83576      | 7,37743    | 1,19587                                 |                                                                  | 9,8059 |
| 300                                   | 300                                        | 286,200     | 13,050   | 9,77727      | 7,33356    | 1,19011                                 |                                                                  | 9,8057 |
| 350                                   | 350                                        | 285,875     | 12,725   | 9,71907      | 7,28990    | 1,18437                                 |                                                                  | 9,8056 |
| 400                                   | 400                                        | 285,550     | 12,400   | 9,66114      | 7,24645    | 1,17865                                 |                                                                  | 9,8054 |
| 450                                   | 450                                        | 285,225     | 12,075   | 9,60350      | 7,20321    | 1,17295                                 |                                                                  | 9,8053 |
| 500                                   | 500                                        | 284,900     | 11,750   | 9,54613+4    | 7,16019+2  | 1,16727                                 | 0                                                                | 9,8051 |
| 550                                   | 550                                        | 284,575     | 11,425   | 9,48904      | 7,11737    | 1,16162                                 |                                                                  | 9,8050 |
| 600                                   | 600                                        | 284,250     | 11,100   | 9,43223      | 7,07476    | 1,15598                                 |                                                                  | 9,8048 |
| 650                                   | 650                                        | 283,925     | 10,775   | 9,37570      | 7,03236    | 1,15037                                 |                                                                  | 9,8046 |
| 700                                   | 700                                        | 283,601     | 10,451   | 9,31944      | 6,99016    | 1,14478                                 |                                                                  | 9,8045 |
| 750                                   | 750                                        | 283,276     | 10,126   | 9,26346      | 6,94817    | 1,13921                                 |                                                                  | 9,8043 |
| 800                                   | 800                                        | 282,951     | 9,801    | 9,20775      | 6,90638    | 1,13366                                 |                                                                  | 9,8042 |
| 850                                   | 850                                        | 282,626     | 9,476    | 9,15231      | 6,86480    | 1,12813                                 |                                                                  | 9,8040 |
| 900                                   | 900                                        | 282,301     | 9,151    | 9,09715      | 6,82342    | 1,12261                                 |                                                                  | 9,8039 |
| 950                                   | 950                                        | 281,976     | 8,826    | 9,04225      | 6,78225    | 1,11713                                 |                                                                  | 9,8037 |
| 1000                                  | 1000                                       | 281,651     | 8,501    | 8,98763+4    | 6,74128+2  | 1,11166                                 | 0                                                                | 9,8036 |
| 1050                                  | 1050                                       | 281,326     | 8,176    | 8,93327      | 6,70050    | 1,10621                                 |                                                                  | 9,8034 |
| 1100                                  | 1100                                       | 281,001     | 7,851    | 8,87918      | 6,65993    | 1,10079                                 |                                                                  | 9,8033 |
| 1150                                  | 1150                                       | 280,676     | 7,526    | 8,82536      | 6,61956    | 1,09538                                 |                                                                  | 9,8031 |
| 1200                                  | 1200                                       | 280,351     | 7,201    | 8,77180      | 6,57939    | 1,08999                                 |                                                                  | 9,8029 |
| 1250                                  | 1250                                       | 280,027     | 6,877    | 8,71851      | 6,53942    | 1,08463                                 |                                                                  | 9,8028 |
| 1300                                  | 1300                                       | 279,702     | 6,552    | 8,66548      | 6,49964    | 1,07928                                 |                                                                  | 9,8026 |
| 1350                                  | 1350                                       | 279,377     | 6,227    | 8,61271      | 6,46006    | 1,07395                                 |                                                                  | 9,8025 |
| 1400                                  | 1400                                       | 279,052     | 5,902    | 8,56020      | 6,42068    | 1,06865                                 |                                                                  | 9,8023 |
| 1450                                  | 1450                                       | 278,727     | 5,577    | 8,50795      | 6,38149    | 1,06337                                 |                                                                  | 9,8022 |
| 1500                                  | 1500                                       | 278,402     | 5,252    | 8,45597+4    | 6,34250+2  | 1,05810                                 | 0                                                                | 9,8020 |
| 1550                                  | 1550                                       | 278,077     | 4,927    | 8,40424      | 6,30370    | 1,05286                                 |                                                                  | 9,8019 |
| 1600                                  | 1600                                       | 277,753     | 4,603    | 8,35277      | 6,26509    | 1,04764                                 |                                                                  | 9,8017 |
| 1650                                  | 1650                                       | 277,428     | 4,278    | 8,30155      | 6,22668    | 1,04243                                 |                                                                  | 9,8016 |
| 1700                                  | 1700                                       | 277,103     | 3,953    | 8,25059      | 6,18845    | 1,03725                                 |                                                                  | 9,8014 |
| 1750                                  | 1750                                       | 276,778     | 3,628    | 8,19989      | 6,15042    | 1,03208                                 |                                                                  | 9,8013 |
| 1800                                  | 1799                                       | 276,453     | 3,303    | 8,14943      | 6,11258    | 1,02694                                 |                                                                  | 9,8011 |
| 1850                                  | 1849                                       | 276,128     | 2,979    | 8,09923      | 6,07493    | 1,02181                                 |                                                                  | 9,8009 |
| 1900                                  | 1899                                       | 275,804     | 2,654    | 8,04929      | 6,03746    | 1,01671                                 |                                                                  | 9,8008 |
| 1950                                  | 1949                                       | 275,479     | 2,329    | 7,99959      | 6,00019    | 1,01162                                 |                                                                  | 9,8006 |

| Геотерми-<br>ческая вы-<br>сота<br>H, м | геотерми-<br>ческая вы-<br>сота h, м | Величины и функции геотермической высоты |        |            |            |                       |                                                   |        |
|-----------------------------------------|--------------------------------------|------------------------------------------|--------|------------|------------|-----------------------|---------------------------------------------------|--------|
|                                         |                                      | температура                              |        | давление p |            | плотность<br>ρ, кг/м³ | ускорение<br>свободно-<br>го паде-<br>ния g, м/с² |        |
|                                         |                                      | T, K                                     | t, °C  | Па         | мм рт. ст. |                       |                                                   |        |
| 0                                       | 0                                    | 288,150                                  | 15,000 | 1,01325+5  | 7,60000+2  | 1,22500               | 0                                                 | 9,8066 |
| 50                                      | 50                                   | 287,825                                  | 14,675 | 1,00726    | 7,55505    | 1,21913               |                                                   | 9,8065 |
| 100                                     | 100                                  | 287,500                                  | 14,350 | 1,00129    | 7,51033    | 1,21328               |                                                   | 9,8063 |
| 150                                     | 150                                  | 287,175                                  | 14,025 | 9,95359+4  | 7,46581    | 1,20746               |                                                   | 9,8062 |
| 200                                     | 200                                  | 286,850                                  | 13,700 | 9,89453    | 7,42151    | 1,20165               |                                                   | 9,8060 |
| 250                                     | 250                                  | 286,525                                  | 13,375 | 9,83575    | 7,37742    | 1,19587               |                                                   | 9,8059 |
| 300                                     | 300                                  | 286,200                                  | 13,050 | 9,77726    | 7,33355    | 1,19011               |                                                   | 9,8057 |
| 350                                     | 350                                  | 285,875                                  | 12,725 | 9,71904    | 7,28988    | 1,18436               |                                                   | 9,8056 |
| 400                                     | 400                                  | 285,550                                  | 12,400 | 9,66111    | 7,24643    | 1,17864               |                                                   | 9,8054 |
| 450                                     | 450                                  | 285,225                                  | 12,075 | 9,60346    | 7,20319    | 1,17295               |                                                   | 9,8053 |
| 500                                     | 500                                  | 284,900                                  | 11,750 | 9,54608+4  | 7,16015+2  | 1,16727               | 0                                                 | 9,8051 |
| 550                                     | 550                                  | 284,575                                  | 11,425 | 9,48899    | 7,11733    | 1,16161               |                                                   | 9,8050 |
| 600                                     | 600                                  | 284,250                                  | 11,100 | 9,43217    | 7,07471    | 1,15598               |                                                   | 9,8048 |
| 650                                     | 650                                  | 283,925                                  | 10,775 | 9,37562    | 7,03230    | 1,15036               |                                                   | 9,8046 |
| 700                                     | 700                                  | 283,600                                  | 10,450 | 9,31936    | 6,99009    | 1,14477               |                                                   | 9,8045 |
| 750                                     | 750                                  | 283,275                                  | 10,125 | 9,26336    | 6,94809    | 1,13919               |                                                   | 9,8043 |
| 800                                     | 800                                  | 282,950                                  | 9,800  | 9,20764    | 6,90630    | 1,13364               |                                                   | 9,8042 |
| 850                                     | 850                                  | 282,625                                  | 9,475  | 9,15219    | 6,86471    | 1,12811               |                                                   | 9,8040 |
| 900                                     | 900                                  | 282,300                                  | 9,150  | 9,09701    | 6,82332    | 1,12260               |                                                   | 9,8039 |
| 950                                     | 950                                  | 281,975                                  | 8,825  | 9,04210    | 6,78213    | 1,11711               |                                                   | 9,8037 |
| 1000                                    | 1000                                 | 281,650                                  | 8,500  | 8,98746+4  | 6,74115+2  | 1,11164               | 0                                                 | 9,8036 |
| 1050                                    | 1050                                 | 281,325                                  | 8,175  | 8,93308    | 6,70036    | 1,10619               |                                                   | 9,8034 |
| 1100                                    | 1100                                 | 281,000                                  | 7,850  | 8,87898    | 6,65978    | 1,10076               |                                                   | 9,8033 |
| 1150                                    | 1150                                 | 280,675                                  | 7,525  | 8,82513    | 6,61940    | 1,09536               |                                                   | 9,8031 |
| 1200                                    | 1200                                 | 280,350                                  | 7,200  | 8,77156    | 6,57921    | 1,08997               |                                                   | 9,8029 |
| 1250                                    | 1250                                 | 280,025                                  | 6,875  | 8,71824    | 6,53922    | 1,08460               |                                                   | 9,8028 |
| 1300                                    | 1300                                 | 279,700                                  | 6,550  | 8,66519    | 6,49943    | 1,07925               |                                                   | 9,8026 |
| 1350                                    | 1350                                 | 279,375                                  | 6,225  | 8,61241    | 6,45984    | 1,07393               |                                                   | 9,8025 |
| 1400                                    | 1400                                 | 279,050                                  | 5,900  | 8,55988    | 6,42044    | 1,06862               |                                                   | 9,8023 |
| 1450                                    | 1450                                 | 278,725                                  | 5,575  | 8,50761    | 6,38123    | 1,06333               |                                                   | 9,8022 |
| 1500                                    | 1500                                 | 278,400                                  | 5,250  | 8,45560+4  | 6,34222+2  | 1,05807               | 0                                                 | 9,8020 |
| 1550                                    | 1550                                 | 278,075                                  | 4,925  | 8,40385    | 6,30340    | 1,05282               |                                                   | 9,8019 |
| 1600                                    | 1600                                 | 277,750                                  | 4,600  | 8,35235    | 6,26478    | 1,04759               |                                                   | 9,8017 |
| 1650                                    | 1650                                 | 277,425                                  | 4,275  | 8,30111    | 6,22635    | 1,04239               |                                                   | 9,8016 |
| 1700                                    | 1700                                 | 277,100                                  | 3,950  | 8,25013    | 6,18811    | 1,03720               |                                                   | 9,8014 |
| 1750                                    | 1750                                 | 276,775                                  | 3,625  | 8,19940    | 6,15006    | 1,03203               |                                                   | 9,8013 |
| 1800                                    | 1800                                 | 276,450                                  | 3,300  | 8,14892    | 6,11219    | 1,02688               |                                                   | 9,8011 |
| 1850                                    | 1850                                 | 276,125                                  | 2,975  | 8,09870    | 6,07452    | 1,02176               |                                                   | 9,8009 |
| 1900                                    | 1900                                 | 275,800                                  | 2,650  | 8,04872    | 6,03704    | 1,01665               |                                                   | 9,8008 |
| 1950                                    | 1950                                 | 275,475                                  | 2,325  | 7,99900    | 5,99974    | 1,01158               |                                                   | 9,8006 |

От 2000 до 3950 м

| Геометричес-<br>кая высота<br>$H, м$ | геотер-<br>мическая<br>высота<br>$H, м$ | Величины в функции геометрической высоты |               |              |            |                             |                                                    |
|--------------------------------------|-----------------------------------------|------------------------------------------|---------------|--------------|------------|-----------------------------|----------------------------------------------------|
|                                      |                                         | температура                              |               | давление $p$ |            | плотность<br>$\rho, кг/м^3$ | ускорение<br>свободно-<br>го падения<br>$g, м/с^2$ |
|                                      |                                         | $T, K$                                   | $t, ^\circ C$ | Па           | мм рт. ст. |                             |                                                    |
| 2000                                 | 1999                                    | 275,154                                  | 2,004         | 7,95014+4    | 5,96310+2  | 1,00655 0                   | 9,8005                                             |
| 2050                                 | 2049                                    | 274,829                                  | 1,679         | 7,90094      | 5,92619    | 1,00151                     | 9,8003                                             |
| 2100                                 | 2099                                    | 274,505                                  | 1,355         | 7,85199      | 5,88948    | 9,96479-1                   | 9,8002                                             |
| 2150                                 | 2149                                    | 274,180                                  | 1,030         | 7,80329      | 5,85294    | 9,91471                     | 9,8000                                             |
| 2200                                 | 2199                                    | 273,855                                  | 0,705         | 7,75483      | 5,81660    | 9,86483                     | 9,7999                                             |
| 2250                                 | 2249                                    | 273,530                                  | 0,380         | 7,70661      | 5,78043    | 9,81513                     | 9,7997                                             |
| 2300                                 | 2299                                    | 273,205                                  | 0,055         | 7,65864      | 5,74445    | 9,76563                     | 9,7996                                             |
| 2350                                 | 2349                                    | 272,881                                  | -0,269        | 7,61091      | 5,70865    | 9,71632                     | 9,7994                                             |
| 2400                                 | 2399                                    | 272,556                                  | -0,594        | 7,56342      | 5,67304    | 9,66721                     | 9,7992                                             |
| 2450                                 | 2449                                    | 272,231                                  | -0,919        | 7,51618      | 5,63760    | 9,61828                     | 9,7991                                             |
| 2500                                 | 2499                                    | 271,906                                  | -1,244        | 7,46917+4    | 5,60234+2  | 9,56954-1                   | 9,7989                                             |
| 2550                                 | 2549                                    | 271,582                                  | -1,568        | 7,42241      | 5,56726    | 9,52100                     | 9,7988                                             |
| 2600                                 | 2599                                    | 271,257                                  | -1,893        | 7,37588      | 5,53236    | 9,47264                     | 9,7986                                             |
| 2650                                 | 2649                                    | 270,932                                  | -2,218        | 7,32959      | 5,49764    | 9,42447                     | 9,7985                                             |
| 2700                                 | 2699                                    | 270,607                                  | -2,543        | 7,28353      | 5,46310    | 9,37619                     | 9,7983                                             |
| 2750                                 | 2749                                    | 270,283                                  | -2,867        | 7,23771      | 5,42873    | 9,32870                     | 9,7982                                             |
| 2800                                 | 2799                                    | 269,958                                  | -3,192        | 7,19213      | 5,39454    | 9,28110                     | 9,7980                                             |
| 2850                                 | 2849                                    | 269,633                                  | -3,517        | 7,14678      | 5,36052    | 9,23368                     | 9,7979                                             |
| 2900                                 | 2899                                    | 269,309                                  | -3,841        | 7,10166      | 5,32668    | 9,18645                     | 9,7977                                             |
| 2950                                 | 2949                                    | 268,984                                  | -4,166        | 7,05677      | 5,29301    | 9,13940                     | 9,7976                                             |
| 3000                                 | 2999                                    | 268,659                                  | -4,491        | 7,01212+4    | 5,25952+2  | 9,09254-1                   | 9,7974                                             |
| 3050                                 | 3049                                    | 268,335                                  | -4,815        | 6,96769      | 5,22620    | 9,04587                     | 9,7972                                             |
| 3100                                 | 3098                                    | 268,010                                  | -5,140        | 6,92349      | 5,19304    | 8,99938                     | 9,7971                                             |
| 3150                                 | 3148                                    | 267,685                                  | -5,465        | 6,87952      | 5,16006    | 8,95307                     | 9,7969                                             |
| 3200                                 | 3198                                    | 267,360                                  | -5,790        | 6,83578      | 5,12725    | 8,90694                     | 9,7968                                             |
| 3250                                 | 3248                                    | 267,036                                  | -6,114        | 6,79226      | 5,09461    | 8,86100                     | 9,7966                                             |
| 3300                                 | 3298                                    | 266,711                                  | -6,439        | 6,74897      | 5,06214    | 8,81524                     | 9,7965                                             |
| 3350                                 | 3348                                    | 266,386                                  | -6,764        | 6,70590      | 5,02984    | 8,76967                     | 9,7963                                             |
| 3400                                 | 3398                                    | 266,062                                  | -7,088        | 6,66306      | 4,99770    | 8,72427                     | 9,7962                                             |
| 3450                                 | 3448                                    | 265,737                                  | -7,413        | 6,62044      | 4,96574    | 8,67905                     | 9,7960                                             |
| 3500                                 | 3498                                    | 265,413                                  | -7,737        | 6,57804+4    | 4,93393+2  | 8,63402-1                   | 9,7959                                             |
| 3550                                 | 3548                                    | 265,088                                  | -8,062        | 6,53586      | 4,90230    | 8,58916                     | 9,7957                                             |
| 3600                                 | 3598                                    | 264,763                                  | -8,387        | 6,49390      | 4,87083    | 8,54449                     | 9,7956                                             |
| 3650                                 | 3648                                    | 264,439                                  | -8,711        | 6,45216      | 4,83952    | 8,49999                     | 9,7954                                             |
| 3700                                 | 3698                                    | 264,114                                  | -9,036        | 6,41054      | 4,80837    | 8,45567                     | 9,7952                                             |
| 3750                                 | 3748                                    | 263,789                                  | -9,361        | 6,36933      | 4,77739    | 8,41153                     | 9,7951                                             |
| 3800                                 | 3798                                    | 263,465                                  | -9,685        | 6,32825      | 4,74658    | 8,36756                     | 9,7949                                             |
| 3850                                 | 3848                                    | 263,140                                  | -10,010       | 6,28737      | 4,71592    | 8,32377                     | 9,7948                                             |
| 3900                                 | 3898                                    | 262,816                                  | -10,334       | 6,24672      | 4,68542    | 8,28016                     | 9,7946                                             |
| 3950                                 | 3918                                    | 262,491                                  | -10,659       | 6,20627      | 4,65509    | 8,23673                     | 9,7945                                             |

| Геотензи-онная высота<br>$H, м$ | Геотензи-онная вы-сота $H, м$ | Величины в функции геотензионной высоты |              |               |                             |            | Ускорение<br>свободно-го паде-ния $g, м/с^2$ |
|---------------------------------|-------------------------------|-----------------------------------------|--------------|---------------|-----------------------------|------------|----------------------------------------------|
|                                 |                               | температура                             | давление $p$ |               | плотность<br>$\rho, кг/м^3$ |            |                                              |
|                                 |                               |                                         | $T, K$       | $t, ^\circ C$ |                             | $Па$       |                                              |
| 2000                            | 2001                          | 275,150                                 | 2,000        | 7,94952+4     | 5,96263+2                   | 1,00649 0  | 9,8005                                       |
| 2050                            | 2051                          | 274,825                                 | 1,675        | 7,90029       | 5,92571                     | 1,00144    | 9,8003                                       |
| 2100                            | 2101                          | 274,500                                 | 1,350        | 7,85131       | 5,88897                     | 9,96410 -1 | 9,8002                                       |
| 2150                            | 2151                          | 274,175                                 | 1,025        | 7,80258       | 5,85242                     | 9,91399    | 9,8000                                       |
| 2200                            | 2201                          | 273,850                                 | 0,700        | 7,75409       | 5,81605                     | 9,86407    | 9,7999                                       |
| 2250                            | 2251                          | 273,525                                 | 0,375        | 7,70584       | 5,77986                     | 9,81434    | 9,7997                                       |
| 2300                            | 2301                          | 273,200                                 | 0,050        | 7,65784       | 5,74385                     | 9,76481    | 9,7996                                       |
| 2350                            | 2351                          | 272,875                                 | -0,275       | 7,61008       | 5,70803                     | 9,71547    | 9,7994                                       |
| 2400                            | 2401                          | 272,550                                 | -0,600       | 7,56257       | 5,67239                     | 9,66632    | 9,7992                                       |
| 2450                            | 2451                          | 272,225                                 | -0,925       | 7,51529       | 5,63693                     | 9,61736    | 9,7991                                       |
| 2500                            | 2501                          | 271,900                                 | -1,250       | 7,46825+4     | 5,60165+2                   | 9,56859 -1 | 9,7989                                       |
| 2550                            | 2551                          | 271,575                                 | -1,575       | 7,42145       | 5,56655                     | 9,52001    | 9,7988                                       |
| 2600                            | 2601                          | 271,250                                 | -1,900       | 7,37489       | 5,53162                     | 9,47161    | 9,7986                                       |
| 2650                            | 2651                          | 270,925                                 | -2,225       | 7,32857       | 5,49688                     | 9,42341    | 9,7985                                       |
| 2700                            | 2701                          | 270,600                                 | -2,550       | 7,28248       | 5,46231                     | 9,37540    | 9,7983                                       |
| 2750                            | 2751                          | 270,275                                 | -2,875       | 7,23663       | 5,42792                     | 9,32757    | 9,7982                                       |
| 2800                            | 2801                          | 269,950                                 | -3,200       | 7,19101       | 5,39370                     | 9,27992    | 9,7980                                       |
| 2850                            | 2851                          | 269,625                                 | -3,525       | 7,14562       | 5,35966                     | 9,23247    | 9,7979                                       |
| 2900                            | 2901                          | 269,300                                 | -3,850       | 7,10047       | 5,32579                     | 9,18520    | 9,7977                                       |
| 2950                            | 2951                          | 268,975                                 | -4,175       | 7,05555       | 5,29209                     | 9,13812    | 9,7976                                       |
| 3000                            | 3001                          | 268,650                                 | -4,500       | 7,01085+4     | 5,25857+2                   | 9,09122 -1 | 9,7974                                       |
| 3050                            | 3051                          | 268,325                                 | -4,825       | 6,96639       | 5,22522                     | 9,04450    | 9,7972                                       |
| 3100                            | 3102                          | 268,000                                 | -5,150       | 6,92216       | 5,19204                     | 8,99797    | 9,7971                                       |
| 3150                            | 3152                          | 267,675                                 | -5,475       | 6,87815       | 5,15904                     | 8,95162    | 9,7969                                       |
| 3200                            | 3202                          | 267,350                                 | -5,800       | 6,83437       | 5,12620                     | 8,90546    | 9,7968                                       |
| 3250                            | 3252                          | 267,025                                 | -6,125       | 6,79082       | 5,09353                     | 8,85948    | 9,7966                                       |
| 3300                            | 3302                          | 266,700                                 | -6,450       | 6,74749       | 5,06103                     | 8,81368    | 9,7965                                       |
| 3350                            | 3352                          | 266,375                                 | -6,775       | 6,70438       | 5,02870                     | 8,76806    | 9,7963                                       |
| 3400                            | 3402                          | 266,050                                 | -7,100       | 6,66150       | 4,99654                     | 8,72262    | 9,7962                                       |
| 3450                            | 3452                          | 265,725                                 | -7,425       | 6,61884       | 4,96454                     | 8,67736    | 9,7960                                       |
| 3500                            | 3502                          | 265,400                                 | -7,750       | 6,57641+4     | 4,93271+2                   | 8,63229 -1 | 9,7959                                       |
| 3550                            | 3552                          | 265,075                                 | -8,075       | 6,53419       | 4,90105                     | 8,58739    | 9,7957                                       |
| 3600                            | 3602                          | 264,750                                 | -8,400       | 6,49219       | 4,86955                     | 8,54267    | 9,7955                                       |
| 3650                            | 3652                          | 264,425                                 | -8,725       | 6,45041       | 4,83821                     | 8,49813    | 9,7954                                       |
| 3700                            | 3702                          | 264,100                                 | -9,050       | 6,40885       | 4,80704                     | 8,45376    | 9,7952                                       |
| 3750                            | 3752                          | 263,775                                 | -9,375       | 6,36751       | 4,77603                     | 8,40958    | 9,7951                                       |
| 3800                            | 3802                          | 263,450                                 | -9,700       | 6,32638       | 4,74518                     | 8,36557    | 9,7949                                       |
| 3850                            | 3852                          | 263,125                                 | -10,025      | 6,28547       | 4,71449                     | 8,32174    | 9,7948                                       |
| 3900                            | 3902                          | 262,800                                 | -10,350      | 6,24478       | 4,68397                     | 8,27808    | 9,7946                                       |
| 3950                            | 3952                          | 262,475                                 | -10,675      | 6,20429       | 4,65360                     | 8,23460    | 9,7945                                       |

От 4000 до 5950 м

| Геометриче-<br>ская высота<br>А, м | Величины в функции геометрической высоты         |             |         |            |            |                       |
|------------------------------------|--------------------------------------------------|-------------|---------|------------|------------|-----------------------|
|                                    | Геотен-<br>зиометри-<br>ческая<br>высота<br>Н, м | температура |         | давление p |            | плотность<br>ρ, кг/м³ |
|                                    |                                                  | T, K        | t, °C   | Па         | мм рт. ст. |                       |
| 4000                               | 3997                                             | 262,166     | -10,984 | 6,16604+4  | 4,62491+2  | 8,19347-1             |
| 4050                               | 4047                                             | 261,842     | -11,308 | 6,12602    | 4,59490    | 8,15038               |
| 4100                               | 4097                                             | 261,517     | -11,633 | 6,08622    | 4,56504    | 8,10747               |
| 4150                               | 4147                                             | 261,193     | -11,957 | 6,04662    | 4,53534    | 8,06473               |
| 4200                               | 4197                                             | 260,868     | -12,282 | 6,00723    | 4,50579    | 8,02216               |
| 4250                               | 4247                                             | 260,543     | -12,607 | 5,96805    | 4,47641    | 7,97977               |
| 4300                               | 4297                                             | 260,219     | -12,931 | 5,92908    | 4,44718    | 7,93755               |
| 4350                               | 4347                                             | 259,894     | -13,256 | 5,89032    | 4,41810    | 7,89550               |
| 4400                               | 4397                                             | 259,570     | -13,580 | 5,85176    | 4,38918    | 7,85363               |
| 4450                               | 4447                                             | 259,245     | -13,905 | 5,81340    | 4,36041    | 7,81192               |
| 4500                               | 4497                                             | 258,921     | -14,229 | 5,77526+4  | 4,33180+2  | 7,77038-1             |
| 4550                               | 4547                                             | 258,596     | -14,554 | 5,73731    | 4,30334    | 7,72902               |
| 4600                               | 4597                                             | 258,272     | -14,878 | 5,69957    | 4,27503    | 7,68782               |
| 4650                               | 4647                                             | 257,947     | -15,203 | 5,66203    | 4,24687    | 7,64679               |
| 4700                               | 4697                                             | 257,623     | -15,527 | 5,62469    | 4,21886    | 7,60593               |
| 4750                               | 4746                                             | 257,298     | -15,852 | 5,58755    | 4,19101    | 7,56524               |
| 4800                               | 4796                                             | 256,974     | -16,176 | 5,55061    | 4,16330    | 7,52472               |
| 4850                               | 4846                                             | 256,649     | -16,501 | 5,51387    | 4,13574    | 7,48436               |
| 4900                               | 4896                                             | 256,325     | -16,825 | 5,47732    | 4,10833    | 7,44417               |
| 4950                               | 4946                                             | 256,000     | -17,150 | 5,44098    | 4,08107    | 7,40415               |
| 5000                               | 4996                                             | 255,676     | -17,474 | 5,40483+4  | 4,05395+2  | 7,36429-1             |
| 5050                               | 5046                                             | 255,351     | -17,799 | 5,36887    | 4,02698    | 7,32459               |
| 5100                               | 5096                                             | 255,027     | -18,124 | 5,33311    | 4,00016    | 7,28506               |
| 5150                               | 5146                                             | 254,702     | -18,448 | 5,29754    | 3,97348    | 7,24570               |
| 5200                               | 5196                                             | 254,378     | -18,772 | 5,26217    | 3,94695    | 7,20649               |
| 5250                               | 5246                                             | 254,053     | -19,097 | 5,22699    | 3,92056    | 7,16745               |
| 5300                               | 5296                                             | 253,729     | -19,421 | 5,19200    | 3,89432    | 7,12858               |
| 5350                               | 5346                                             | 253,404     | -19,746 | 5,15720    | 3,86822    | 7,08985               |
| 5400                               | 5395                                             | 253,080     | -20,070 | 5,12259    | 3,84225    | 7,05131               |
| 5450                               | 5445                                             | 252,755     | -20,395 | 5,08816    | 3,81644    | 7,01292               |
| 5500                               | 5495                                             | 252,431     | -20,719 | 5,05393+4  | 3,79076+2  | 6,97469-1             |
| 5550                               | 5545                                             | 252,106     | -21,044 | 5,01988    | 3,76522    | 6,93662               |
| 5600                               | 5595                                             | 251,782     | -21,368 | 4,98602    | 3,73982    | 6,89871               |
| 5650                               | 5645                                             | 251,458     | -21,692 | 4,95235    | 3,71457    | 6,86095               |
| 5700                               | 5695                                             | 251,133     | -22,017 | 4,91886    | 3,68945    | 6,82336               |
| 5750                               | 5745                                             | 250,809     | -22,341 | 4,88555    | 3,66447    | 6,78593               |
| 5800                               | 5795                                             | 250,484     | -22,666 | 4,85243    | 3,63962    | 6,74865               |
| 5850                               | 5845                                             | 250,160     | -22,990 | 4,81949    | 3,61492    | 6,71153               |
| 5900                               | 5895                                             | 249,836     | -23,314 | 4,78673    | 3,59035    | 6,67457               |
| 5950                               | 5944                                             | 249,511     | -23,639 | 4,75416    | 3,56591    | 6,63776               |

Продолжение табл. 1

| Геопотенциальная высота<br>H, м | геоцентрическая высота<br>h, м | Величины в функции геопотенциальной высоты |         |            |            |                                         |                                                                    |
|---------------------------------|--------------------------------|--------------------------------------------|---------|------------|------------|-----------------------------------------|--------------------------------------------------------------------|
|                                 |                                | температура                                |         | давление p |            | плотность<br>$\rho$ , кг/м <sup>3</sup> | ускорение<br>свободно-го падения<br>гравитации g, м/с <sup>2</sup> |
|                                 |                                | T, K                                       | t, °C   | Па         | мм рт. ст. |                                         |                                                                    |
| 4000                            | 4003                           | 262,150                                    | -11,000 | 6,16402+4  | 4,62340+2  | 8,19129-1                               | 9,7943                                                             |
| 4050                            | 4053                           | 261,825                                    | -11,325 | 6,12396    | 4,59335    | 8,14816                                 | 9,7942                                                             |
| 4100                            | 4103                           | 261,500                                    | -11,650 | 6,08412    | 4,56346    | 8,10520                                 | 9,7940                                                             |
| 4150                            | 4153                           | 261,175                                    | -11,975 | 6,04448    | 4,53373    | 8,06242                                 | 9,7938                                                             |
| 4200                            | 4203                           | 260,850                                    | -12,300 | 6,00505    | 4,50416    | 8,01981                                 | 9,7937                                                             |
| 4250                            | 4253                           | 260,525                                    | -12,625 | 5,96583    | 4,47474    | 7,97737                                 | 9,7935                                                             |
| 4300                            | 4303                           | 260,200                                    | -12,950 | 5,92682    | 4,44548    | 7,93510                                 | 9,7934                                                             |
| 4350                            | 4353                           | 259,875                                    | -13,275 | 5,88801    | 4,41637    | 7,89300                                 | 9,7932                                                             |
| 4400                            | 4403                           | 259,550                                    | -13,600 | 5,84941    | 4,38742    | 7,85108                                 | 9,7931                                                             |
| 4450                            | 4453                           | 259,225                                    | -13,925 | 5,81102    | 4,35862    | 7,80933                                 | 9,7929                                                             |
| 4500                            | 4503                           | 258,900                                    | -14,250 | 5,77283+4  | 4,32988+2  | 7,76774-1                               | 9,7928                                                             |
| 4550                            | 4553                           | 258,575                                    | -14,575 | 5,73484    | 4,30149    | 7,72633                                 | 9,7926                                                             |
| 4600                            | 4603                           | 258,250                                    | -14,900 | 5,69706    | 4,27315    | 7,68508                                 | 9,7925                                                             |
| 4650                            | 4653                           | 257,925                                    | -15,225 | 5,65948    | 4,24496    | 7,64401                                 | 9,7923                                                             |
| 4700                            | 4703                           | 257,600                                    | -15,550 | 5,62210    | 4,21692    | 7,60310                                 | 9,7922                                                             |
| 4750                            | 4753                           | 257,275                                    | -15,875 | 5,58492    | 4,18903    | 7,56236                                 | 9,7920                                                             |
| 4800                            | 4803                           | 256,950                                    | -16,200 | 5,54794    | 4,16129    | 7,52178                                 | 9,7918                                                             |
| 4850                            | 4853                           | 256,625                                    | -16,525 | 5,51115    | 4,13371    | 7,48138                                 | 9,7917                                                             |
| 4900                            | 4903                           | 256,300                                    | -16,850 | 5,47457    | 4,10626    | 7,44114                                 | 9,7915                                                             |
| 4950                            | 4953                           | 255,975                                    | -17,175 | 5,43818    | 4,07897    | 7,40106                                 | 9,7914                                                             |
| 5000                            | 5003                           | 255,650                                    | -17,500 | 5,40199+4  | 4,05183+2  | 7,36116-1                               | 9,7912                                                             |
| 5050                            | 5053                           | 255,325                                    | -17,825 | 5,36599    | 4,02482    | 7,32141                                 | 9,7911                                                             |
| 5100                            | 5103                           | 255,000                                    | -18,150 | 5,33019    | 3,99797    | 7,28183                                 | 9,7909                                                             |
| 5150                            | 5153                           | 254,675                                    | -18,475 | 5,29458    | 3,97126    | 7,24242                                 | 9,7908                                                             |
| 5200                            | 5203                           | 254,350                                    | -18,800 | 5,25917    | 3,94470    | 7,20316                                 | 9,7906                                                             |
| 5250                            | 5253                           | 254,025                                    | -19,125 | 5,22394    | 3,91828    | 7,16407                                 | 9,7905                                                             |
| 5300                            | 5303                           | 253,700                                    | -19,450 | 5,18891    | 3,89200    | 7,12515                                 | 9,7903                                                             |
| 5350                            | 5353                           | 253,375                                    | -19,775 | 5,15407    | 3,86587    | 7,08638                                 | 9,7901                                                             |
| 5400                            | 5403                           | 253,050                                    | -20,100 | 5,11942    | 3,83988    | 7,04778                                 | 9,7900                                                             |
| 5450                            | 5453                           | 252,725                                    | -20,425 | 5,08495    | 3,81403    | 7,00934                                 | 9,7898                                                             |
| 5500                            | 5503                           | 252,400                                    | -20,750 | 5,05068+4  | 3,78832+2  | 6,97105-1                               | 9,7897                                                             |
| 5550                            | 5553                           | 252,075                                    | -21,075 | 5,01659    | 3,76275    | 6,93293                                 | 9,7895                                                             |
| 5600                            | 5603                           | 251,750                                    | -21,400 | 4,98269    | 3,73732    | 6,89497                                 | 9,7894                                                             |
| 5650                            | 5653                           | 251,425                                    | -21,725 | 4,94897    | 3,71203    | 6,85717                                 | 9,7892                                                             |
| 5700                            | 5703                           | 251,100                                    | -22,050 | 4,91544    | 3,68688    | 6,81952                                 | 9,7891                                                             |
| 5750                            | 5753                           | 250,775                                    | -22,375 | 4,88210    | 3,66187    | 6,78204                                 | 9,7889                                                             |
| 5800                            | 5803                           | 250,450                                    | -22,700 | 4,84893    | 3,63700    | 6,74471                                 | 9,7888                                                             |
| 5850                            | 5853                           | 250,125                                    | -23,025 | 4,81595    | 3,61226    | 6,70754                                 | 9,7886                                                             |
| 5900                            | 5903                           | 249,800                                    | -23,350 | 4,78315    | 3,58766    | 6,67053                                 | 9,7885                                                             |
| 5950                            | 5953                           | 249,475                                    | -23,675 | 4,75054    | 3,56310    | 6,63367                                 | 9,7883                                                             |

От 6000 до 7950 м

| Геометрическая<br>высота $h$ , м | Величины в функции геометрической высоты  |             |          |              |            |                                         |
|----------------------------------|-------------------------------------------|-------------|----------|--------------|------------|-----------------------------------------|
|                                  | геопотенци-<br>альная высо-<br>та $H$ , м | температура |          | давление $p$ |            | плотность<br>$\rho$ , кг/м <sup>3</sup> |
|                                  |                                           | $T$ , К     | $t$ , °C | Па           | мм рт. ст. |                                         |
| 6000                             | 5994                                      | 249,187     | -23,963  | 4,72176+4    | 3,54161+2  | 6,60111-1                               |
| 6050                             | 6044                                      | 248,862     | -24,288  | 5,68955      | 3,51745    | 6,56462                                 |
| 6100                             | 6094                                      | 248,538     | -24,612  | 4,65751      | 3,49342    | 6,52828                                 |
| 6150                             | 6144                                      | 248,214     | -24,936  | 4,62565      | 3,46952    | 6,49210                                 |
| 6200                             | 6194                                      | 247,889     | -25,261  | 4,59396      | 3,44576    | 6,45607                                 |
| 6250                             | 6244                                      | 247,565     | -25,585  | 4,56246      | 3,42212    | 6,42019                                 |
| 6300                             | 6294                                      | 247,241     | -25,909  | 4,53113      | 3,39863    | 6,38447                                 |
| 6350                             | 6344                                      | 246,916     | -26,234  | 4,49997      | 3,37528    | 6,34890                                 |
| 6400                             | 6394                                      | 246,592     | -26,558  | 4,46899      | 3,35202    | 6,31348                                 |
| 6450                             | 6443                                      | 246,267     | -26,883  | 4,43818      | 3,32891    | 6,27821                                 |
| 6500                             | 6493                                      | 245,943     | -27,207  | 4,40755+4    | 3,30593+2  | 6,24310-1                               |
| 6550                             | 6543                                      | 245,619     | -27,531  | 4,37708      | 3,28308    | 6,20813                                 |
| 6600                             | 6593                                      | 245,294     | -27,856  | 4,34679      | 3,26036    | 6,17332                                 |
| 6650                             | 6643                                      | 244,970     | -28,180  | 4,31667      | 3,23777    | 6,13866                                 |
| 6700                             | 6693                                      | 244,646     | -28,504  | 4,28672      | 3,21530    | 6,10415                                 |
| 6750                             | 6743                                      | 244,322     | -28,828  | 4,25693      | 3,19296    | 6,06978                                 |
| 6800                             | 6793                                      | 243,997     | -29,153  | 4,22732      | 3,17075    | 6,03557                                 |
| 6850                             | 6843                                      | 243,673     | -29,477  | 4,19787      | 3,14866    | 6,00150                                 |
| 6900                             | 6893                                      | 243,349     | -29,801  | 4,16859      | 3,12670    | 5,96758                                 |
| 6950                             | 6942                                      | 243,024     | -30,126  | 4,13947      | 3,10486    | 5,93381                                 |
| 7000                             | 6992                                      | 242,700     | -30,450  | 4,11053+4    | 3,08315+2  | 5,90018-1                               |
| 7050                             | 7042                                      | 242,376     | -30,774  | 4,08174      | 3,06156    | 5,86571                                 |
| 7100                             | 7092                                      | 242,051     | -31,099  | 4,05312      | 3,04009    | 5,83337                                 |
| 7150                             | 7142                                      | 241,727     | -31,423  | 4,02466      | 3,01875    | 5,80019                                 |
| 7200                             | 7192                                      | 241,403     | -31,747  | 3,99637      | 2,99752    | 5,76715                                 |
| 7250                             | 7242                                      | 241,079     | -32,071  | 3,96823      | 2,97642    | 5,73425                                 |
| 7300                             | 7292                                      | 240,754     | -32,396  | 3,94026      | 2,95544    | 5,70150                                 |
| 7350                             | 7342                                      | 240,430     | -32,720  | 3,91245      | 2,93458    | 5,66889                                 |
| 7400                             | 7391                                      | 240,106     | -33,044  | 3,88480      | 2,91384    | 5,63642                                 |
| 7450                             | 7441                                      | 239,782     | -33,368  | 3,85730      | 2,89322    | 5,60410                                 |
| 7500                             | 7491                                      | 239,457     | -33,693  | 3,82997+4    | 2,87271+2  | 5,57192-1                               |
| 7550                             | 7541                                      | 239,133     | -34,017  | 3,80279      | 2,85233    | 5,53988                                 |
| 7600                             | 7591                                      | 238,809     | -34,341  | 3,77577      | 2,83206    | 5,50798                                 |
| 7650                             | 7641                                      | 238,485     | -34,665  | 3,74890      | 2,81191    | 5,47623                                 |
| 7700                             | 7691                                      | 238,161     | -34,989  | 3,72219      | 2,79187    | 5,44462                                 |
| 7750                             | 7741                                      | 237,836     | -35,314  | 3,69564      | 2,77196    | 5,41314                                 |
| 7800                             | 7790                                      | 237,512     | -35,638  | 3,66924      | 2,75215    | 5,38181                                 |
| 7850                             | 7840                                      | 237,188     | -35,962  | 3,64299      | 2,73247    | 5,35061                                 |
| 7900                             | 7890                                      | 236,864     | -36,286  | 3,61690      | 2,71289    | 5,31956                                 |
| 7950                             | 7940                                      | 236,540     | -36,610  | 3,59095      | 2,69344    | 5,28864                                 |

Продолжение табл. 1

| Геопотенциальная высота, Н, м | геометрическая высота Н, м | Величины в функции геопотенциальной высоты |         |            |            |                    | ускорение свободного падения g, м/с² |
|-------------------------------|----------------------------|--------------------------------------------|---------|------------|------------|--------------------|--------------------------------------|
|                               |                            | температура                                |         | давление P |            | плотность P, кг/м³ |                                      |
|                               |                            | T, К                                       | t, °C   | Па         | мм рт. ст. |                    |                                      |
| 6000                          | 6006                       | 249,150                                    | -24,000 | 4,71810+4  | 3,53887+2  | 6,59697-1          | 9,7881                               |
| 6050                          | 6056                       | 248,825                                    | -24,325 | 4,68584    | 3,51467    | 6,56042            | 9,7880                               |
| 6100                          | 6106                       | 248,500                                    | -24,650 | 4,65377    | 3,49061    | 6,52403            | 9,7878                               |
| 6150                          | 6156                       | 248,175                                    | -24,975 | 4,62186    | 3,46668    | 6,48780            | 9,7877                               |
| 6200                          | 6206                       | 247,850                                    | -25,300 | 4,59014    | 3,44289    | 6,45171            | 9,7875                               |
| 6250                          | 6256                       | 247,525                                    | -25,625 | 4,55859    | 3,41923    | 6,41579            | 9,7874                               |
| 6300                          | 6306                       | 247,200                                    | -25,950 | 4,52722    | 3,39570    | 6,38101            | 9,7872                               |
| 6350                          | 6356                       | 246,875                                    | -26,275 | 4,49603    | 3,37230    | 6,34439            | 9,7871                               |
| 6400                          | 6406                       | 246,550                                    | -26,600 | 4,46501    | 3,34903    | 6,30892            | 9,7869                               |
| 6450                          | 6457                       | 246,225                                    | -26,925 | 4,43416    | 3,32589    | 6,27360            | 9,7868                               |
|                               |                            |                                            |         |            |            |                    |                                      |
| 6500                          | 6507                       | 245,900                                    | -27,250 | 4,40348+4  | 3,30288+2  | 6,23844-1          | 9,7866                               |
| 6550                          | 6557                       | 245,575                                    | -27,575 | 4,37298    | 3,28000    | 6,20342            | 9,7865                               |
| 6600                          | 6607                       | 245,250                                    | -27,900 | 4,34265    | 3,25725    | 6,16856            | 9,7863                               |
| 6650                          | 6657                       | 244,925                                    | -28,225 | 4,31249    | 3,23463    | 6,13384            | 9,7861                               |
| 6700                          | 6707                       | 244,600                                    | -28,550 | 4,28249    | 3,21214    | 6,09928            | 9,7860                               |
| 6750                          | 6757                       | 244,275                                    | -28,875 | 4,25267    | 3,18977    | 6,06486            | 9,7858                               |
| 6800                          | 6807                       | 243,950                                    | -29,200 | 4,22302    | 3,16752    | 6,03060            | 9,7857                               |
| 6850                          | 6857                       | 243,625                                    | -29,525 | 4,19353    | 3,14541    | 5,99648            | 9,7855                               |
| 6900                          | 6907                       | 243,300                                    | -29,850 | 4,16421    | 3,12342    | 5,96251            | 9,7854                               |
| 6950                          | 6958                       | 242,975                                    | -30,175 | 4,13506    | 3,10155    | 5,92868            | 9,7852                               |
|                               |                            |                                            |         |            |            |                    |                                      |
| 7000                          | 7008                       | 242,650                                    | -30,500 | 4,10607+4  | 3,07981+2  | 5,89501-1          | 9,7851                               |
| 7050                          | 7058                       | 242,325                                    | -30,825 | 4,07725    | 3,05819    | 5,86148            | 9,7849                               |
| 7100                          | 7108                       | 242,000                                    | -31,150 | 4,04859    | 3,03669    | 5,82809            | 9,7848                               |
| 7150                          | 7158                       | 241,675                                    | -31,475 | 4,02009    | 3,01532    | 5,79486            | 9,7846                               |
| 7200                          | 7208                       | 241,350                                    | -31,800 | 3,99176    | 2,99407    | 5,76176            | 9,7844                               |
| 7250                          | 7258                       | 241,025                                    | -32,125 | 3,96359    | 2,97294    | 5,72882            | 9,7843                               |
| 7300                          | 7308                       | 240,700                                    | -32,450 | 3,93558    | 2,95193    | 5,69601            | 9,7841                               |
| 7350                          | 7359                       | 240,375                                    | -32,775 | 3,90773    | 2,93104    | 5,66335            | 9,7840                               |
| 7400                          | 7409                       | 240,050                                    | -33,100 | 3,88004    | 2,91027    | 5,63084            | 9,7838                               |
| 7450                          | 7459                       | 239,725                                    | -33,425 | 3,85251    | 2,88962    | 5,59846            | 9,7837                               |
|                               |                            |                                            |         |            |            |                    |                                      |
| 7500                          | 7509                       | 239,400                                    | -33,750 | 3,82514+4  | 2,86909+2  | 5,56623-1          | 9,7835                               |
| 7550                          | 7559                       | 239,075                                    | -34,075 | 3,79792    | 2,84868    | 5,53414            | 9,7834                               |
| 7600                          | 7609                       | 238,750                                    | -34,400 | 3,77087    | 2,82838    | 5,50220            | 9,7832                               |
| 7650                          | 7659                       | 238,425                                    | -34,725 | 3,74397    | 2,80821    | 5,47039            | 9,7831                               |
| 7700                          | 7709                       | 238,100                                    | -35,050 | 3,71722    | 2,78815    | 5,43873            | 9,7829                               |
| 7750                          | 7759                       | 237,775                                    | -35,375 | 3,69063    | 2,76820    | 5,40720            | 9,7828                               |
| 7800                          | 7810                       | 237,450                                    | -35,700 | 3,66420    | 2,74837    | 5,37582            | 9,7826                               |
| 7850                          | 7860                       | 237,125                                    | -36,025 | 3,63791    | 2,72866    | 5,34457            | 9,7824                               |
| 7900                          | 7910                       | 236,800                                    | -36,350 | 3,61178    | 2,70906    | 5,31347            | 9,7823                               |
| 7950                          | 7960                       | 236,475                                    | -36,675 | 3,58581    | 2,68957    | 5,28250            | 9,7821                               |



От 6000 до 6950 м

| Геометрическая<br>высота $H$ , м | Величины в функции геометрической высоты    |             |          |              |            |                                         |                                                              |
|----------------------------------|---------------------------------------------|-------------|----------|--------------|------------|-----------------------------------------|--------------------------------------------------------------|
|                                  | геопотенци-<br>альная высо-<br>та $H_p$ , м | температура |          | давление $p$ |            | плотность<br>$\rho$ , кг/м <sup>3</sup> | ускорение<br>свободного<br>падения $g$ ,<br>м/с <sup>2</sup> |
|                                  |                                             | $T$ , К     | $t$ , °C | Па           | мм рт. ст. |                                         |                                                              |
| 8000                             | 7990                                        | 236,215     | -36,935  | 3,56516+4    | 2,67409+2  | 5,25786-1                               | 9,7820                                                       |
| 8050                             | 8040                                        | 235,891     | -37,259  | 3,53952      | 2,65486    | 5,22722                                 | 9,7819                                                       |
| 8100                             | 8090                                        | 235,567     | -37,583  | 3,51403      | 2,63574    | 5,19671                                 | 9,7817                                                       |
| 8150                             | 8140                                        | 235,243     | -37,907  | 3,48869      | 2,61673    | 5,16635                                 | 9,7816                                                       |
| 8200                             | 8189                                        | 234,919     | -38,231  | 3,46349      | 2,59783    | 5,13612                                 | 9,7814                                                       |
| 8250                             | 8239                                        | 234,595     | -38,555  | 3,43845      | 2,57905    | 5,10602                                 | 9,7812                                                       |
| 8300                             | 8289                                        | 234,270     | -38,880  | 3,41355      | 2,56037    | 5,07606                                 | 9,7811                                                       |
| 8350                             | 8339                                        | 233,946     | -39,204  | 3,38880      | 2,54181    | 5,04624                                 | 9,7809                                                       |
| 8400                             | 8389                                        | 233,622     | -39,528  | 3,36419      | 2,52335    | 5,01655                                 | 9,7808                                                       |
| 8450                             | 8439                                        | 233,298     | -39,852  | 3,33973      | 2,50500    | 4,98699                                 | 9,7806                                                       |
| 8500                             | 8489                                        | 232,974     | -40,176  | 3,31542+4    | 2,48677+2  | 4,95757-1                               | 9,7805                                                       |
| 8550                             | 8539                                        | 232,650     | -40,500  | 3,29124      | 2,46864    | 4,92829                                 | 9,7803                                                       |
| 8600                             | 8588                                        | 232,326     | -40,824  | 3,26722      | 2,45061    | 4,89913                                 | 9,7802                                                       |
| 8650                             | 8638                                        | 232,001     | -41,149  | 3,24333      | 2,43270    | 4,87011                                 | 9,7800                                                       |
| 8700                             | 8688                                        | 231,677     | -41,473  | 3,21959      | 2,41489    | 4,84122                                 | 9,7799                                                       |
| 8750                             | 8738                                        | 231,353     | -41,797  | 3,19598      | 2,39718    | 4,81246                                 | 9,7797                                                       |
| 8800                             | 8788                                        | 231,029     | -42,121  | 3,17252      | 2,37959    | 4,78383                                 | 9,7796                                                       |
| 8850                             | 8838                                        | 230,705     | -42,445  | 3,14920      | 2,36209    | 4,75531                                 | 9,7794                                                       |
| 8900                             | 8888                                        | 230,381     | -42,769  | 3,12602      | 2,34471    | 4,72697                                 | 9,7792                                                       |
| 8950                             | 8937                                        | 230,057     | -43,093  | 3,10297      | 2,32742    | 4,69874                                 | 9,7791                                                       |
| 9000                             | 8987                                        | 229,733     | -43,417  | 3,08007+4    | 2,31024+2  | 4,67063-1                               | 9,7789                                                       |
| 9050                             | 9037                                        | 229,409     | -43,741  | 3,05730      | 2,29316    | 4,64265                                 | 9,7788                                                       |
| 9100                             | 9087                                        | 229,085     | -44,065  | 3,03467      | 2,27619    | 4,61481                                 | 9,7786                                                       |
| 9150                             | 9137                                        | 228,760     | -44,390  | 3,01217      | 2,25932    | 4,58709                                 | 9,7785                                                       |
| 9200                             | 9187                                        | 228,436     | -44,714  | 2,98981      | 2,24254    | 4,55949                                 | 9,7783                                                       |
| 9250                             | 9237                                        | 228,112     | -45,038  | 2,96759      | 2,22587    | 4,53203                                 | 9,7782                                                       |
| 9300                             | 9286                                        | 227,788     | -45,362  | 2,94550      | 2,20930    | 4,50469                                 | 9,7780                                                       |
| 9350                             | 9336                                        | 227,464     | -45,686  | 2,92354      | 2,19284    | 4,47748                                 | 9,7779                                                       |
| 9400                             | 9386                                        | 227,140     | -46,010  | 2,90172      | 2,17647    | 4,45040                                 | 9,7777                                                       |
| 9450                             | 9436                                        | 226,816     | -46,334  | 2,88003      | 2,16020    | 4,42344                                 | 9,7776                                                       |
| 9500                             | 9486                                        | 226,492     | -46,658  | 2,85847+4    | 2,14403+2  | 4,39561-1                               | 9,7774                                                       |
| 9550                             | 9536                                        | 226,168     | -46,982  | 2,83704      | 2,12795    | 4,36990                                 | 9,7773                                                       |
| 9600                             | 9586                                        | 225,844     | -47,306  | 2,81574      | 2,11198    | 4,34432                                 | 9,7771                                                       |
| 9650                             | 9635                                        | 225,520     | -47,630  | 2,79457      | 2,09610    | 4,31886                                 | 9,7769                                                       |
| 9700                             | 9685                                        | 225,196     | -47,954  | 2,77353      | 2,08032    | 4,29353                                 | 9,7768                                                       |
| 9750                             | 9735                                        | 224,872     | -48,278  | 2,75262      | 2,06464    | 4,26832                                 | 9,7766                                                       |
| 9800                             | 9785                                        | 224,548     | -48,602  | 2,73184      | 2,04905    | 4,24323                                 | 9,7765                                                       |
| 9850                             | 9835                                        | 224,224     | -48,926  | 2,71119      | 2,03356    | 4,21827                                 | 9,7763                                                       |
| 9900                             | 9885                                        | 223,900     | -49,250  | 2,69066      | 2,01816    | 4,19342                                 | 9,7762                                                       |
| 9950                             | 9934                                        | 223,576     | -49,574  | 2,67026      | 2,00286    | 4,16870                                 | 9,7760                                                       |

Продолжение табл. 1

| Геопотенциаль-<br>ная высота $H$ , м | геометричес-<br>кая высота<br>$A$ , м | Величины в функции геопотенциальной высоты |          |              |             |                                         |                                                              |
|--------------------------------------|---------------------------------------|--------------------------------------------|----------|--------------|-------------|-----------------------------------------|--------------------------------------------------------------|
|                                      |                                       | температура                                |          | давление $p$ |             | плотность<br>$\rho$ , кг/м <sup>3</sup> | ускорение<br>свободного<br>падения $g$ ,<br>м/с <sup>2</sup> |
|                                      |                                       | $T$ , К                                    | $t$ , °C | Па           | мм рт. ст.  |                                         |                                                              |
| 8000                                 | 8010                                  | 236,150                                    | -37,000  | 3,55998 + 4  | 2,67020 + 2 | 5,25167 - 1                             | 9,7820                                                       |
| 8050                                 | 8060                                  | 235,825                                    | -37,325  | 3,53430      | 2,65095     | 5,22098                                 | 9,7818                                                       |
| 8100                                 | 8110                                  | 235,500                                    | -37,650  | 3,50878      | 2,63180     | 5,19043                                 | 9,7817                                                       |
| 8150                                 | 8160                                  | 235,175                                    | -37,975  | 3,48340      | 2,61277     | 5,16001                                 | 9,7815                                                       |
| 8200                                 | 8210                                  | 234,850                                    | -38,300  | 3,45818      | 2,59385     | 5,12973                                 | 9,7814                                                       |
| 8250                                 | 8260                                  | 234,525                                    | -38,625  | 3,43310      | 2,57503     | 5,09959                                 | 9,7812                                                       |
| 8300                                 | 8310                                  | 234,200                                    | -38,950  | 3,40817      | 2,55633     | 5,06958                                 | 9,7811                                                       |
| 8350                                 | 8360                                  | 233,875                                    | -39,275  | 3,38338      | 2,53774     | 5,03971                                 | 9,7809                                                       |
| 8400                                 | 8410                                  | 233,550                                    | -39,600  | 3,35874      | 2,51926     | 5,00997                                 | 9,7807                                                       |
| 8450                                 | 8460                                  | 233,225                                    | -39,925  | 3,33425      | 2,50089     | 4,98036                                 | 9,7806                                                       |
| 8500                                 | 8510                                  | 232,900                                    | -40,250  | 3,30990 + 4  | 2,48263 + 2 | 4,95089 - 1                             | 9,7804                                                       |
| 8550                                 | 8560                                  | 232,575                                    | -40,575  | 3,28570      | 2,46448     | 4,92156                                 | 9,7803                                                       |
| 8600                                 | 8610                                  | 232,250                                    | -40,900  | 3,26164      | 2,44643     | 4,89236                                 | 9,7801                                                       |
| 8650                                 | 8660                                  | 231,925                                    | -41,225  | 3,23772      | 2,42849     | 4,86329                                 | 9,7800                                                       |
| 8700                                 | 8710                                  | 231,600                                    | -41,550  | 3,21395      | 2,41066     | 4,83435                                 | 9,7798                                                       |
| 8750                                 | 8760                                  | 231,275                                    | -41,875  | 3,19031      | 2,39293     | 4,80554                                 | 9,7797                                                       |
| 8800                                 | 8810                                  | 230,950                                    | -42,200  | 3,16682      | 2,37531     | 4,77687                                 | 9,7795                                                       |
| 8850                                 | 8860                                  | 230,625                                    | -42,525  | 3,14347      | 2,35779     | 4,74832                                 | 9,7794                                                       |
| 8900                                 | 8910                                  | 230,300                                    | -42,850  | 3,12025      | 2,34038     | 4,71991                                 | 9,7792                                                       |
| 8950                                 | 8960                                  | 229,975                                    | -43,175  | 3,09718      | 2,32308     | 4,69163                                 | 9,7791                                                       |
| 9000                                 | 9010                                  | 229,650                                    | -43,500  | 3,07424 + 4  | 2,30587 + 2 | 4,66348 - 1                             | 9,7789                                                       |
| 9050                                 | 9060                                  | 229,325                                    | -43,825  | 3,05145      | 2,28877     | 4,63545                                 | 9,7787                                                       |
| 9100                                 | 9110                                  | 229,000                                    | -44,150  | 3,02879      | 2,27178     | 4,60756                                 | 9,7786                                                       |
| 9150                                 | 9160                                  | 228,675                                    | -44,475  | 3,00626      | 2,25488     | 4,57980                                 | 9,7784                                                       |
| 9200                                 | 9210                                  | 228,350                                    | -44,800  | 2,98387      | 2,23809     | 4,55216                                 | 9,7783                                                       |
| 9250                                 | 9260                                  | 228,025                                    | -45,120  | 2,96162      | 2,22140     | 4,52465                                 | 9,7781                                                       |
| 9300                                 | 9310                                  | 227,700                                    | -45,450  | 2,93950      | 2,20481     | 4,49727                                 | 9,7780                                                       |
| 9350                                 | 9360                                  | 227,375                                    | -45,775  | 2,91752      | 2,18832     | 4,47001                                 | 9,7778                                                       |
| 9400                                 | 9410                                  | 227,050                                    | -46,100  | 2,89566      | 2,17193     | 4,44288                                 | 9,7777                                                       |
| 9450                                 | 9460                                  | 226,725                                    | -46,425  | 2,87395      | 2,15564     | 4,41588                                 | 9,7775                                                       |
| 9500                                 | 9510                                  | 226,400                                    | -46,750  | 2,85236 + 4  | 2,13945 + 2 | 4,38900 - 1                             | 9,7774                                                       |
| 9550                                 | 9560                                  | 226,075                                    | -47,075  | 2,83090      | 2,12335     | 4,36225                                 | 9,7772                                                       |
| 9600                                 | 9610                                  | 225,750                                    | -47,400  | 2,80958      | 2,10736     | 4,33563                                 | 9,7771                                                       |
| 9650                                 | 9660                                  | 225,425                                    | -47,725  | 2,78839      | 2,09146     | 4,30912                                 | 9,7769                                                       |
| 9700                                 | 9710                                  | 225,100                                    | -48,050  | 2,76732      | 2,07566     | 4,28275                                 | 9,7767                                                       |
| 9750                                 | 9760                                  | 224,775                                    | -48,375  | 2,74639      | 2,05996     | 4,25649                                 | 9,7766                                                       |
| 9800                                 | 9810                                  | 224,450                                    | -48,700  | 2,72558      | 2,04435     | 4,23036                                 | 9,7764                                                       |
| 9850                                 | 9860                                  | 224,125                                    | -49,025  | 2,70490      | 2,02884     | 4,20435                                 | 9,7763                                                       |
| 9900                                 | 9910                                  | 223,800                                    | -49,350  | 2,68435      | 2,01343     | 4,17847                                 | 9,7761                                                       |
| 9950                                 | 9960                                  | 223,475                                    | -49,675  | 2,66392      | 1,99811     | 4,15270                                 | 9,7760                                                       |

От 10000 до 11950 м

| Геометрическая<br>высота $H$ , м | Величины в функции геометрической высоты    |             |          |              |            |                                         |
|----------------------------------|---------------------------------------------|-------------|----------|--------------|------------|-----------------------------------------|
|                                  | геопотенци-<br>альная высо-<br>та $H_p$ , м | температура |          | давление $p$ |            | плотность<br>$\rho$ , кг/м <sup>3</sup> |
|                                  |                                             | $T$ , К     | $t$ , °C | Па           | мм рт. ст. |                                         |
| 10000                            | 9984                                        | 223,252     | -49,898  | 2,64999+4    | 1,98765+2  | 4,13510-1                               |
| 10050                            | 10034                                       | 222,928     | -50,222  | 2,62984      | 1,97254    | 4,10962                                 |
| 10100                            | 10084                                       | 222,604     | -50,546  | 2,60981      | 1,95752    | 4,08427                                 |
| 10150                            | 10134                                       | 222,280     | -50,870  | 2,58991      | 1,94259    | 4,05903                                 |
| 10200                            | 10184                                       | 221,956     | -51,194  | 2,57013      | 1,92776    | 4,03391                                 |
| 10250                            | 10233                                       | 221,632     | -51,518  | 2,55048      | 1,91302    | 4,00891                                 |
| 10300                            | 10283                                       | 221,308     | -51,842  | 2,53095      | 1,89837    | 3,98404                                 |
| 10350                            | 10333                                       | 220,984     | -52,166  | 2,51153      | 1,88381    | 3,95928                                 |
| 10400                            | 10383                                       | 220,660     | -52,490  | 2,49225      | 1,86934    | 3,93463                                 |
| 10450                            | 10433                                       | 220,336     | -52,814  | 2,47308      | 1,85496    | 3,91011                                 |
| 10500                            | 10483                                       | 220,013     | -53,137  | 2,45402+4    | 1,84067+2  | 3,88570-1                               |
| 10550                            | 10533                                       | 219,689     | -53,461  | 2,43510      | 1,82647    | 3,86141                                 |
| 10600                            | 10582                                       | 219,365     | -53,785  | 2,41628      | 1,81236    | 3,83724                                 |
| 10650                            | 10632                                       | 219,041     | -54,109  | 2,39759      | 1,79834    | 3,81319                                 |
| 10700                            | 10682                                       | 218,717     | -54,433  | 2,37901      | 1,78441    | 3,78924                                 |
| 10750                            | 10732                                       | 218,393     | -54,757  | 2,36055      | 1,77056    | 3,76542                                 |
| 10800                            | 10782                                       | 218,069     | -55,081  | 2,34221      | 1,75680    | 3,74171                                 |
| 10850                            | 10832                                       | 217,745     | -55,405  | 2,32398      | 1,74313    | 3,71812                                 |
| 10900                            | 10881                                       | 217,421     | -55,729  | 2,30587      | 1,72955    | 3,69463                                 |
| 10950                            | 10931                                       | 217,097     | -56,053  | 2,28788      | 1,71605    | 3,67127                                 |
| 11000                            | 10981                                       | 216,774     | -56,376  | 2,26999+4    | 1,70264+2  | 3,64801-1                               |
| 11050                            | 11031                                       | 216,450     | -56,500  | 2,25223      | 1,68931    | 3,62132                                 |
| 11100                            | 11081                                       | 216,126     | -56,500  | 2,23460      | 1,67609    | 3,59318                                 |
| 11150                            | 11130                                       | 215,802     | -56,500  | 2,21711      | 1,66297    | 3,56506                                 |
| 11200                            | 11180                                       | 215,478     | -56,500  | 2,19976      | 1,64995    | 3,53716                                 |
| 11250                            | 11230                                       | 215,154     | -56,500  | 2,18255      | 1,63704    | 3,50948                                 |
| 11300                            | 11280                                       | 214,830     | -56,500  | 2,16547      | 1,62423    | 3,48201                                 |
| 11350                            | 11330                                       | 214,506     | -56,500  | 2,14852      | 1,61152    | 3,45477                                 |
| 11400                            | 11380                                       | 214,182     | -56,500  | 2,13171      | 1,59891    | 3,42773                                 |
| 11450                            | 11429                                       | 213,858     | -56,500  | 2,11502      | 1,58640    | 3,40091                                 |
| 11500                            | 11479                                       | 213,534     | -56,500  | 2,09847+4    | 1,57398+2  | 3,37429-1                               |
| 11550                            | 11529                                       | 213,210     | -56,500  | 2,08205      | 1,56167    | 3,34789                                 |
| 11600                            | 11579                                       | 212,886     | -56,500  | 2,06576      | 1,54945    | 3,32169                                 |
| 11650                            | 11629                                       | 212,562     | -56,500  | 2,04960      | 1,53732    | 3,29570                                 |
| 11700                            | 11679                                       | 212,238     | -56,500  | 2,03356      | 1,52529    | 3,26991                                 |
| 11750                            | 11728                                       | 211,914     | -56,500  | 2,01765      | 1,51336    | 3,24433                                 |
| 11800                            | 11778                                       | 211,590     | -56,500  | 2,00186      | 1,50152    | 3,21894                                 |
| 11850                            | 11828                                       | 211,266     | -56,500  | 1,98620      | 1,48977    | 3,19375                                 |
| 11900                            | 11878                                       | 210,942     | -56,500  | 1,97066      | 1,47811    | 3,16877                                 |
| 11950                            | 11928                                       | 210,618     | -56,500  | 1,95524      | 1,46655    | 3,14397                                 |

Продолжение табл. 1

продолжение табл.

| Геопотенциаль-<br>ная высота, $H$ , м | Величины в функции геопотенциальной высоты |             |          |              |            |                                         | Ускорение<br>свободного<br>падения $g$ ,<br>м/с <sup>2</sup> |
|---------------------------------------|--------------------------------------------|-------------|----------|--------------|------------|-----------------------------------------|--------------------------------------------------------------|
|                                       | геометричес-<br>кая высота<br>$h$ , м      | температура |          | давление $p$ |            | плотность<br>$\rho$ , кг/м <sup>3</sup> |                                                              |
|                                       |                                            | $T$ , К     | $t$ , °С | Па           | мм рт. ст. |                                         |                                                              |
| 10000                                 | 10016                                      | 223,150     | -50,000  | 2,64362+4    | 1,98288+2  | 4,12706-1                               | 9,7758                                                       |
| 10050                                 | 10068                                      | 222,825     | -50,325  | 2,62345      | 1,96775    | 4,10154                                 | 9,7757                                                       |
| 10100                                 | 10116                                      | 222,500     | -50,650  | 2,60340      | 1,95271    | 4,07614                                 | 9,7755                                                       |
| 10150                                 | 10168                                      | 222,175     | -50,975  | 2,58348      | 1,93777    | 4,05086                                 | 9,7754                                                       |
| 10200                                 | 10216                                      | 221,850     | -51,300  | 2,56368      | 1,92292    | 4,02570                                 | 9,7752                                                       |
| 10250                                 | 10267                                      | 221,525     | -51,625  | 2,54400      | 1,90816    | 4,00066                                 | 9,7750                                                       |
| 10300                                 | 10317                                      | 221,200     | -51,950  | 2,52444      | 1,89349    | 3,97575                                 | 9,7749                                                       |
| 10350                                 | 10367                                      | 220,875     | -52,275  | 2,50501      | 1,87891    | 3,95094                                 | 9,7747                                                       |
| 10400                                 | 10417                                      | 220,550     | -52,600  | 2,48570      | 1,86443    | 3,92626                                 | 9,7746                                                       |
| 10450                                 | 10467                                      | 220,225     | -52,925  | 2,46651      | 1,85003    | 3,90170                                 | 9,7744                                                       |
| 10500                                 | 10517                                      | 219,900     | -53,250  | 2,44743+4    | 1,83573+2  | 3,87725-1                               | 9,7743                                                       |
| 10550                                 | 10568                                      | 219,575     | -53,575  | 2,42848      | 1,82151    | 3,85292                                 | 9,7741                                                       |
| 10600                                 | 10618                                      | 219,250     | -53,900  | 2,40965      | 1,80739    | 3,82871                                 | 9,7740                                                       |
| 10650                                 | 10668                                      | 218,925     | -54,225  | 2,39094      | 1,79335    | 3,80461                                 | 9,7738                                                       |
| 10700                                 | 10718                                      | 218,600     | -54,550  | 2,37234      | 1,77940    | 3,78063                                 | 9,7737                                                       |
| 10750                                 | 10768                                      | 218,275     | -54,875  | 2,35386      | 1,76554    | 3,75677                                 | 9,7735                                                       |
| 10800                                 | 10818                                      | 217,950     | -55,200  | 2,33550      | 1,75177    | 3,73302                                 | 9,7734                                                       |
| 10850                                 | 10869                                      | 217,625     | -55,525  | 2,31725      | 1,73808    | 3,70939                                 | 9,7732                                                       |
| 10900                                 | 10919                                      | 217,300     | -55,850  | 2,29912      | 1,72448    | 3,68587                                 | 9,7730                                                       |
| 10950                                 | 10969                                      | 216,975     | -56,175  | 2,28110      | 1,71097    | 3,66247                                 | 9,7729                                                       |
| 11000                                 | 11019                                      | 216,650     | -56,500  | 2,26320+4    | 1,69754+2  | 3,63918-1                               | 9,7727                                                       |
| 11050                                 | 11069                                      | 216,325     | -56,825  | 2,24543      | 1,68421    | 3,61059                                 | 9,7726                                                       |
| 11100                                 | 11119                                      | 216,000     | -57,150  | 2,22779      | 1,67098    | 3,58223                                 | 9,7724                                                       |
| 11150                                 | 11170                                      | 215,675     | -57,475  | 2,21030      | 1,65726    | 3,55410                                 | 9,7723                                                       |
| 11200                                 | 11220                                      | 215,350     | -57,800  | 2,19294      | 1,64484    | 3,52619                                 | 9,7721                                                       |
| 11250                                 | 11270                                      | 215,025     | -58,125  | 2,17571      | 1,63192    | 3,49850                                 | 9,7720                                                       |
| 11300                                 | 11320                                      | 214,700     | -58,450  | 2,15863      | 1,61910    | 3,47102                                 | 9,7718                                                       |
| 11350                                 | 11370                                      | 214,375     | -58,775  | 2,14168      | 1,60639    | 3,44376                                 | 9,7717                                                       |
| 11400                                 | 11420                                      | 214,050     | -59,100  | 2,12486      | 1,59377    | 3,41672                                 | 9,7715                                                       |
| 11450                                 | 11471                                      | 213,725     | -59,425  | 2,10817      | 1,58126    | 3,38988                                 | 9,7714                                                       |
| 11500                                 | 11521                                      | 213,400     | -59,750  | 2,09161+4    | 1,56884+2  | 3,36326-1                               | 9,7712                                                       |
| 11550                                 | 11571                                      | 213,075     | -60,075  | 2,07519      | 1,55652    | 3,33685                                 | 9,7710                                                       |
| 11600                                 | 11621                                      | 212,750     | -60,400  | 2,05889      | 1,54429    | 3,31064                                 | 9,7709                                                       |
| 11650                                 | 11671                                      | 212,425     | -60,725  | 2,04272      | 1,53217    | 3,28464                                 | 9,7707                                                       |
| 11700                                 | 11722                                      | 212,100     | -61,050  | 2,02668      | 1,52013    | 3,25885                                 | 9,7706                                                       |
| 11750                                 | 11772                                      | 211,775     | -61,375  | 2,01076      | 1,50819    | 3,23325                                 | 9,7704                                                       |
| 11800                                 | 11822                                      | 211,450     | -61,700  | 1,99497      | 1,49635    | 3,20786                                 | 9,7703                                                       |
| 11850                                 | 11872                                      | 211,125     | -62,025  | 1,97930      | 1,48460    | 3,18267                                 | 9,7701                                                       |
| 11900                                 | 11922                                      | 210,800     | -62,350  | 1,96376      | 1,47294    | 3,15767                                 | 9,7700                                                       |
| 11950                                 | 11973                                      | 210,475     | -62,675  | 1,94834      | 1,46137    | 3,13288                                 | 9,7698                                                       |

От 12000 до 13950 м

| Геометрическая<br>высота $h$ , м | Величина функции геометрической высоты    |             |          |              |            |                                         |                                                              |
|----------------------------------|-------------------------------------------|-------------|----------|--------------|------------|-----------------------------------------|--------------------------------------------------------------|
|                                  | геопотенци-<br>альная высо-<br>та $H$ , м | температура |          | давление $p$ |            | плотность<br>$\rho$ , кг/м <sup>3</sup> | ускорение<br>свободного<br>падения $g$ ,<br>м/с <sup>2</sup> |
|                                  |                                           | $T$ , К     | $t$ , °C | Па           | мм рт. ст. |                                         |                                                              |
| 12000                            | 11977                                     | 216,650     | -56,500  | 1,93994+4    | 1,45507+2  | 3,11937-1                               | 9,7697                                                       |
| 12050                            | 12027                                     | 216,650     | -56,500  | 1,92476      | 1,44369    | 3,09497                                 | 9,7696                                                       |
| 12100                            | 12077                                     | 216,650     | -56,500  | 1,90970      | 1,43239    | 3,07075                                 | 9,7694                                                       |
| 12150                            | 12127                                     | 216,650     | -56,500  | 1,89476      | 1,42119    | 3,04673                                 | 9,7693                                                       |
| 12200                            | 12177                                     | 216,650     | -56,500  | 1,87991      | 1,41007    | 3,02289                                 | 9,7691                                                       |
| 12250                            | 12226                                     | 216,650     | -56,500  | 1,86523      | 1,39904    | 2,99924                                 | 9,7690                                                       |
| 12300                            | 12276                                     | 216,650     | -56,500  | 1,85064      | 1,38809    | 2,97578                                 | 9,7688                                                       |
| 12350                            | 12326                                     | 216,650     | -56,500  | 1,83616      | 1,37723    | 2,95250                                 | 9,7687                                                       |
| 12400                            | 12376                                     | 216,650     | -56,500  | 1,82180      | 1,36646    | 2,92940                                 | 9,7685                                                       |
| 12450                            | 12426                                     | 216,650     | -56,500  | 1,80754      | 1,35577    | 2,90649                                 | 9,7683                                                       |
|                                  |                                           |             |          |              |            |                                         |                                                              |
| 12500                            | 12475                                     | 216,650     | -56,500  | 1,79340+4    | 1,34516+2  | 2,88375-1                               | 9,7682                                                       |
| 12550                            | 12525                                     | 216,650     | -56,500  | 1,77937      | 1,33464    | 2,86119                                 | 9,7680                                                       |
| 12600                            | 12575                                     | 216,650     | -56,500  | 1,76546      | 1,32420    | 2,83881                                 | 9,7679                                                       |
| 12650                            | 12625                                     | 216,650     | -56,500  | 1,75165      | 1,31384    | 2,81660                                 | 9,7677                                                       |
| 12700                            | 12675                                     | 216,650     | -56,500  | 1,73794      | 1,30356    | 2,79457                                 | 9,7676                                                       |
| 12750                            | 12724                                     | 216,650     | -56,500  | 1,72435      | 1,29337    | 2,77271                                 | 9,7674                                                       |
| 12800                            | 12774                                     | 216,650     | -56,500  | 1,71086      | 1,28325    | 2,75102                                 | 9,7673                                                       |
| 12850                            | 12824                                     | 216,650     | -56,500  | 1,69748      | 1,27321    | 2,72950                                 | 9,7671                                                       |
| 12900                            | 12874                                     | 216,650     | -56,500  | 1,68420      | 1,26325    | 2,70815                                 | 9,7670                                                       |
| 12950                            | 12924                                     | 216,650     | -56,500  | 1,67103      | 1,25337    | 2,68697                                 | 9,7668                                                       |
|                                  |                                           |             |          |              |            |                                         |                                                              |
| 13000                            | 12973                                     | 216,650     | -56,500  | 1,65796+4    | 1,24357+2  | 2,66595-1                               | 9,7667                                                       |
| 13050                            | 13023                                     | 216,650     | -56,500  | 1,64499      | 1,23384    | 2,64510                                 | 9,7665                                                       |
| 13100                            | 13073                                     | 216,650     | -56,500  | 1,63212      | 1,22419    | 2,62442                                 | 9,7664                                                       |
| 13150                            | 13123                                     | 216,650     | -56,500  | 1,61936      | 1,21462    | 2,60389                                 | 9,7662                                                       |
| 13200                            | 13173                                     | 216,650     | -56,500  | 1,60669      | 1,20512    | 2,58352                                 | 9,7660                                                       |
| 13250                            | 13222                                     | 216,650     | -56,500  | 1,59413      | 1,19569    | 2,56332                                 | 9,7659                                                       |
| 13300                            | 13272                                     | 216,650     | -56,500  | 1,58166      | 1,18634    | 2,54327                                 | 9,7657                                                       |
| 13350                            | 13322                                     | 216,650     | -56,500  | 1,56929      | 1,17706    | 2,52338                                 | 9,7656                                                       |
| 13400                            | 13372                                     | 216,650     | -56,500  | 1,55702      | 1,16786    | 2,50365                                 | 9,7654                                                       |
| 13450                            | 13422                                     | 216,650     | -56,500  | 1,54484      | 1,15873    | 2,48407                                 | 9,7653                                                       |
|                                  |                                           |             |          |              |            |                                         |                                                              |
| 13500                            | 13471                                     | 216,650     | -56,500  | 1,53276+4    | 1,14966+2  | 2,46464-1                               | 9,7651                                                       |
| 13550                            | 13521                                     | 216,650     | -56,500  | 1,52077      | 1,14067    | 2,44537                                 | 9,7650                                                       |
| 13600                            | 13571                                     | 216,650     | -56,500  | 1,50888      | 1,13175    | 2,42624                                 | 9,7648                                                       |
| 13650                            | 13621                                     | 216,650     | -56,500  | 1,49708      | 1,12290    | 2,40727                                 | 9,7647                                                       |
| 13700                            | 13671                                     | 216,650     | -56,500  | 1,48537      | 1,11412    | 2,38845                                 | 9,7645                                                       |
| 13750                            | 13720                                     | 216,650     | -56,500  | 1,47376      | 1,10541    | 2,36977                                 | 9,7644                                                       |
| 13800                            | 13770                                     | 216,650     | -56,500  | 1,46223      | 1,09677    | 2,35124                                 | 9,7642                                                       |
| 13850                            | 13820                                     | 216,650     | -56,500  | 1,45080      | 1,08819    | 2,33285                                 | 9,7641                                                       |
| 13900                            | 13870                                     | 216,650     | -56,500  | 1,43946      | 1,07968    | 2,31461                                 | 9,7639                                                       |
| 13950                            | 13919                                     | 216,650     | -56,500  | 1,42820      | 1,07124    | 2,29651                                 | 9,7637                                                       |

| Геопотенциаль-<br>ная высота $H$ , м | Величины в функции геопотенциальной высоты |             |          |              |            |                                         |                                                              |
|--------------------------------------|--------------------------------------------|-------------|----------|--------------|------------|-----------------------------------------|--------------------------------------------------------------|
|                                      | геометриче-<br>ская высота<br>$A$ , м      | температура |          | давление $p$ |            | плотность<br>$\rho$ , кг/м <sup>3</sup> | ускорение<br>свободного<br>падения $g$ ,<br>м/с <sup>2</sup> |
|                                      |                                            | $T$ , К     | $t$ , °С | Па           | мм рт. ст. |                                         |                                                              |
| 12000                                | 12023                                      | 216,650     | -56,500  | 1,93303+4    | 1,44990+2  | 3,10827-1                               | 9,7697                                                       |
| 12050                                | 12073                                      | 216,650     | -56,500  | 1,91785      | 1,43851    | 3,08386                                 | 9,7695                                                       |
| 12100                                | 12123                                      | 216,650     | -56,500  | 1,90279      | 1,42721    | 3,05964                                 | 9,7694                                                       |
| 12150                                | 12173                                      | 216,650     | -56,500  | 1,88785      | 1,41600    | 3,03561                                 | 9,7692                                                       |
| 12200                                | 12223                                      | 216,650     | -56,500  | 1,87302      | 1,40488    | 3,01177                                 | 9,7690                                                       |
| 12250                                | 12274                                      | 216,650     | -56,500  | 1,85831      | 1,39385    | 2,98812                                 | 9,7689                                                       |
| 12300                                | 12324                                      | 216,650     | -56,500  | 1,84372      | 1,38290    | 2,96465                                 | 9,7687                                                       |
| 12350                                | 12374                                      | 216,650     | -56,500  | 1,82924      | 1,37204    | 2,94137                                 | 9,7686                                                       |
| 12400                                | 12424                                      | 216,650     | -56,500  | 1,81487      | 1,36127    | 2,91827                                 | 9,7684                                                       |
| 12450                                | 12474                                      | 216,650     | -56,500  | 1,80062      | 1,35058    | 2,89535                                 | 9,7683                                                       |
| 12500                                | 12525                                      | 216,650     | -56,500  | 1,78648+4    | 1,33997+2  | 2,87262-1                               | 9,7681                                                       |
| 12550                                | 12575                                      | 216,650     | -56,500  | 1,77245      | 1,32945    | 2,85006                                 | 9,7680                                                       |
| 12600                                | 12625                                      | 216,650     | -56,500  | 1,75853      | 1,31901    | 2,82767                                 | 9,7678                                                       |
| 12650                                | 12675                                      | 216,650     | -56,500  | 1,74472      | 1,30865    | 2,80547                                 | 9,7677                                                       |
| 12700                                | 12725                                      | 216,650     | -56,500  | 1,73102      | 1,29837    | 2,78343                                 | 9,7675                                                       |
| 12750                                | 12776                                      | 216,650     | -56,500  | 1,71742      | 1,28817    | 2,76157                                 | 9,7674                                                       |
| 12800                                | 12826                                      | 216,650     | -56,500  | 1,70394      | 1,27806    | 2,73989                                 | 9,7672                                                       |
| 12850                                | 12876                                      | 216,650     | -56,500  | 1,69055      | 1,26802    | 2,71837                                 | 9,7670                                                       |
| 12900                                | 12926                                      | 216,650     | -56,500  | 1,67728      | 1,25806    | 2,69702                                 | 9,7669                                                       |
| 12950                                | 12976                                      | 216,650     | -56,500  | 1,66410      | 1,24818    | 2,67584                                 | 9,7667                                                       |
| 13000                                | 13027                                      | 216,650     | -56,500  | 1,65104+4    | 1,23838+2  | 2,65482-1                               | 9,7666                                                       |
| 13050                                | 13077                                      | 216,650     | -56,500  | 1,63807      | 1,22865    | 2,63398                                 | 9,7664                                                       |
| 13100                                | 13127                                      | 216,650     | -56,500  | 1,62520      | 1,21900    | 2,61329                                 | 9,7663                                                       |
| 13150                                | 13177                                      | 216,650     | -56,500  | 1,61244      | 1,20943    | 2,59277                                 | 9,7661                                                       |
| 13200                                | 13227                                      | 216,650     | -56,500  | 1,59978      | 1,19993    | 2,57240                                 | 9,7660                                                       |
| 13250                                | 13278                                      | 216,650     | -56,500  | 1,58721      | 1,19051    | 2,55220                                 | 9,7658                                                       |
| 13300                                | 13328                                      | 216,650     | -56,500  | 1,57475      | 1,18116    | 2,53216                                 | 9,7657                                                       |
| 13350                                | 13378                                      | 216,650     | -56,500  | 1,56238      | 1,17188    | 2,51227                                 | 9,7655                                                       |
| 13400                                | 13428                                      | 216,650     | -56,500  | 1,55011      | 1,16268    | 2,49254                                 | 9,7653                                                       |
| 13450                                | 13479                                      | 216,650     | -56,500  | 1,53794      | 1,15355    | 2,47297                                 | 9,7652                                                       |
| 13500                                | 13529                                      | 216,650     | -56,500  | 1,52586+4    | 1,14449+2  | 2,45355-1                               | 9,7650                                                       |
| 13550                                | 13579                                      | 216,650     | -56,500  | 1,51388      | 1,13550    | 2,43428                                 | 9,7649                                                       |
| 13600                                | 13629                                      | 216,650     | -56,500  | 1,50199      | 1,12658    | 2,41516                                 | 9,7647                                                       |
| 13650                                | 13679                                      | 216,650     | -56,500  | 1,49019      | 1,11774    | 2,39619                                 | 9,7646                                                       |
| 13700                                | 13730                                      | 216,650     | -56,500  | 1,47849      | 1,10896    | 2,37737                                 | 9,7644                                                       |
| 13750                                | 13780                                      | 216,650     | -56,500  | 1,46688      | 1,10025    | 2,35870                                 | 9,7643                                                       |
| 13800                                | 13830                                      | 216,650     | -56,500  | 1,45536      | 1,09161    | 2,34018                                 | 9,7641                                                       |
| 13850                                | 13880                                      | 216,650     | -56,500  | 1,44393      | 1,08304    | 2,32180                                 | 9,7640                                                       |
| 13900                                | 13930                                      | 216,650     | -56,500  | 1,43259      | 1,07453    | 2,30357                                 | 9,7638                                                       |
| 13950                                | 13981                                      | 216,650     | -56,500  | 1,42134      | 1,06609    | 2,28548                                 | 9,7637                                                       |

От 14000 до 15950 м

| Геометрическая<br>высота $H$ , м | Величины в функции геометрической высоты |             |          |              |            |                                         |
|----------------------------------|------------------------------------------|-------------|----------|--------------|------------|-----------------------------------------|
|                                  | геометриче-<br>ская высо-<br>та $H$ , м  | температура |          | давление $p$ |            | плотность<br>$\rho$ , кг/м <sup>3</sup> |
|                                  |                                          | $T$ , К     | $t$ , °C | Па           | мм рт. ст. |                                         |
| 14000                            | 13999                                    | 216,650     | -56,500  | 1,41703+4    | 1,06286+2  | 2,27855-1                               |
| 14050                            | 14019                                    | 216,650     | -56,500  | 1,40595      | 1,05455    | 2,26074                                 |
| 14100                            | 14069                                    | 216,650     | -56,500  | 1,39496      | 1,04631    | 2,24306                                 |
| 14150                            | 14119                                    | 216,650     | -56,500  | 1,38405      | 1,03812    | 2,22552                                 |
| 14200                            | 14168                                    | 216,650     | -56,500  | 1,37323      | 1,03001    | 2,20812                                 |
| 14250                            | 14218                                    | 216,650     | -56,500  | 1,36250      | 1,02196    | 2,19086                                 |
| 14300                            | 14268                                    | 216,650     | -56,500  | 1,35184      | 1,01397    | 2,17373                                 |
| 14350                            | 14318                                    | 216,650     | -56,500  | 1,34127      | 1,00604    | 2,15674                                 |
| 14400                            | 14367                                    | 216,650     | -56,500  | 1,33079      | 9,98173+1  | 2,13987                                 |
| 14450                            | 14417                                    | 216,650     | -56,500  | 1,32038      | 9,90369    | 2,12314                                 |
| 14500                            | 14467                                    | 216,650     | -56,500  | 1,31006+4    | 9,82627+1  | 2,10654-1                               |
| 14550                            | 14517                                    | 216,650     | -56,500  | 1,29982      | 9,74945    | 2,09008                                 |
| 14600                            | 14567                                    | 216,650     | -56,500  | 1,28966      | 9,67323    | 2,07374                                 |
| 14650                            | 14616                                    | 216,650     | -56,500  | 1,27958      | 9,59761    | 2,05753                                 |
| 14700                            | 14666                                    | 216,650     | -56,500  | 1,26957      | 9,52258    | 2,04144                                 |
| 14750                            | 14716                                    | 216,650     | -56,500  | 1,25965      | 9,44814    | 2,02548                                 |
| 14800                            | 14766                                    | 216,650     | -56,500  | 1,24980      | 9,37428    | 2,00965                                 |
| 14850                            | 14815                                    | 216,650     | -56,500  | 1,24003      | 9,30100    | 1,99394                                 |
| 14900                            | 14865                                    | 216,650     | -56,500  | 1,23034      | 9,22829    | 1,97835                                 |
| 14950                            | 14915                                    | 216,650     | -56,500  | 1,22072      | 9,15616    | 1,96289                                 |
| 15000                            | 14965                                    | 216,650     | -56,500  | 1,21118+4    | 9,08459+1  | 1,94755-1                               |
| 15050                            | 15014                                    | 216,650     | -56,500  | 1,20171      | 9,01358    | 1,93232                                 |
| 15100                            | 15064                                    | 216,650     | -56,500  | 1,19232      | 8,94312    | 1,91722                                 |
| 15150                            | 15114                                    | 216,650     | -56,500  | 1,18300      | 8,87322    | 1,90223                                 |
| 15200                            | 15164                                    | 216,650     | -56,500  | 1,17375      | 8,80387    | 1,88736                                 |
| 15250                            | 15214                                    | 216,650     | -56,500  | 1,16458      | 8,73505    | 1,87261                                 |
| 15300                            | 15263                                    | 216,650     | -56,500  | 1,15548      | 8,66678    | 1,85798                                 |
| 15350                            | 15313                                    | 216,650     | -56,500  | 1,14644      | 8,59904    | 1,84345                                 |
| 15400                            | 15363                                    | 216,650     | -56,500  | 1,13748      | 8,53184    | 1,82905                                 |
| 15450                            | 15413                                    | 216,650     | -56,500  | 1,12859      | 8,46515    | 1,81475                                 |
| 15500                            | 15462                                    | 216,650     | -56,500  | 1,11977+4    | 8,39900+1  | 1,80057-1                               |
| 15550                            | 15512                                    | 216,650     | -56,500  | 1,11102      | 8,33335    | 1,78650                                 |
| 15600                            | 15562                                    | 216,650     | -56,500  | 1,10234      | 8,26823    | 1,77253                                 |
| 15650                            | 15612                                    | 216,650     | -56,500  | 1,09372      | 8,20361    | 1,75868                                 |
| 15700                            | 15661                                    | 216,650     | -56,500  | 1,08518      | 8,13950    | 1,74494                                 |
| 15750                            | 15711                                    | 216,650     | -56,500  | 1,07670      | 8,07589    | 1,73130                                 |
| 15800                            | 15761                                    | 216,650     | -56,500  | 1,06828      | 8,01278    | 1,71777                                 |
| 15850                            | 15811                                    | 216,650     | -56,500  | 1,05993      | 7,95016    | 1,70435                                 |
| 15900                            | 15860                                    | 216,650     | -56,500  | 1,05165      | 7,88804    | 1,69103                                 |
| 15950                            | 15910                                    | 216,650     | -56,500  | 1,04343      | 7,82639    | 1,67782                                 |

Продолжение табл. 1

| Геопотенциальная высота $H_p$ , м | Величины в функции геопотенциальной высоты |             |          |              |            |                                      | ускорение свободного падения $g$ , м/с <sup>2</sup> |
|-----------------------------------|--------------------------------------------|-------------|----------|--------------|------------|--------------------------------------|-----------------------------------------------------|
|                                   | геометрическая высота $H$ , м              | температура |          | давление $p$ |            | плотность $\rho$ , кг/м <sup>3</sup> |                                                     |
|                                   |                                            | $T$ , К     | $t$ , °C | Па           | мм рт. ст. |                                      |                                                     |
| 14000                             | 14031                                      | 216,650     | -56,500  | 1,41018+4    | 1,05772+2  | 2,26753-1                            | 9,7635                                              |
| 14050                             | 14081                                      | 216,650     | -56,500  | 1,39910      | 1,04941    | 2,24972                              | 9,7633                                              |
| 14100                             | 14131                                      | 216,650     | -56,500  | 1,38811      | 1,04117    | 2,23205                              | 9,7632                                              |
| 14150                             | 14182                                      | 216,650     | -56,500  | 1,37721      | 1,03299    | 2,21452                              | 9,7630                                              |
| 14200                             | 14232                                      | 216,650     | -56,500  | 1,36640      | 1,02488    | 2,19713                              | 9,7629                                              |
| 14250                             | 14282                                      | 216,650     | -56,500  | 1,35567      | 1,01683    | 2,17988                              | 9,7627                                              |
| 14300                             | 14332                                      | 216,650     | -56,500  | 1,34502      | 1,00885    | 2,16276                              | 9,7626                                              |
| 14350                             | 14382                                      | 216,650     | -56,500  | 1,33446      | 1,00092    | 2,14577                              | 9,7624                                              |
| 14400                             | 14433                                      | 216,650     | -56,500  | 1,32398      | 9,93063+1  | 2,12892                              | 9,7623                                              |
| 14450                             | 14483                                      | 216,650     | -56,500  | 1,31358      | 9,85264    | 2,11220                              | 9,7621                                              |
| 14500                             | 14533                                      | 216,650     | -56,500  | 1,30326+4    | 9,77526+1  | 2,09561-1                            | 9,7620                                              |
| 14550                             | 14583                                      | 216,650     | -56,500  | 1,29303      | 9,69850    | 2,07915                              | 9,7618                                              |
| 14600                             | 14634                                      | 216,650     | -56,500  | 1,28287      | 9,62233    | 2,06283                              | 9,7617                                              |
| 14650                             | 14684                                      | 216,650     | -56,500  | 1,27280      | 9,54676    | 2,04662                              | 9,7615                                              |
| 14700                             | 14734                                      | 216,650     | -56,500  | 1,26280      | 9,47179    | 2,03055                              | 9,7613                                              |
| 14750                             | 14784                                      | 216,650     | -56,500  | 1,25288      | 9,39740    | 2,01461                              | 9,7612                                              |
| 14800                             | 14835                                      | 216,650     | -56,500  | 1,24304      | 9,32360    | 1,99878                              | 9,7610                                              |
| 14850                             | 14885                                      | 216,650     | -56,500  | 1,23328      | 9,25038    | 1,98309                              | 9,7609                                              |
| 14900                             | 14935                                      | 216,650     | -56,500  | 1,22360      | 9,17773    | 1,96751                              | 9,7607                                              |
| 14950                             | 14985                                      | 216,650     | -56,500  | 1,21399      | 9,10565    | 1,95206                              | 9,7606                                              |
| 15000                             | 15035                                      | 216,650     | -56,500  | 1,20445+4    | 9,03414+1  | 1,93673-1                            | 9,7604                                              |
| 15050                             | 15086                                      | 216,650     | -56,500  | 1,19499      | 8,96319    | 1,92152                              | 9,7603                                              |
| 15100                             | 15136                                      | 216,650     | -56,500  | 1,18561      | 8,89280    | 1,90643                              | 9,7601                                              |
| 15150                             | 15186                                      | 216,650     | -56,500  | 1,17630      | 8,82296    | 1,89146                              | 9,7600                                              |
| 15200                             | 15236                                      | 216,650     | -56,500  | 1,16706      | 8,75367    | 1,87660                              | 9,7598                                              |
| 15250                             | 15287                                      | 216,650     | -56,500  | 1,15789      | 8,68493    | 1,86187                              | 9,7597                                              |
| 15300                             | 15337                                      | 216,650     | -56,500  | 1,14880      | 8,61672    | 1,84724                              | 9,7595                                              |
| 15350                             | 15387                                      | 216,650     | -56,500  | 1,13978      | 8,54905    | 1,83274                              | 9,7593                                              |
| 15400                             | 15437                                      | 216,650     | -56,500  | 1,13083      | 8,48191    | 1,81834                              | 9,7592                                              |
| 15450                             | 15488                                      | 216,650     | -56,500  | 1,12195      | 8,41530    | 1,80406                              | 9,7590                                              |
| 15500                             | 15538                                      | 216,650     | -56,500  | 1,11314+4    | 8,34921+1  | 1,78990-1                            | 9,7589                                              |
| 15550                             | 15588                                      | 216,650     | -56,500  | 1,10439      | 8,28364    | 1,77584                              | 9,7587                                              |
| 15600                             | 15638                                      | 216,650     | -56,500  | 1,09572      | 8,21858    | 1,76189                              | 9,7586                                              |
| 15650                             | 15689                                      | 216,650     | -56,500  | 1,08711      | 8,15404    | 1,74805                              | 9,7584                                              |
| 15700                             | 15739                                      | 216,650     | -56,500  | 1,07858      | 8,09000    | 1,73433                              | 9,7583                                              |
| 15750                             | 15789                                      | 216,650     | -56,500  | 1,07011      | 8,02647    | 1,72071                              | 9,7581                                              |
| 15800                             | 15839                                      | 216,650     | -56,500  | 1,06170      | 7,96343    | 1,70719                              | 9,7580                                              |
| 15850                             | 15890                                      | 216,650     | -56,500  | 1,05336      | 7,90089    | 1,69379                              | 9,7578                                              |
| 15900                             | 15940                                      | 216,650     | -56,500  | 1,04509      | 7,83884    | 1,68048                              | 9,7577                                              |
| 15950                             | 15990                                      | 216,650     | -56,500  | 1,03689      | 7,77728    | 1,66729                              | 9,7575                                              |



От 16000 до 17950 м

| Геометрическая<br>высота $H$ , м | Величины в функции геометрической высоты  |             |          |              |            |                                         |                                                                     |
|----------------------------------|-------------------------------------------|-------------|----------|--------------|------------|-----------------------------------------|---------------------------------------------------------------------|
|                                  | геопотенци-<br>альная высо-<br>та $H$ , м | температура |          | давление $p$ |            | плотность<br>$\rho$ , кг/м <sup>3</sup> | ускорение<br>свободного<br>падающего тела $g$ ,<br>м/с <sup>2</sup> |
|                                  |                                           | $T$ , К     | $t$ , °C | Па           | мм рт. ст. |                                         |                                                                     |
| 16000                            | 15950                                     | 216,650     | -56,500  | 1,03528+4    | 7,76524+1  | 1,66470-1                               | 9,7575                                                              |
| 16050                            | 16010                                     | 216,650     | -56,500  | 1,02719      | 7,70456    | 1,65170                                 | 9,7573                                                              |
| 16100                            | 16059                                     | 216,650     | -56,500  | 1,01916      | 7,64436    | 1,63879                                 | 9,7572                                                              |
| 16150                            | 16109                                     | 216,650     | -56,500  | 1,01120      | 7,58462    | 1,62598                                 | 9,7570                                                              |
| 16200                            | 16159                                     | 216,650     | -56,500  | 1,00330      | 7,52536    | 1,61328                                 | 9,7569                                                              |
| 16250                            | 16209                                     | 216,650     | -56,500  | 9,95459+3    | 7,46656    | 1,60067                                 | 9,7567                                                              |
| 16300                            | 16258                                     | 216,650     | -56,500  | 9,87681      | 7,40822    | 1,58817                                 | 9,7566                                                              |
| 16350                            | 16308                                     | 216,650     | -56,500  | 9,79964      | 7,35033    | 1,57576                                 | 9,7564                                                              |
| 16400                            | 16358                                     | 216,650     | -56,500  | 9,72307      | 7,29290    | 1,56345                                 | 9,7562                                                              |
| 16450                            | 16408                                     | 216,650     | -56,500  | 9,64711      | 7,23592    | 1,55123                                 | 9,7561                                                              |
| 16500                            | 16457                                     | 216,650     | -56,500  | 9,57173+3    | 7,17939+1  | 1,53911-1                               | 9,7559                                                              |
| 16550                            | 16507                                     | 216,650     | -56,500  | 9,49695      | 7,12330    | 1,52709                                 | 9,7558                                                              |
| 16600                            | 16557                                     | 216,650     | -56,500  | 9,42275      | 7,06764    | 1,51515                                 | 9,7556                                                              |
| 16650                            | 16607                                     | 216,650     | -56,500  | 9,34913      | 7,01243    | 1,50332                                 | 9,7555                                                              |
| 16700                            | 16656                                     | 216,650     | -56,500  | 9,27609      | 6,95764    | 1,49157                                 | 9,7553                                                              |
| 16750                            | 16706                                     | 216,650     | -56,500  | 9,20362      | 6,90329    | 1,47992                                 | 9,7552                                                              |
| 16800                            | 16756                                     | 216,650     | -56,500  | 9,13172      | 6,84936    | 1,46836                                 | 9,7550                                                              |
| 16850                            | 16806                                     | 216,650     | -56,500  | 9,06039      | 6,79585    | 1,45689                                 | 9,7549                                                              |
| 16900                            | 16855                                     | 216,650     | -56,500  | 8,98969      | 6,74276    | 1,44551                                 | 9,7547                                                              |
| 16950                            | 16905                                     | 216,650     | -56,500  | 8,91938      | 6,69008    | 1,43421                                 | 9,7546                                                              |
| 17000                            | 16955                                     | 216,650     | -56,500  | 8,84970+3    | 6,63782+1  | 1,42301-1                               | 9,7544                                                              |
| 17050                            | 17004                                     | 216,650     | -56,500  | 8,78057      | 6,58597    | 1,41189                                 | 9,7543                                                              |
| 17100                            | 17054                                     | 216,650     | -56,500  | 8,71198      | 6,53452    | 1,40086                                 | 9,7541                                                              |
| 17150                            | 17104                                     | 216,650     | -56,500  | 8,64393      | 6,48348    | 1,38992                                 | 9,7539                                                              |
| 17200                            | 17154                                     | 216,650     | -56,500  | 8,57641      | 6,43283    | 1,37907                                 | 9,7538                                                              |
| 17250                            | 17203                                     | 216,650     | -56,500  | 8,50942      | 6,38259    | 1,36829                                 | 9,7536                                                              |
| 17300                            | 17253                                     | 216,650     | -56,500  | 8,44295      | 6,33273    | 1,35761                                 | 9,7535                                                              |
| 17350                            | 17303                                     | 216,650     | -56,500  | 8,37700      | 6,28327    | 1,34700                                 | 9,7533                                                              |
| 17400                            | 17353                                     | 216,650     | -56,500  | 8,31157      | 6,23419    | 1,33648                                 | 9,7532                                                              |
| 17450                            | 17402                                     | 216,650     | -56,500  | 8,24665      | 6,18550    | 1,32604                                 | 9,7530                                                              |
| 17500                            | 17452                                     | 216,650     | -56,500  | 8,18224+3    | 6,13718+1  | 1,31568-1                               | 9,7529                                                              |
| 17550                            | 17502                                     | 216,650     | -56,500  | 8,11833      | 6,08925    | 1,30541                                 | 9,7527                                                              |
| 17600                            | 17551                                     | 216,650     | -56,500  | 8,05492      | 6,04169    | 1,29521                                 | 9,7526                                                              |
| 17650                            | 17601                                     | 216,650     | -56,500  | 7,99201      | 5,99450    | 1,28509                                 | 9,7524                                                              |
| 17700                            | 17651                                     | 216,650     | -56,500  | 7,92959      | 5,94768    | 1,27506                                 | 9,7523                                                              |
| 17750                            | 17701                                     | 216,650     | -56,500  | 7,86766      | 5,90123    | 1,26510                                 | 9,7521                                                              |
| 17800                            | 17750                                     | 216,650     | -56,500  | 7,80622      | 5,85515    | 1,25522                                 | 9,7520                                                              |
| 17850                            | 17800                                     | 216,650     | -56,500  | 7,74525      | 5,80942    | 1,24542                                 | 9,7518                                                              |
| 17900                            | 17850                                     | 216,650     | -56,500  | 7,68477      | 5,76405    | 1,23569                                 | 9,7517                                                              |
| 17950                            | 17899                                     | 216,650     | -56,500  | 7,62475      | 5,71904    | 1,22604                                 | 9,7515                                                              |

Продолжение табл. 1

| Геотермическая высота $H$ , м | Величины в функции геотермической высоты |             |          |              |            |                                      |                                                     |
|-------------------------------|------------------------------------------|-------------|----------|--------------|------------|--------------------------------------|-----------------------------------------------------|
|                               | Геотермическая высота $H$ , м            | температура |          | давление $p$ |            | плотность $\rho$ , кг/м <sup>3</sup> | ускорение свободного падения $g$ , м/с <sup>2</sup> |
|                               |                                          | $T$ , К     | $t$ , °С | Па           | мм рт. ст. |                                      |                                                     |
| 16000                         | 16040                                    | 216,650     | -56,500  | 1,02874+4    | 7,71620+1  | 1,65419-1                            | 9,7573                                              |
| 16050                         | 16091                                    | 216,650     | -56,500  | 1,02066      | 7,65561    | 1,64120                              | 9,7572                                              |
| 16100                         | 16141                                    | 216,650     | -56,500  | 1,01265      | 7,59548    | 1,62831                              | 9,7570                                              |
| 16150                         | 16191                                    | 216,650     | -56,500  | 1,00469      | 7,53583    | 1,61552                              | 9,7569                                              |
| 16200                         | 16241                                    | 216,650     | -56,500  | 9,96805+3    | 7,47665    | 1,60284                              | 9,7567                                              |
| 16250                         | 16292                                    | 216,650     | -56,500  | 9,88976      | 7,41793    | 1,59025                              | 9,7566                                              |
| 16300                         | 16342                                    | 216,650     | -56,500  | 9,81209      | 7,35968    | 1,57776                              | 9,7564                                              |
| 16350                         | 16392                                    | 216,650     | -56,500  | 9,73503      | 7,30188    | 1,56537                              | 9,7563                                              |
| 16400                         | 16442                                    | 216,650     | -56,500  | 9,65858      | 7,24453    | 1,55308                              | 9,7561                                              |
| 16450                         | 16493                                    | 216,650     | -56,500  | 9,58273      | 7,18764    | 1,54088                              | 9,7560                                              |
| 16500                         | 16543                                    | 216,650     | -56,500  | 9,50747+3    | 7,13119+1  | 1,52878-1                            | 9,7558                                              |
| 16550                         | 16593                                    | 216,650     | -56,500  | 9,43281      | 7,07519    | 1,51677                              | 9,7557                                              |
| 16600                         | 16643                                    | 216,650     | -56,500  | 9,35873      | 7,01962    | 1,50486                              | 9,7555                                              |
| 16650                         | 16694                                    | 216,650     | -56,500  | 9,28523      | 6,96449    | 1,49304                              | 9,7553                                              |
| 16700                         | 16744                                    | 216,650     | -56,500  | 9,21231      | 6,90930    | 1,48132                              | 9,7552                                              |
| 16750                         | 16794                                    | 216,650     | -56,500  | 9,13996      | 6,85553    | 1,46968                              | 9,7550                                              |
| 16800                         | 16845                                    | 216,650     | -56,500  | 9,06818      | 6,80169    | 1,45814                              | 9,7549                                              |
| 16850                         | 16895                                    | 216,650     | -56,500  | 8,99696      | 6,74828    | 1,44669                              | 9,7547                                              |
| 16900                         | 16945                                    | 216,650     | -56,500  | 8,92631      | 6,69528    | 1,43533                              | 9,7546                                              |
| 16950                         | 16995                                    | 216,650     | -56,500  | 8,85620      | 6,64270    | 1,42405                              | 9,7544                                              |
| 17000                         | 17046                                    | 216,650     | -56,500  | 8,78665+3    | 6,59053+1  | 1,41287-1                            | 9,7543                                              |
| 17050                         | 17096                                    | 216,650     | -56,500  | 8,71765      | 6,53877    | 1,40178                              | 9,7541                                              |
| 17100                         | 17146                                    | 216,650     | -56,500  | 8,64918      | 6,48742    | 1,39077                              | 9,7540                                              |
| 17150                         | 17196                                    | 216,650     | -56,500  | 8,58126      | 6,43647    | 1,37985                              | 9,7538                                              |
| 17200                         | 17247                                    | 216,650     | -56,500  | 8,51387      | 6,38592    | 1,36901                              | 9,7537                                              |
| 17250                         | 17297                                    | 216,650     | -56,500  | 8,44700      | 6,33577    | 1,35826                              | 9,7535                                              |
| 17300                         | 17347                                    | 216,650     | -56,500  | 8,38067      | 6,28602    | 1,34759                              | 9,7533                                              |
| 17350                         | 17397                                    | 216,650     | -56,500  | 8,31485      | 6,23665    | 1,33701                              | 9,7532                                              |
| 17400                         | 17448                                    | 216,650     | -56,500  | 8,24955      | 6,18767    | 1,32651                              | 9,7530                                              |
| 17450                         | 17498                                    | 216,650     | -56,500  | 8,18476      | 6,13908    | 1,31609                              | 9,7529                                              |
| 17500                         | 17548                                    | 216,650     | -56,500  | 8,12048+3    | 6,09086+1  | 1,30575-1                            | 9,7527                                              |
| 17550                         | 17599                                    | 216,650     | -56,500  | 8,05671      | 6,04303    | 1,29550                              | 9,7526                                              |
| 17600                         | 17649                                    | 216,650     | -56,500  | 7,99344      | 5,99557    | 1,28532                              | 9,7524                                              |
| 17650                         | 17699                                    | 216,650     | -56,500  | 7,93066      | 5,94848    | 1,27523                              | 9,7523                                              |
| 17700                         | 17749                                    | 216,650     | -56,500  | 7,86838      | 5,90177    | 1,26522                              | 9,7521                                              |
| 17750                         | 17800                                    | 216,650     | -56,500  | 7,80658      | 5,85542    | 1,25528                              | 9,7520                                              |
| 17800                         | 17850                                    | 216,650     | -56,500  | 7,74527      | 5,80943    | 1,24542                              | 9,7518                                              |
| 17850                         | 17900                                    | 216,650     | -56,500  | 7,68445      | 5,76381    | 1,23564                              | 9,7517                                              |
| 17900                         | 17951                                    | 216,650     | -56,500  | 7,62410      | 5,71854    | 1,22594                              | 9,7515                                              |
| 17950                         | 18001                                    | 216,650     | -56,500  | 7,56422      | 5,67363    | 1,21631                              | 9,7513                                              |

От 18000 до 19950 м

| Геометрическая<br>высота $H$ , м | Величины в функции геометрической высоты   |             |          |              |            |                                         |                                                              |
|----------------------------------|--------------------------------------------|-------------|----------|--------------|------------|-----------------------------------------|--------------------------------------------------------------|
|                                  | геоцентриче-<br>ская высо-<br>та $H_g$ , м | температура |          | давление $p$ |            | плотность<br>$\rho$ , кг/м <sup>3</sup> | усреднен-<br>ное значение<br>$\bar{g}$ ,<br>м/с <sup>2</sup> |
|                                  |                                            | $T$ , К     | $t$ , °C | Па           | мм рт. ст. |                                         |                                                              |
| 18000                            | 17949                                      | 216,650     | -56,500  | 7,56521+3    | 5,67437+1  | 1,21647-1                               | 9,7513                                                       |
| 18050                            | 17999                                      | 216,650     | -56,500  | 7,50613      | 5,63006    | 1,20697                                 | 9,7512                                                       |
| 18100                            | 18049                                      | 216,650     | -56,500  | 7,44751      | 5,58609    | 1,19754                                 | 9,7510                                                       |
| 18150                            | 18098                                      | 216,650     | -56,500  | 7,38936      | 5,54247    | 1,18819                                 | 9,7509                                                       |
| 18200                            | 18148                                      | 216,650     | -56,500  | 7,33165      | 5,49919    | 1,17891                                 | 9,7507                                                       |
| 18250                            | 18198                                      | 216,650     | -56,500  | 7,27440      | 5,45625    | 1,16971                                 | 9,7506                                                       |
| 18300                            | 18247                                      | 216,650     | -56,500  | 7,21760      | 5,41364    | 1,16057                                 | 9,7504                                                       |
| 18350                            | 18297                                      | 216,650     | -56,500  | 7,16124      | 5,37137    | 1,15151                                 | 9,7503                                                       |
| 18400                            | 18347                                      | 216,650     | -56,500  | 7,10532      | 5,32943    | 1,14252                                 | 9,7501                                                       |
| 18450                            | 18397                                      | 216,650     | -56,500  | 7,04984      | 5,28782    | 1,13360                                 | 9,7500                                                       |
| 18500                            | 18446                                      | 216,650     | -56,500  | 6,99480+3    | 5,24653+1  | 1,12475-1                               | 9,7498                                                       |
| 18550                            | 18496                                      | 216,650     | -56,500  | 6,94018      | 5,20556    | 1,11596                                 | 9,7497                                                       |
| 18600                            | 18546                                      | 216,650     | -56,500  | 6,88599      | 5,16492    | 1,10725                                 | 9,7495                                                       |
| 18650                            | 18595                                      | 216,650     | -56,500  | 6,83223      | 5,12459    | 1,09861                                 | 9,7494                                                       |
| 18700                            | 18645                                      | 216,650     | -56,500  | 6,77888      | 5,08458    | 1,09003                                 | 9,7492                                                       |
| 18750                            | 18695                                      | 216,650     | -56,500  | 6,72596      | 5,04488    | 1,08152                                 | 9,7491                                                       |
| 18800                            | 18745                                      | 216,650     | -56,500  | 6,67345      | 5,00549    | 1,07307                                 | 9,7489                                                       |
| 18850                            | 18794                                      | 216,650     | -56,500  | 6,62134      | 4,96642    | 1,06470                                 | 9,7487                                                       |
| 18900                            | 18844                                      | 216,650     | -56,500  | 6,56965      | 4,92764    | 1,05638                                 | 9,7486                                                       |
| 18950                            | 18894                                      | 216,650     | -56,500  | 6,51836      | 4,88917    | 1,04814                                 | 9,7484                                                       |
| 19000                            | 18943                                      | 216,650     | -56,500  | 6,46747+3    | 4,85100+1  | 1,03995-1                               | 9,7483                                                       |
| 19050                            | 18993                                      | 216,650     | -56,500  | 6,41698      | 4,81313    | 1,03183                                 | 9,7481                                                       |
| 19100                            | 19043                                      | 216,650     | -56,500  | 6,36689      | 4,77556    | 1,02378                                 | 9,7480                                                       |
| 19150                            | 19092                                      | 216,650     | -56,500  | 6,31718      | 4,73828    | 1,01579                                 | 9,7478                                                       |
| 19200                            | 19142                                      | 216,650     | -56,500  | 6,26787      | 4,70129    | 1,00786                                 | 9,7477                                                       |
| 19250                            | 19192                                      | 216,650     | -56,500  | 6,21894      | 4,66459    | 9,99990-2                               | 9,7475                                                       |
| 19300                            | 19242                                      | 216,650     | -56,500  | 6,17039      | 4,62818    | 9,92184                                 | 9,7474                                                       |
| 19350                            | 19291                                      | 216,650     | -56,500  | 6,12223      | 4,59205    | 9,84439                                 | 9,7472                                                       |
| 19400                            | 19341                                      | 216,650     | -56,500  | 6,07444      | 4,55620    | 9,76754                                 | 9,7471                                                       |
| 19450                            | 19391                                      | 216,650     | -56,500  | 6,02702      | 4,52064    | 9,69130                                 | 9,7469                                                       |
| 19500                            | 19440                                      | 216,650     | -56,500  | 5,97997+3    | 4,48535+1  | 9,61555-2                               | 9,7468                                                       |
| 19550                            | 19490                                      | 216,650     | -56,500  | 5,93330      | 4,45034    | 9,54060                                 | 9,7466                                                       |
| 19600                            | 19540                                      | 216,650     | -56,500  | 5,88699      | 4,41560    | 9,46613                                 | 9,7465                                                       |
| 19650                            | 19589                                      | 216,650     | -56,500  | 5,84104      | 4,38114    | 9,39224                                 | 9,7463                                                       |
| 19700                            | 19639                                      | 216,650     | -56,500  | 5,79544      | 4,34694    | 9,31893                                 | 9,7461                                                       |
| 19750                            | 19689                                      | 216,650     | -56,500  | 5,75021      | 4,31301    | 9,24620                                 | 9,7460                                                       |
| 19800                            | 19739                                      | 216,650     | -56,500  | 5,70533      | 4,27935    | 9,17403                                 | 9,7458                                                       |
| 19850                            | 19788                                      | 216,650     | -56,500  | 5,66080      | 4,24595    | 9,10243                                 | 9,7457                                                       |
| 19900                            | 19838                                      | 216,650     | -56,500  | 5,61662      | 4,21281    | 9,03139                                 | 9,7455                                                       |
| 19950                            | 19888                                      | 216,650     | -56,500  | 5,57279      | 4,17993    | 8,96090                                 | 9,7454                                                       |

Продолжение табл. 1

| Геопотенциальная высота $H$ , м | геометрическая высота $h$ , м | Величины в функции геопотенциальной высоты |          |              |            |                                      |                                                     |
|---------------------------------|-------------------------------|--------------------------------------------|----------|--------------|------------|--------------------------------------|-----------------------------------------------------|
|                                 |                               | температура                                |          | давление $p$ |            | плотность $\rho$ , кг/м <sup>3</sup> | ускорение свободного падения $g$ , м/с <sup>2</sup> |
|                                 |                               | $T$ , К                                    | $t$ , °С | Па           | мм рт. ст. |                                      |                                                     |
| 18000                           | 18051                         | 216,650                                    | -56,500  | 7,50482+3    | 5,62908+1  | 1,20676-1                            | 9,7512                                              |
| 18050                           | 18101                         | 216,650                                    | -56,500  | 7,44588      | 5,58487    | 1,19728                              | 9,7510                                              |
| 18100                           | 18152                         | 216,650                                    | -56,500  | 7,38740      | 5,54101    | 1,18788                              | 9,7509                                              |
| 18150                           | 18202                         | 216,650                                    | -56,500  | 7,32939      | 5,49749    | 1,17855                              | 9,7507                                              |
| 18200                           | 18252                         | 216,650                                    | -56,500  | 7,27183      | 5,45432    | 1,16929                              | 9,7506                                              |
| 18250                           | 18303                         | 216,650                                    | -56,500  | 7,21472      | 5,41148    | 1,16011                              | 9,7504                                              |
| 18300                           | 18353                         | 216,650                                    | -56,500  | 7,15806      | 5,36898    | 1,15100                              | 9,7503                                              |
| 18350                           | 18403                         | 216,650                                    | -56,500  | 7,10181      | 5,32682    | 1,14196                              | 9,7501                                              |
| 18400                           | 18453                         | 216,650                                    | -56,500  | 7,04607      | 5,28499    | 1,13299                              | 9,7500                                              |
| 18450                           | 18504                         | 216,650                                    | -56,500  | 6,99073      | 5,24348    | 1,12409                              | 9,7498                                              |
| 18500                           | 18554                         | 216,650                                    | -56,500  | 6,93583+3    | 5,20230+1  | 1,11526-1                            | 9,7497                                              |
| 18550                           | 18604                         | 216,650                                    | -56,500  | 6,88133      | 5,16145    | 1,10651                              | 9,7995                                              |
| 18600                           | 18655                         | 216,650                                    | -56,500  | 6,82732      | 5,12091    | 1,09782                              | 9,7493                                              |
| 18650                           | 18705                         | 216,650                                    | -56,500  | 6,77370      | 5,08069    | 1,08919                              | 9,7492                                              |
| 18700                           | 18755                         | 216,650                                    | -56,500  | 6,72051      | 5,04079    | 1,08064                              | 9,7490                                              |
| 18750                           | 18805                         | 216,650                                    | -56,500  | 6,66773      | 5,00121    | 1,07215                              | 9,7489                                              |
| 18800                           | 18856                         | 216,650                                    | -56,500  | 6,61535      | 4,96193    | 1,06373                              | 9,7487                                              |
| 18850                           | 18906                         | 216,650                                    | -56,500  | 6,56341      | 4,92296    | 1,05538                              | 9,7486                                              |
| 18900                           | 18956                         | 216,650                                    | -56,500  | 6,51186      | 4,88430    | 1,04709                              | 9,7484                                              |
| 18950                           | 19007                         | 216,650                                    | -56,500  | 6,46072      | 4,84594    | 1,03887                              | 9,7483                                              |
| 19000                           | 19057                         | 216,650                                    | -56,500  | 6,40998+3    | 4,80788+1  | 1,03071-1                            | 9,7481                                              |
| 19050                           | 19107                         | 216,650                                    | -56,500  | 6,35964      | 4,77013    | 1,02261                              | 9,7480                                              |
| 19100                           | 19158                         | 216,650                                    | -56,500  | 6,30970      | 4,73266    | 1,01458                              | 9,7478                                              |
| 19150                           | 19208                         | 216,650                                    | -56,500  | 6,26015      | 4,69550    | 1,00662                              | 9,7477                                              |
| 19200                           | 19258                         | 216,650                                    | -56,500  | 6,21098      | 4,65862    | 9,98711-2                            | 9,7475                                              |
| 19250                           | 19308                         | 216,650                                    | -56,500  | 6,16221      | 4,62203    | 9,90867                              | 9,7473                                              |
| 19300                           | 19359                         | 216,650                                    | -56,500  | 6,11381      | 4,58573    | 9,83086                              | 9,7472                                              |
| 19350                           | 19409                         | 216,650                                    | -56,500  | 6,06580      | 4,54972    | 9,75365                              | 9,7470                                              |
| 19400                           | 19459                         | 216,650                                    | -56,500  | 6,01816      | 4,51399    | 9,67705                              | 9,7469                                              |
| 19450                           | 19510                         | 216,650                                    | -56,500  | 5,97090      | 4,47854    | 9,60105                              | 9,7467                                              |
| 19500                           | 19560                         | 216,650                                    | -56,500  | 5,92400+3    | 4,44337+1  | 9,52565-2                            | 9,7466                                              |
| 19550                           | 19610                         | 216,650                                    | -56,500  | 5,87748      | 4,40847    | 9,45084                              | 9,7464                                              |
| 19600                           | 19661                         | 216,650                                    | -56,500  | 5,83132      | 4,37385    | 9,37662                              | 9,7463                                              |
| 19650                           | 19711                         | 216,650                                    | -56,500  | 5,78553      | 4,33950    | 9,30298                              | 9,7461                                              |
| 19700                           | 19761                         | 216,650                                    | -56,500  | 5,74009      | 4,30542    | 9,22992                              | 9,7460                                              |
| 19750                           | 19812                         | 216,650                                    | -56,500  | 5,69501      | 4,27161    | 9,15744                              | 9,7458                                              |
| 19800                           | 19862                         | 216,650                                    | -56,500  | 5,65029      | 4,23806    | 9,08552                              | 9,7457                                              |
| 19850                           | 19912                         | 216,650                                    | -56,500  | 5,60591      | 4,20478    | 9,01417                              | 9,7455                                              |
| 19900                           | 19962                         | 216,650                                    | -56,500  | 5,56189      | 4,17176    | 8,94337                              | 9,7453                                              |
| 19950                           | 20013                         | 216,650                                    | -56,500  | 5,51821      | 4,13899    | 8,87314                              | 9,7452                                              |

От 20000 до 21950 м

| Величины и функции геометрической высоты |                                          |             |          |              |            |                                         |                                                              |
|------------------------------------------|------------------------------------------|-------------|----------|--------------|------------|-----------------------------------------|--------------------------------------------------------------|
| Геометрическая<br>высота $h$ , м         | геоцентриче-<br>ская высо-<br>та $H$ , м | температура |          | давление $p$ |            | плотность<br>$\rho$ , кг/м <sup>3</sup> | ускорение<br>свободного<br>падения $g$ ,<br>м/с <sup>2</sup> |
|                                          |                                          | $T$ , К     | $t$ , °C | Па           | мм рт. ст. |                                         |                                                              |
| 20000                                    | 19937                                    | 216,650     | -56,500  | 5,52929+3    | 4,14731+1  | 8,89097-2                               | 9,7452                                                       |
| 20050                                    | 19987                                    | 216,650     | -56,500  | 5,48614      | 4,11494    | 8,82158                                 | 9,7451                                                       |
| 20100                                    | 20037                                    | 216,687     | -56,463  | 5,44333      | 4,08283    | 8,75125                                 | 9,7449                                                       |
| 20150                                    | 20086                                    | 216,736     | -56,414  | 5,40086      | 4,05097    | 8,68098                                 | 9,7448                                                       |
| 20200                                    | 20136                                    | 216,786     | -56,364  | 5,35873      | 4,01938    | 8,61130                                 | 9,7446                                                       |
| 20250                                    | 20186                                    | 216,836     | -56,314  | 5,31694      | 3,98803    | 8,54219                                 | 9,7445                                                       |
| 20300                                    | 20235                                    | 216,885     | -56,265  | 5,27549      | 3,95694    | 8,47365                                 | 9,7443                                                       |
| 20350                                    | 20285                                    | 216,935     | -56,215  | 5,23437      | 3,92610    | 8,40568                                 | 9,7442                                                       |
| 20400                                    | 20335                                    | 216,985     | -56,165  | 5,19358      | 3,89551    | 8,33827                                 | 9,7440                                                       |
| 20450                                    | 20384                                    | 217,034     | -56,116  | 5,15312      | 3,86516    | 8,27142                                 | 9,7439                                                       |
| 20500                                    | 20434                                    | 217,084     | -56,066  | 5,11298+3    | 3,83505+1  | 8,20511-2                               | 9,7437                                                       |
| 20550                                    | 20484                                    | 217,134     | -56,016  | 5,07317      | 3,80519    | 8,13936                                 | 9,7436                                                       |
| 20600                                    | 20533                                    | 217,183     | -55,967  | 5,03368      | 3,77557    | 8,07415                                 | 9,7434                                                       |
| 20650                                    | 20583                                    | 217,233     | -55,917  | 4,99450      | 3,74618    | 8,00948                                 | 9,7432                                                       |
| 20700                                    | 20633                                    | 217,283     | -55,867  | 4,95564      | 3,71703    | 7,94534                                 | 9,7431                                                       |
| 20750                                    | 20682                                    | 217,332     | -55,818  | 4,91709      | 3,68812    | 7,88173                                 | 9,7429                                                       |
| 20800                                    | 20732                                    | 217,382     | -55,768  | 4,87885      | 3,65944    | 7,81864                                 | 9,7428                                                       |
| 20850                                    | 20782                                    | 217,432     | -55,718  | 4,84091      | 3,63098    | 7,75608                                 | 9,7426                                                       |
| 20900                                    | 20832                                    | 217,482     | -55,668  | 4,80328      | 3,60276    | 7,69403                                 | 9,7425                                                       |
| 20950                                    | 20881                                    | 217,531     | -55,619  | 4,76595      | 3,57476    | 7,63249                                 | 9,7423                                                       |
| 21000                                    | 20931                                    | 217,581     | -55,569  | 4,72892+3    | 3,54698+1  | 7,57146-2                               | 9,7422                                                       |
| 21050                                    | 20981                                    | 217,631     | -55,519  | 4,69219      | 3,51943    | 7,51093                                 | 9,7420                                                       |
| 21100                                    | 21031                                    | 217,680     | -55,470  | 4,65575      | 3,49210    | 7,45090                                 | 9,7419                                                       |
| 21150                                    | 21080                                    | 217,730     | -55,420  | 4,61960      | 3,46499    | 7,39137                                 | 9,7417                                                       |
| 21200                                    | 21130                                    | 217,780     | -55,370  | 4,58375      | 3,43809    | 7,33232                                 | 9,7416                                                       |
| 21250                                    | 21179                                    | 217,829     | -55,321  | 4,54817      | 3,41141    | 7,27376                                 | 9,7414                                                       |
| 21300                                    | 21229                                    | 217,879     | -55,271  | 4,51289      | 3,38494    | 7,21568                                 | 9,7413                                                       |
| 21350                                    | 21279                                    | 217,929     | -55,221  | 4,47788      | 3,35869    | 7,15809                                 | 9,7411                                                       |
| 21400                                    | 21328                                    | 217,978     | -55,172  | 4,44316      | 3,33264    | 7,10096                                 | 9,7410                                                       |
| 21450                                    | 21378                                    | 218,028     | -55,122  | 4,40871      | 3,30681    | 7,04430                                 | 9,7408                                                       |
| 21500                                    | 21428                                    | 218,078     | -55,072  | 4,37454+3    | 3,28118+1  | 6,98811-2                               | 9,7406                                                       |
| 21550                                    | 21477                                    | 218,127     | -55,023  | 4,34065      | 3,25575    | 6,93238                                 | 9,7405                                                       |
| 21600                                    | 21527                                    | 218,177     | -54,973  | 4,30702      | 3,23053    | 6,87711                                 | 9,7403                                                       |
| 21650                                    | 21577                                    | 218,227     | -54,923  | 4,27366      | 3,20551    | 6,82229                                 | 9,7402                                                       |
| 21700                                    | 21626                                    | 218,276     | -54,874  | 4,24056      | 3,18068    | 6,76792                                 | 9,7400                                                       |
| 21750                                    | 21676                                    | 218,326     | -54,824  | 4,20774      | 3,15606    | 6,71400                                 | 9,7399                                                       |
| 21800                                    | 21725                                    | 218,375     | -54,775  | 4,17517      | 3,13163    | 6,66052                                 | 9,7397                                                       |
| 21850                                    | 21775                                    | 218,425     | -54,725  | 4,14286      | 3,10740    | 6,60748                                 | 9,7396                                                       |
| 21900                                    | 21825                                    | 218,475     | -54,675  | 4,11082      | 3,08337    | 6,55488                                 | 9,7394                                                       |
| 21950                                    | 21874                                    | 218,524     | -54,626  | 4,07902      | 3,05952    | 6,50271                                 | 9,7393                                                       |

Продолжение табл. 1

Продолжение табл. 1

| Геоцентрическая высота $H, \text{ м}$ | Геоцентрическая высота $H, \text{ м}$ | Вязкость в функции геопотенциальной высоты |              |                                  |           |                | Ускорение свободного падения $g, \text{ м/с}^2$ |
|---------------------------------------|---------------------------------------|--------------------------------------------|--------------|----------------------------------|-----------|----------------|-------------------------------------------------|
|                                       |                                       | температура                                | давление $p$ | плотность $\rho, \text{ кг/м}^3$ |           |                |                                                 |
|                                       |                                       |                                            |              |                                  |           | $T, \text{ К}$ |                                                 |
| 20000                                 | 20063                                 | 216,650                                    | -56,500      | 5,47487+3                        | 4,10649+1 | 8,80345-2      | 9,7450                                          |
| 20050                                 | 20113                                 | 216,700                                    | -56,450      | 5,43187                          | 4,07424   | 8,73230        | 9,7449                                          |
| 20100                                 | 20161                                 | 216,750                                    | -56,400      | 5,38923                          | 4,04225   | 8,66175        | 9,7447                                          |
| 20150                                 | 20214                                 | 216,800                                    | -56,350      | 5,34693                          | 4,01053   | 8,59179        | 9,7446                                          |
| 20200                                 | 20264                                 | 216,850                                    | -56,300      | 5,30497                          | 3,97906   | 8,52240        | 9,7444                                          |
| 20250                                 | 20315                                 | 216,900                                    | -56,250      | 5,26335                          | 3,94784   | 8,45359        | 9,7443                                          |
| 20300                                 | 20365                                 | 216,950                                    | -56,200      | 5,22207                          | 3,91687   | 8,38535        | 9,7441                                          |
| 20350                                 | 20415                                 | 217,000                                    | -56,150      | 5,18112                          | 3,88616   | 8,31768        | 9,7440                                          |
| 20400                                 | 20466                                 | 217,050                                    | -56,100      | 5,14050                          | 3,85569   | 8,25057        | 9,7438                                          |
| 20450                                 | 20516                                 | 217,100                                    | -56,050      | 5,10021                          | 3,82547   | 8,18401        | 9,7437                                          |
| 20500                                 | 20566                                 | 217,150                                    | -56,000      | 5,06024+3                        | 3,79550+1 | 8,11801-2      | 9,7435                                          |
| 20550                                 | 20617                                 | 217,200                                    | -55,950      | 5,02060                          | 3,76576   | 8,05256        | 9,7433                                          |
| 20600                                 | 20667                                 | 217,250                                    | -55,900      | 4,98127                          | 3,73626   | 7,98761        | 9,7432                                          |
| 20650                                 | 20717                                 | 217,300                                    | -55,850      | 4,94226                          | 3,70700   | 7,92327        | 9,7430                                          |
| 20700                                 | 20768                                 | 217,350                                    | -55,800      | 4,90357                          | 3,67798   | 7,85943        | 9,7429                                          |
| 20750                                 | 20818                                 | 217,400                                    | -55,750      | 4,86519                          | 3,64919   | 7,79611        | 9,7427                                          |
| 20800                                 | 20868                                 | 217,450                                    | -55,700      | 4,82712                          | 3,62064   | 7,73333        | 9,7426                                          |
| 20850                                 | 20919                                 | 217,500                                    | -55,650      | 4,78935                          | 3,59231   | 7,67106        | 9,7424                                          |
| 20900                                 | 20969                                 | 217,550                                    | -55,600      | 4,75189                          | 3,56421   | 7,60931        | 9,7423                                          |
| 20950                                 | 21019                                 | 217,600                                    | -55,550      | 4,71473                          | 3,53634   | 7,54807        | 9,7421                                          |
| 21000                                 | 21070                                 | 217,650                                    | -55,500      | 4,67787+3                        | 3,50869+1 | 7,48733-2      | 9,7420                                          |
| 21050                                 | 21120                                 | 217,700                                    | -55,450      | 4,64130                          | 3,48126   | 7,42710        | 9,7418                                          |
| 21100                                 | 21170                                 | 217,750                                    | -55,400      | 4,60503                          | 3,45406   | 7,36737        | 9,7417                                          |
| 21150                                 | 21221                                 | 217,800                                    | -55,350      | 4,56905                          | 3,42707   | 7,30813        | 9,7415                                          |
| 21200                                 | 21271                                 | 217,850                                    | -55,300      | 4,53336                          | 3,40030   | 7,24938        | 9,7413                                          |
| 21250                                 | 21321                                 | 217,900                                    | -55,250      | 4,49796                          | 3,37375   | 7,19112        | 9,7412                                          |
| 21300                                 | 21372                                 | 217,950                                    | -55,200      | 4,46284                          | 3,34740   | 7,13333        | 9,7410                                          |
| 21350                                 | 21422                                 | 218,000                                    | -55,150      | 4,42800                          | 3,32128   | 7,07603        | 9,7409                                          |
| 21400                                 | 21472                                 | 218,050                                    | -55,100      | 4,39345                          | 3,29536   | 7,01920        | 9,7407                                          |
| 21450                                 | 21523                                 | 218,100                                    | -55,050      | 4,35917                          | 3,26965   | 6,96284        | 9,7406                                          |
| 21500                                 | 21573                                 | 218,150                                    | -55,000      | 4,32517+3                        | 3,24414+1 | 6,90691-2      | 9,7404                                          |
| 21550                                 | 21623                                 | 218,200                                    | -54,950      | 4,29143                          | 3,21884   | 6,85150        | 9,7403                                          |
| 21600                                 | 21674                                 | 218,250                                    | -54,900      | 4,25797                          | 3,19374   | 6,79652        | 9,7401                                          |
| 21650                                 | 21724                                 | 218,300                                    | -54,850      | 4,22478                          | 3,16885   | 6,74200        | 9,7400                                          |
| 21700                                 | 21774                                 | 218,350                                    | -54,800      | 4,19186                          | 3,14415   | 6,68792        | 9,7398                                          |
| 21750                                 | 21825                                 | 218,400                                    | -54,750      | 4,15919                          | 3,11965   | 6,63429        | 9,7397                                          |
| 21800                                 | 21875                                 | 218,450                                    | -54,700      | 4,12680                          | 3,09535   | 6,58111        | 9,7395                                          |
| 21850                                 | 21925                                 | 218,500                                    | -54,650      | 4,09466                          | 3,07124   | 6,52836        | 9,7393                                          |
| 21900                                 | 21976                                 | 218,550                                    | -54,600      | 4,06277                          | 3,04733   | 6,47605        | 9,7392                                          |
| 21950                                 | 22026                                 | 218,600                                    | -54,550      | 4,03115                          | 3,02361   | 6,42416        | 9,7390                                          |

| Геометрическая<br>высота $h$ , м | Величины в функции геометрической высоты  |             |          |              |            |                                         |                                                              |
|----------------------------------|-------------------------------------------|-------------|----------|--------------|------------|-----------------------------------------|--------------------------------------------------------------|
|                                  | геопотенци-<br>альная вы-<br>сота $H$ , м | температура |          | давление $p$ |            | плотность<br>$\rho$ , кг/м <sup>3</sup> | ускорение<br>свободного<br>падения $g$ ,<br>м/с <sup>2</sup> |
|                                  |                                           | $T$ , К     | $t$ , °C | Па           | мм рт. ст. |                                         |                                                              |
| 22000                            | 21924                                     | 218,574     | -54,576  | 4,04748+3    | 3,03586+1  | 6,45096-2                               | 9,7391                                                       |
| 22050                            | 21974                                     | 218,624     | -54,526  | 4,01620      | 3,01240    | 6,39964                                 | 9,7390                                                       |
| 22100                            | 22023                                     | 218,673     | -54,477  | 3,98516      | 3,98911    | 6,34874                                 | 9,7388                                                       |
| 22150                            | 22073                                     | 218,723     | -54,427  | 3,95437      | 2,96602    | 6,29825                                 | 9,7387                                                       |
| 22200                            | 22123                                     | 218,773     | -54,377  | 3,92382      | 2,94311    | 6,24819                                 | 9,7385                                                       |
| 22250                            | 22172                                     | 218,822     | -54,328  | 3,89352      | 2,92038    | 6,19853                                 | 9,7384                                                       |
| 22300                            | 22222                                     | 218,872     | -54,278  | 3,86346      | 2,89783    | 6,14927                                 | 9,7382                                                       |
| 22350                            | 22272                                     | 218,922     | -54,228  | 3,83363      | 2,87546    | 6,10042                                 | 9,7381                                                       |
| 22400                            | 22321                                     | 218,971     | -54,179  | 3,80405      | 2,85327    | 6,05197                                 | 9,7379                                                       |
| 22450                            | 22371                                     | 219,021     | -54,129  | 3,77470      | 2,83126    | 6,00392                                 | 9,7377                                                       |
| 22500                            | 22421                                     | 219,071     | -54,079  | 3,74558+3    | 2,80942+1  | 5,95626-2                               | 9,7376                                                       |
| 22550                            | 22470                                     | 219,120     | -54,030  | 3,71670      | 2,78775    | 5,90898                                 | 9,7374                                                       |
| 22600                            | 22520                                     | 219,170     | -53,980  | 3,68804      | 2,76626    | 5,86210                                 | 9,7373                                                       |
| 22650                            | 22570                                     | 219,220     | -53,930  | 3,65962      | 2,74494    | 5,81560                                 | 9,7371                                                       |
| 22700                            | 22619                                     | 219,269     | -53,881  | 3,63142      | 2,72379    | 5,76948                                 | 9,7370                                                       |
| 22750                            | 22669                                     | 219,319     | -53,831  | 3,60344      | 2,70280    | 5,72373                                 | 9,7368                                                       |
| 22800                            | 22719                                     | 219,369     | -53,781  | 3,57569      | 2,68199    | 5,67836                                 | 9,7367                                                       |
| 22850                            | 22768                                     | 219,418     | -53,732  | 3,54815      | 2,66133    | 5,63336                                 | 9,7365                                                       |
| 22900                            | 22818                                     | 219,468     | -53,682  | 3,52083      | 2,64084    | 5,58873                                 | 9,7364                                                       |
| 22950                            | 22867                                     | 219,517     | -53,633  | 3,49373      | 2,62052    | 5,54446                                 | 9,7362                                                       |
| 23000                            | 22917                                     | 219,567     | -53,583  | 3,46685+3    | 2,60035+1  | 5,50055-2                               | 9,7361                                                       |
| 23050                            | 22967                                     | 219,617     | -53,533  | 3,44018      | 2,58035    | 5,45700                                 | 9,7359                                                       |
| 23100                            | 23016                                     | 219,666     | -53,484  | 3,41372      | 2,56050    | 5,41381                                 | 9,7358                                                       |
| 23150                            | 23066                                     | 219,716     | -53,434  | 3,38747      | 2,54081    | 5,37096                                 | 9,7356                                                       |
| 23200                            | 23116                                     | 219,766     | -53,384  | 3,36143      | 2,52128    | 5,32847                                 | 9,7355                                                       |
| 23250                            | 23165                                     | 219,815     | -53,335  | 3,33560      | 2,50190    | 5,28633                                 | 9,7353                                                       |
| 23300                            | 23215                                     | 219,865     | -53,285  | 3,30997      | 2,48268    | 5,24452                                 | 9,7352                                                       |
| 23350                            | 23265                                     | 219,915     | -53,235  | 3,28454      | 2,46361    | 5,20306                                 | 9,7350                                                       |
| 23400                            | 23314                                     | 219,964     | -53,186  | 3,25932      | 2,44469    | 5,16194                                 | 9,7348                                                       |
| 23450                            | 23364                                     | 220,014     | -53,136  | 3,23420      | 2,42592    | 5,12114                                 | 9,7347                                                       |
| 23500                            | 23413                                     | 220,063     | -53,087  | 3,20946+3    | 2,40729+1  | 5,08069-2                               | 9,7345                                                       |
| 23550                            | 23463                                     | 220,113     | -53,037  | 3,18483      | 2,38882    | 5,04056                                 | 9,7344                                                       |
| 23600                            | 23513                                     | 220,163     | -52,987  | 3,16040      | 2,37049    | 5,00076                                 | 9,7342                                                       |
| 23650                            | 23562                                     | 220,212     | -52,938  | 3,13615      | 2,35231    | 4,96128                                 | 9,7341                                                       |
| 23700                            | 23612                                     | 220,262     | -52,888  | 3,11210      | 2,33427    | 4,92212                                 | 9,7339                                                       |
| 23750                            | 23662                                     | 220,312     | -52,838  | 3,08824      | 2,31637    | 4,88328                                 | 9,7338                                                       |
| 23800                            | 23711                                     | 220,361     | -52,789  | 3,06457      | 2,29861    | 4,84476                                 | 9,7336                                                       |
| 23850                            | 23761                                     | 220,411     | -52,739  | 3,04108      | 2,28100    | 4,80655                                 | 9,7335                                                       |
| 23900                            | 23810                                     | 220,460     | -52,690  | 3,01778      | 2,26352    | 4,76865                                 | 9,7333                                                       |
| 23950                            | 23860                                     | 220,510     | -52,640  | 2,99467      | 2,24619    | 4,73106                                 | 9,7332                                                       |

Продолжение табл. 1

| Величины в функции геотехнической высоты |                              |             |               |              |              |                          |                                         |
|------------------------------------------|------------------------------|-------------|---------------|--------------|--------------|--------------------------|-----------------------------------------|
| Геотехническая высота $H, м$             | Геотехническая высота $H, м$ | температура |               | давление $p$ |              | плотность $\rho, кг/м^3$ | ускорение свободного падения $g, м/с^2$ |
|                                          |                              | $T, K$      | $t, ^\circ C$ | $Па$         | $мм рт. ст.$ |                          |                                         |
| 22000                                    | 22076                        | 218,650     | -54,500       | 3,99977+3    | 3,00008+1    | 6,37271-2                | 9,7389                                  |
| 22050                                    | 22127                        | 218,700     | -54,450       | 3,96865      | 2,97673      | 6,32168                  | 9,7387                                  |
| 22100                                    | 22177                        | 218,750     | -54,400       | 3,93778      | 2,95358      | 6,27106                  | 9,7386                                  |
| 22150                                    | 22227                        | 218,800     | -54,350       | 3,90715      | 2,93061      | 6,22-87                  | 9,7384                                  |
| 22200                                    | 22278                        | 218,850     | -54,300       | 3,87677      | 2,9-782      | 6,17109                  | 9,7383                                  |
| 22250                                    | 22328                        | 218,900     | -54,250       | 3,84663      | 2,88521      | 6,12172                  | 9,7381                                  |
| 22300                                    | 22379                        | 218,950     | -54,200       | 3,81674      | 2,86279      | 6,07275                  | 9,7380                                  |
| 22350                                    | 22429                        | 219,000     | -54,150       | 3,78708      | 2,84054      | 6,02419                  | 9,7378                                  |
| 22400                                    | 22479                        | 219,050     | -54,100       | 3,75766      | 2,81848      | 5,97602                  | 9,7377                                  |
| 22450                                    | 22530                        | 219,100     | -54,050       | 3,72848      | 2,79659      | 5,92826                  | 9,7375                                  |
| 22500                                    | 22580                        | 219,150     | -54,000       | 3,69952+3    | 2,77487+1    | 5,88088-2                | 9,7374                                  |
| 22550                                    | 22630                        | 219,200     | -53,950       | 3,67080      | 2,75333      | 5,83389                  | 9,7372                                  |
| 22600                                    | 22681                        | 219,250     | -53,900       | 3,64231      | 2,73196      | 5,78729                  | 9,7370                                  |
| 22650                                    | 22731                        | 219,300     | -53,850       | 3,61405      | 2,71076      | 5,74108                  | 9,7369                                  |
| 22700                                    | 22781                        | 219,350     | -53,800       | 3,58601      | 2,68973      | 5,69524                  | 9,7367                                  |
| 22750                                    | 22832                        | 219,400     | -53,750       | 3,55820      | 2,66887      | 5,64977                  | 9,7366                                  |
| 22800                                    | 22882                        | 219,450     | -53,700       | 3,53060      | 2,64817      | 5,60469                  | 9,7364                                  |
| 22850                                    | 22932                        | 219,500     | -53,650       | 3,50323      | 2,62764      | 5,55997                  | 9,7363                                  |
| 22900                                    | 22983                        | 219,550     | -53,600       | 3,47608      | 2,60727      | 5,51562                  | 9,7361                                  |
| 22950                                    | 23033                        | 219,600     | -53,550       | 3,44914      | 2,58707      | 5,47163                  | 9,7360                                  |
| 23000                                    | 23084                        | 219,650     | -53,500       | 3,42242+3    | 2,56703+1    | 5,42800-2                | 9,7358                                  |
| 23050                                    | 23134                        | 219,700     | -53,450       | 3,39591      | 2,54714      | 5,38473                  | 9,7357                                  |
| 23100                                    | 23184                        | 219,750     | -53,400       | 3,36961      | 2,52742      | 5,34182                  | 9,7355                                  |
| 23150                                    | 23235                        | 219,800     | -53,350       | 3,34353      | 2,50785      | 5,29926                  | 9,7354                                  |
| 23200                                    | 23285                        | 219,850     | -53,300       | 3,31764      | 2,48844      | 5,25704                  | 9,7352                                  |
| 23250                                    | 23335                        | 219,900     | -53,250       | 3,29197      | 2,46918      | 5,21517                  | 9,7350                                  |
| 23300                                    | 23386                        | 219,950     | -53,200       | 3,26650      | 2,45008      | 5,17365                  | 9,7349                                  |
| 23350                                    | 23436                        | 220,000     | -53,150       | 3,24123      | 2,43112      | 5,13246                  | 9,7347                                  |
| 23400                                    | 23486                        | 220,050     | -53,100       | 3,21617      | 2,41232      | 5,09161                  | 9,7346                                  |
| 23450                                    | 23537                        | 220,100     | -53,050       | 3,19130      | 2,39367      | 5,05110                  | 9,7344                                  |
| 23500                                    | 23587                        | 220,150     | -53,000       | 3,16663+3    | 2,37517+1    | 5,01092-2                | 9,7343                                  |
| 23550                                    | 23638                        | 220,200     | -52,950       | 3,14216      | 2,35681      | 4,97106                  | 9,7341                                  |
| 23600                                    | 23688                        | 220,250     | -52,900       | 3,11788      | 2,33860      | 4,93153                  | 9,7340                                  |
| 23650                                    | 23738                        | 220,300     | -52,850       | 3,09380      | 2,32054      | 4,89233                  | 9,7338                                  |
| 23700                                    | 23789                        | 220,350     | -52,800       | 3,06990      | 2,30262      | 4,85344                  | 9,7337                                  |
| 23750                                    | 23839                        | 220,400     | -52,750       | 3,04620      | 2,28484      | 4,81488                  | 9,7335                                  |
| 23800                                    | 23889                        | 220,450     | -52,700       | 3,02269      | 2,26720      | 4,77662                  | 9,7334                                  |
| 23850                                    | 23940                        | 220,500     | -52,650       | 2,99936      | 2,24970      | 4,73868                  | 9,7332                                  |
| 23900                                    | 23990                        | 220,550     | -52,600       | 2,97622      | 2,23234      | 4,70106                  | 9,7330                                  |
| 23950                                    | 24041                        | 220,600     | -52,550       | 2,95326      | 2,21512      | 4,66373                  | 9,7329                                  |



От 24000 до 25950 м

| Геометрическая<br>высота $h$ , м        |             | Величины в функции геометрической высоты |          |                                         |                                                                     |           |            |
|-----------------------------------------|-------------|------------------------------------------|----------|-----------------------------------------|---------------------------------------------------------------------|-----------|------------|
| геометриче-<br>ская высо-<br>та $H$ , м | температура | давление $p$                             |          | плотность<br>$\rho$ , кг/м <sup>3</sup> | ускорение<br>свободного<br>падающего<br>тела<br>g, м/с <sup>2</sup> |           |            |
|                                         |             | $T$ , К                                  | $t$ , °C |                                         |                                                                     | Па        | мм рт. ст. |
| 24000                                   | 23910       | 220,560                                  | -52,590  | 2,97174+3                               | 2,22898+1                                                           | 4,69377-2 | 9,7330     |
| 24050                                   | 23959       | 220,609                                  | -52,541  | 2,94898                                 | 2,21192                                                             | 4,65679   | 9,7329     |
| 24100                                   | 24009       | 220,659                                  | -52,491  | 2,92641                                 | 2,19499                                                             | 4,62010   | 9,7327     |
| 24150                                   | 24059       | 220,709                                  | -52,441  | 2,90402                                 | 2,17819                                                             | 4,58372   | 9,7326     |
| 24200                                   | 24108       | 220,758                                  | -52,392  | 2,88180                                 | 2,16153                                                             | 4,54762   | 9,7324     |
| 24250                                   | 24158       | 220,808                                  | -52,342  | 2,85976                                 | 2,14499                                                             | 4,51183   | 9,7323     |
| 24300                                   | 24207       | 220,857                                  | -52,293  | 2,83789                                 | 2,12859                                                             | 4,47632   | 9,7321     |
| 24350                                   | 24257       | 220,907                                  | -52,243  | 2,81619                                 | 2,11232                                                             | 4,44110   | 9,7319     |
| 24400                                   | 24307       | 220,957                                  | -52,193  | 2,79467                                 | 2,09617                                                             | 4,40617   | 9,7318     |
| 24450                                   | 24356       | 221,006                                  | -52,144  | 2,77331                                 | 2,08015                                                             | 4,37151   | 9,7316     |
| 24500                                   | 24406       | 221,056                                  | -52,094  | 2,75212+3                               | 2,06426+1                                                           | 4,33714-2 | 9,7315     |
| 24550                                   | 24456       | 221,106                                  | -52,044  | 2,73110                                 | 2,04850                                                             | 4,30305   | 9,7313     |
| 24600                                   | 24505       | 221,155                                  | -51,995  | 2,71025                                 | 2,03285                                                             | 4,26924   | 9,7312     |
| 24650                                   | 24555       | 221,205                                  | -51,945  | 2,68956                                 | 2,01733                                                             | 4,23569   | 9,7310     |
| 24700                                   | 24604       | 221,254                                  | -51,896  | 2,66903                                 | 2,00194                                                             | 4,20242   | 9,7309     |
| 24750                                   | 24654       | 221,304                                  | -51,846  | 2,64866                                 | 1,98666                                                             | 4,16942   | 9,7307     |
| 24800                                   | 24704       | 221,354                                  | -51,796  | 2,62846                                 | 1,97151                                                             | 4,13669   | 9,7306     |
| 24850                                   | 24753       | 221,403                                  | -51,747  | 2,60841                                 | 1,95647                                                             | 4,10422   | 9,7304     |
| 24900                                   | 24803       | 221,453                                  | -51,697  | 2,58852                                 | 1,94155                                                             | 4,07201   | 9,7303     |
| 24950                                   | 24852       | 221,502                                  | -51,648  | 2,56879                                 | 1,92675                                                             | 4,04006   | 9,7301     |
| 25000                                   | 24902       | 221,552                                  | -51,598  | 2,54921+3                               | 1,91207+1                                                           | 4,00837-2 | 9,7300     |
| 25050                                   | 24952       | 221,602                                  | -51,548  | 2,52979                                 | 1,89750                                                             | 3,97694   | 9,7298     |
| 25100                                   | 25001       | 221,651                                  | -51,499  | 2,51052                                 | 1,88304                                                             | 3,94576   | 9,7297     |
| 25150                                   | 25051       | 221,701                                  | -51,449  | 2,49140                                 | 1,86870                                                             | 3,91483   | 9,7295     |
| 25200                                   | 25100       | 221,750                                  | -51,400  | 2,47243                                 | 1,85447                                                             | 3,88416   | 9,7294     |
| 25250                                   | 25150       | 221,800                                  | -51,350  | 2,45361                                 | 1,84035                                                             | 3,85373   | 9,7292     |
| 25300                                   | 25200       | 221,850                                  | -51,300  | 2,43493                                 | 1,82635                                                             | 3,82355   | 9,7291     |
| 25350                                   | 25249       | 221,899                                  | -51,251  | 2,41641                                 | 1,81245                                                             | 3,79360   | 9,7289     |
| 25400                                   | 25299       | 221,949                                  | -51,201  | 2,39802                                 | 1,79867                                                             | 3,76390   | 9,7287     |
| 25450                                   | 25349       | 221,999                                  | -51,151  | 2,37979                                 | 1,78499                                                             | 3,73445   | 9,7286     |
| 25500                                   | 25398       | 222,048                                  | -51,102  | 2,36169+3                               | 1,77141+1                                                           | 3,70522-2 | 9,7284     |
| 25550                                   | 25448       | 222,098                                  | -51,052  | 2,34374                                 | 1,75795                                                             | 3,67624   | 9,7283     |
| 25600                                   | 25497       | 222,147                                  | -51,003  | 2,32593                                 | 1,74459                                                             | 3,64748   | 9,7281     |
| 25650                                   | 25547       | 222,197                                  | -50,953  | 2,30826                                 | 1,73134                                                             | 3,61896   | 9,7280     |
| 25700                                   | 25597       | 222,247                                  | -50,903  | 2,29072                                 | 1,71818                                                             | 3,59067   | 9,7278     |
| 25750                                   | 25646       | 222,296                                  | -50,854  | 2,27333                                 | 1,70514                                                             | 3,56261   | 9,7277     |
| 25800                                   | 25696       | 222,346                                  | -50,804  | 2,25607                                 | 1,69219                                                             | 3,53477   | 9,7275     |
| 25850                                   | 25745       | 222,395                                  | -50,755  | 2,23894                                 | 1,67935                                                             | 3,50716   | 9,7274     |
| 25900                                   | 25795       | 222,445                                  | -50,705  | 2,22195                                 | 1,66660                                                             | 3,47977   | 9,7272     |
| 25950                                   | 25844       | 222,494                                  | -50,656  | 2,20509                                 | 1,65396                                                             | 3,45260   | 9,7271     |

| Величины в функции геопотенциальной высоты |                                 |             |          |              |            |                                      |                                                     |
|--------------------------------------------|---------------------------------|-------------|----------|--------------|------------|--------------------------------------|-----------------------------------------------------|
| Геопотенциальная высота $H$ , м            | геопотенциальная высота $H$ , м | температура |          | давление $p$ |            | плотность $\rho$ , кг/м <sup>3</sup> | ускорение свободного падения $g$ , м/с <sup>2</sup> |
|                                            |                                 | $T$ , К     | $t$ , °C | Па           | мм рт. ст. |                                      |                                                     |
| 24000                                      | 24091                           | 220,650     | -52,500  | 2,93048+3    | 2,19804+1  | 4,62672-2                            | 9,7327                                              |
| 24050                                      | 24141                           | 220,700     | -52,450  | 2,90788      | 2,18109    | 4,59000                              | 9,7326                                              |
| 24100                                      | 24192                           | 220,750     | -52,400  | 2,88547      | 2,16428    | 4,55358                              | 9,7324                                              |
| 24150                                      | 24242                           | 220,800     | -52,350  | 2,86323      | 2,14760    | 4,51747                              | 9,7323                                              |
| 24200                                      | 24292                           | 220,850     | -52,300  | 2,84117      | 2,13105    | 4,48164                              | 9,7321                                              |
| 24250                                      | 24343                           | 220,900     | -52,250  | 2,81928      | 2,11463    | 4,44611                              | 9,7320                                              |
| 24300                                      | 24393                           | 220,950     | -52,200  | 2,79756      | 2,09834    | 4,41087                              | 9,7318                                              |
| 24350                                      | 24444                           | 221,000     | -52,150  | 2,77602      | 2,08219    | 4,37591                              | 9,7317                                              |
| 24400                                      | 24494                           | 221,050     | -52,100  | 2,75465      | 2,06616    | 4,34124                              | 9,7315                                              |
| 24450                                      | 24544                           | 221,100     | -52,050  | 2,73345      | 2,05025    | 4,30685                              | 9,7314                                              |
| 24500                                      | 24595                           | 221,150     | -52,000  | 2,71241+3    | 2,03448+1  | 4,27275-2                            | 9,7312                                              |
| 24550                                      | 24645                           | 221,200     | -51,950  | 2,69155      | 2,01883    | 4,23892                              | 9,7310                                              |
| 24600                                      | 24696                           | 221,250     | -51,900  | 2,67084      | 2,00330    | 4,20536                              | 9,7309                                              |
| 24650                                      | 24746                           | 221,300     | -51,850  | 2,65030      | 1,98789    | 4,17208                              | 9,7307                                              |
| 24700                                      | 24796                           | 221,350     | -51,800  | 2,62993      | 1,97261    | 4,13907                              | 9,7306                                              |
| 24750                                      | 24847                           | 221,400     | -51,750  | 2,60971      | 1,95745    | 4,10632                              | 9,7304                                              |
| 24800                                      | 24897                           | 221,450     | -51,700  | 2,58966      | 1,94240    | 4,07385                              | 9,7303                                              |
| 24850                                      | 24948                           | 221,500     | -51,650  | 2,56976      | 1,92748    | 4,04163                              | 9,7301                                              |
| 24900                                      | 24998                           | 221,550     | -51,600  | 2,55002      | 1,91268    | 4,00969                              | 9,7300                                              |
| 24950                                      | 25048                           | 221,600     | -51,550  | 2,53044      | 1,89799    | 3,97800                              | 9,7298                                              |
| 25000                                      | 25099                           | 221,650     | -51,500  | 2,51101+3    | 1,88341+1  | 3,94656-2                            | 9,7297                                              |
| 25050                                      | 25149                           | 221,700     | -51,450  | 2,49174      | 1,86896    | 3,91538                              | 9,7295                                              |
| 25100                                      | 25200                           | 221,750     | -51,400  | 2,47261      | 1,85461    | 3,88446                              | 9,7294                                              |
| 25150                                      | 25250                           | 221,800     | -51,350  | 2,45364      | 1,84038    | 3,85379                              | 9,7292                                              |
| 25200                                      | 25300                           | 221,850     | -51,300  | 2,43482      | 1,82627    | 3,82337                              | 9,7291                                              |
| 25250                                      | 25351                           | 221,900     | -51,250  | 2,41615      | 1,81226    | 3,79319                              | 9,7289                                              |
| 25300                                      | 25401                           | 221,950     | -51,200  | 2,39762      | 1,79837    | 3,76326                              | 9,7287                                              |
| 25350                                      | 25451                           | 222,000     | -51,150  | 2,37924      | 1,78458    | 3,73357                              | 9,7286                                              |
| 25400                                      | 25502                           | 222,050     | -51,100  | 2,36101      | 1,77090    | 3,70412                              | 9,7284                                              |
| 25450                                      | 25552                           | 222,100     | -51,050  | 2,34292      | 1,75733    | 3,67491                              | 9,7283                                              |
| 25500                                      | 25603                           | 222,150     | -51,000  | 2,32497+3    | 1,74387+1  | 3,64594-2                            | 9,7281                                              |
| 25550                                      | 25653                           | 222,200     | -50,950  | 2,30716      | 1,73051    | 3,61720                              | 9,7280                                              |
| 25600                                      | 25704                           | 222,250     | -50,900  | 2,28950      | 1,71726    | 3,58869                              | 9,7278                                              |
| 25650                                      | 25754                           | 222,300     | -50,850  | 2,27197      | 1,70412    | 3,56042                              | 9,7277                                              |
| 25700                                      | 25804                           | 222,350     | -50,800  | 2,25458      | 1,69107    | 3,53237                              | 9,7275                                              |
| 25750                                      | 25855                           | 222,400     | -50,750  | 2,23733      | 1,67813    | 3,50456                              | 9,7274                                              |
| 25800                                      | 25905                           | 222,450     | -50,700  | 2,22021      | 1,66530    | 3,47695                              | 9,7272                                              |
| 25850                                      | 25956                           | 222,500     | -50,650  | 2,20323      | 1,65256    | 3,44959                              | 9,7271                                              |
| 25900                                      | 26006                           | 222,550     | -50,600  | 2,18638      | 1,63992    | 3,42245                              | 9,7269                                              |
| 25950                                      | 26056                           | 222,600     | -50,550  | 2,16967      | 1,62738    | 3,39552                              | 9,7267                                              |

От 26000 до 27950 м

| Величины и функции геометрической высоты |                                         |             |          |              |            |                                         |                                                              |
|------------------------------------------|-----------------------------------------|-------------|----------|--------------|------------|-----------------------------------------|--------------------------------------------------------------|
| Геометрическая<br>высота $H$ , м         | геометриче-<br>ская высо-<br>та $H$ , м | температура |          | давление $p$ |            | плотность<br>$\rho$ , кг/м <sup>3</sup> | ускорение<br>свободного<br>падения $g$ ,<br>м/с <sup>2</sup> |
|                                          |                                         | $T$ , К     | $t$ , °С | Па           | мм рт. ст. |                                         |                                                              |
| 26000                                    | 25894                                   | 222,544     | -50,606  | 2,18837+3    | 1,64141+1  | 3,42565-2                               | 9,7269                                                       |
| 26050                                    | 25944                                   | 222,594     | -50,556  | 2,17177      | 1,62896    | 3,39891                                 | 9,7268                                                       |
| 26100                                    | 25993                                   | 222,643     | -50,507  | 2,15531      | 1,61661    | 3,37239                                 | 9,7266                                                       |
| 26150                                    | 26043                                   | 222,693     | -50,457  | 2,13897      | 1,60436    | 3,34608                                 | 9,7265                                                       |
| 26200                                    | 26092                                   | 222,742     | -50,408  | 2,12276      | 1,59220    | 3,31998                                 | 9,7263                                                       |
| 26250                                    | 26142                                   | 222,792     | -50,358  | 2,10668      | 1,58014    | 3,29410                                 | 9,7262                                                       |
| 26300                                    | 26192                                   | 222,842     | -50,308  | 2,09072      | 1,56817    | 3,26842                                 | 9,7260                                                       |
| 26350                                    | 26241                                   | 222,891     | -50,259  | 2,07489      | 1,55630    | 3,24295                                 | 9,7259                                                       |
| 26400                                    | 26291                                   | 222,941     | -50,209  | 2,05918      | 1,54451    | 3,21788                                 | 9,7257                                                       |
| 26450                                    | 26340                                   | 222,990     | -50,160  | 2,04360      | 1,53282    | 3,19262                                 | 9,7255                                                       |
| 26500                                    | 26390                                   | 223,040     | -50,110  | 2,02813+3    | 1,52122+1  | 3,16775-2                               | 9,7254                                                       |
| 26550                                    | 26440                                   | 223,090     | -50,060  | 2,01279      | 1,50971    | 3,14309                                 | 9,7252                                                       |
| 26600                                    | 26489                                   | 223,139     | -50,011  | 1,99756      | 1,49830    | 3,11862                                 | 9,7251                                                       |
| 26650                                    | 26539                                   | 223,189     | -49,961  | 1,98246      | 1,48697    | 3,09435                                 | 9,7249                                                       |
| 26700                                    | 26588                                   | 223,238     | -49,912  | 1,96747      | 1,47572    | 3,07028                                 | 9,7248                                                       |
| 26750                                    | 26638                                   | 223,288     | -49,862  | 1,95260      | 1,46457    | 3,04639                                 | 9,7246                                                       |
| 26800                                    | 26687                                   | 223,337     | -49,813  | 1,93785      | 1,45350    | 3,02270                                 | 9,7245                                                       |
| 26850                                    | 26737                                   | 223,387     | -49,763  | 1,92320      | 1,44252    | 2,99920                                 | 9,7243                                                       |
| 26900                                    | 26787                                   | 223,437     | -49,713  | 1,90868      | 1,43163    | 2,97589                                 | 9,7242                                                       |
| 26950                                    | 26836                                   | 223,486     | -49,664  | 1,89427      | 1,42082    | 2,95276                                 | 9,7240                                                       |
| 27000                                    | 26886                                   | 223,536     | -49,614  | 1,87997+3    | 1,41009+1  | 2,92982-2                               | 9,7239                                                       |
| 27050                                    | 26935                                   | 223,585     | -49,565  | 1,86578      | 1,39945    | 2,90706                                 | 9,7237                                                       |
| 27100                                    | 26985                                   | 223,635     | -49,515  | 1,85170      | 1,38889    | 2,88449                                 | 9,7236                                                       |
| 27150                                    | 27035                                   | 223,685     | -49,465  | 1,83773      | 1,37841    | 2,86209                                 | 9,7234                                                       |
| 27200                                    | 27084                                   | 223,734     | -49,416  | 1,82387      | 1,36801    | 2,83988                                 | 9,7233                                                       |
| 27250                                    | 27134                                   | 223,784     | -49,366  | 1,81012      | 1,35770    | 2,81784                                 | 9,7231                                                       |
| 27300                                    | 27183                                   | 223,833     | -49,317  | 1,79647      | 1,34746    | 2,79598                                 | 9,7230                                                       |
| 27350                                    | 27233                                   | 223,883     | -49,267  | 1,78293      | 1,33731    | 2,77429                                 | 9,7228                                                       |
| 27400                                    | 27282                                   | 223,932     | -49,218  | 1,76950      | 1,32723    | 2,75278                                 | 9,7227                                                       |
| 27450                                    | 27332                                   | 223,982     | -49,168  | 1,75617      | 1,31723    | 2,73143                                 | 9,7225                                                       |
| 27500                                    | 27382                                   | 224,032     | -49,118  | 1,74294+3    | 1,30731+1  | 2,71026-2                               | 9,7223                                                       |
| 27550                                    | 27431                                   | 224,081     | -49,069  | 1,72982      | 1,29747    | 2,68926                                 | 9,7222                                                       |
| 27600                                    | 27481                                   | 224,131     | -49,019  | 1,71679      | 1,28770    | 2,66842                                 | 9,7220                                                       |
| 27650                                    | 27530                                   | 224,180     | -48,970  | 1,70387      | 1,27801    | 2,64776                                 | 9,7219                                                       |
| 27700                                    | 27580                                   | 224,230     | -48,920  | 1,69105      | 1,26839    | 2,62725                                 | 9,7217                                                       |
| 27750                                    | 27629                                   | 224,279     | -48,871  | 1,67833      | 1,25885    | 2,60691                                 | 9,7216                                                       |
| 27800                                    | 27679                                   | 224,329     | -48,821  | 1,66571      | 1,24938    | 2,58673                                 | 9,7214                                                       |
| 27850                                    | 27729                                   | 224,379     | -48,771  | 1,65318      | 1,23999    | 2,56672                                 | 9,7213                                                       |
| 27900                                    | 27778                                   | 224,428     | -48,722  | 1,64076      | 1,23067    | 2,54686                                 | 9,7211                                                       |
| 27950                                    | 27828                                   | 224,478     | -48,672  | 1,62843      | 1,22142    | 2,52716                                 | 9,7210                                                       |

Продолжение табл. 1

Продолжение табл. 1

| Геопотенциальная высота $H$ , м | Величины в функции геопотенциальной высоты |             |          |              |            |                                      |                                                     |
|---------------------------------|--------------------------------------------|-------------|----------|--------------|------------|--------------------------------------|-----------------------------------------------------|
|                                 | геометрическая высота $h$ , м              | температура |          | давление $p$ |            | плотность $\rho$ , кг/м <sup>3</sup> | ускорение свободного падения $g$ , м/с <sup>2</sup> |
|                                 |                                            | $T$ , К     | $t$ , °С | Па           | мм рт. ст. |                                      |                                                     |
| 26000                           | 26107                                      | 222,650     | -50,500  | 2,15308+3    | 1,61495+1  | 3,34881-2                            | 9,7266                                              |
| 26050                           | 26157                                      | 222,700     | -50,450  | 2,13663      | 1,60260    | 3,34231                              | 9,7264                                              |
| 26100                           | 26208                                      | 222,750     | -50,400  | 2,12031      | 1,59036    | 3,33603                              | 9,7263                                              |
| 26150                           | 26258                                      | 222,800     | -50,350  | 2,10411      | 1,57821    | 3,32997                              | 9,7261                                              |
| 26200                           | 26308                                      | 222,850     | -50,300  | 2,08804      | 1,56616    | 3,32411                              | 9,7260                                              |
| 26250                           | 26359                                      | 222,900     | -50,250  | 2,07210      | 1,55420    | 3,31846                              | 9,7258                                              |
| 26300                           | 26409                                      | 222,950     | -50,200  | 2,05628      | 1,54234    | 3,31302                              | 9,7257                                              |
| 26350                           | 26460                                      | 223,000     | -50,150  | 2,04059      | 1,53057    | 3,30779                              | 9,7255                                              |
| 26400                           | 26510                                      | 223,050     | -50,100  | 2,02502      | 1,51889    | 3,30276                              | 9,7254                                              |
| 26450                           | 26561                                      | 223,100     | -50,050  | 2,00957      | 1,50731    | 3,30792                              | 9,7252                                              |
| 26500                           | 26611                                      | 223,150     | -50,000  | 1,99425+3    | 1,49581+1  | 3,31130-2                            | 9,7251                                              |
| 26550                           | 26661                                      | 223,200     | -49,950  | 1,97904      | 1,48441    | 3,30887                              | 9,7249                                              |
| 26600                           | 26712                                      | 223,250     | -49,900  | 1,96396      | 1,47309    | 3,30643                              | 9,7247                                              |
| 26650                           | 26762                                      | 223,300     | -49,850  | 1,94899      | 1,46186    | 3,30400                              | 9,7246                                              |
| 26700                           | 26813                                      | 223,350     | -49,800  | 1,93414      | 1,45072    | 3,30167                              | 9,7244                                              |
| 26750                           | 26863                                      | 223,400     | -49,750  | 1,91940      | 1,43967    | 2,99310                              | 9,7243                                              |
| 26800                           | 26913                                      | 223,450     | -49,700  | 1,90479      | 1,42871    | 2,96964                              | 9,7241                                              |
| 26850                           | 26964                                      | 223,500     | -49,650  | 1,89028      | 1,41783    | 2,94637                              | 9,7240                                              |
| 26900                           | 27014                                      | 223,550     | -49,600  | 1,87589      | 1,40704    | 2,92329                              | 9,7238                                              |
| 26950                           | 27065                                      | 223,600     | -49,550  | 1,86161      | 1,39633    | 2,90039                              | 9,7237                                              |
| 27000                           | 27115                                      | 223,650     | -49,500  | 1,84745+3    | 1,38570+1  | 2,87767-2                            | 9,7235                                              |
| 27050                           | 27166                                      | 223,700     | -49,450  | 1,83339      | 1,37516    | 2,85514                              | 9,7234                                              |
| 27100                           | 27216                                      | 223,750     | -49,400  | 1,81945      | 1,36470    | 2,83279                              | 9,7232                                              |
| 27150                           | 27266                                      | 223,800     | -49,350  | 1,80561      | 1,35432    | 2,81062                              | 9,7231                                              |
| 27200                           | 27317                                      | 223,850     | -49,300  | 1,79189      | 1,34402    | 2,78863                              | 9,7229                                              |
| 27250                           | 27367                                      | 223,900     | -49,250  | 1,77827      | 1,33381    | 2,76682                              | 9,7228                                              |
| 27300                           | 27418                                      | 223,950     | -49,200  | 1,76475      | 1,32367    | 2,74518                              | 9,7226                                              |
| 27350                           | 27468                                      | 224,000     | -49,150  | 1,75134      | 1,31362    | 2,72372                              | 9,7224                                              |
| 27400                           | 27519                                      | 224,050     | -49,100  | 1,73804      | 1,30364    | 2,70242                              | 9,7223                                              |
| 27450                           | 27569                                      | 224,100     | -49,050  | 1,72484      | 1,29374    | 2,68130                              | 9,7221                                              |
| 27500                           | 27619                                      | 224,150     | -49,000  | 1,71175+3    | 1,28392+1  | 2,66035-2                            | 9,7220                                              |
| 27550                           | 27670                                      | 224,200     | -48,950  | 1,69875      | 1,27417    | 2,63957                              | 9,7218                                              |
| 27600                           | 27720                                      | 224,250     | -48,900  | 1,68586      | 1,26450    | 2,61895                              | 9,7217                                              |
| 27650                           | 27771                                      | 224,300     | -48,850  | 1,67307      | 1,25491    | 2,59850                              | 9,7215                                              |
| 27700                           | 27821                                      | 224,350     | -48,800  | 1,66038      | 1,24539    | 2,57821                              | 9,7214                                              |
| 27750                           | 27872                                      | 224,400     | -48,750  | 1,64779      | 1,23594    | 2,55809                              | 9,7212                                              |
| 27800                           | 27922                                      | 224,450     | -48,700  | 1,63529      | 1,22657    | 2,53813                              | 9,7211                                              |
| 27850                           | 27973                                      | 224,500     | -48,650  | 1,62289      | 1,21727    | 2,51833                              | 9,7209                                              |
| 27900                           | 28023                                      | 224,550     | -48,600  | 1,61060      | 1,20805    | 2,49868                              | 9,7208                                              |
| 27950                           | 28073                                      | 224,600     | -48,550  | 1,59839      | 1,19889    | 2,47920                              | 9,7206                                              |

От 28000 до 29950 м

| Геометрическая<br>высота $H$ , м | Величины в функции геометрической высоты |             |          |              |            |                                         |                                                              |
|----------------------------------|------------------------------------------|-------------|----------|--------------|------------|-----------------------------------------|--------------------------------------------------------------|
|                                  | геометричес-<br>кая высота<br>$H$ , м    | температура |          | давление $p$ |            | плотность<br>$\rho$ , кг/м <sup>3</sup> | ускорение<br>свободного<br>падения $g$ ,<br>м/с <sup>2</sup> |
|                                  |                                          | $T$ , К     | $t$ , °С | Па           | мм рт. ст. |                                         |                                                              |
| 28000                            | 27877                                    | 224,527     | -48,623  | 1,61619+3    | 1,21224+1  | 2,50762-2                               | 9,7280                                                       |
| 28050                            | 27927                                    | 224,577     | -48,573  | 1,60405      | 1,20314    | 2,48823                                 | 9,7207                                                       |
| 28100                            | 27976                                    | 224,626     | -48,524  | 1,59200      | 1,19410    | 2,46900                                 | 9,7205                                                       |
| 28150                            | 28026                                    | 224,676     | -48,474  | 1,58005      | 1,18513    | 2,44992                                 | 9,7204                                                       |
| 28200                            | 28075                                    | 224,725     | -48,425  | 1,56819      | 1,17624    | 2,43100                                 | 9,7202                                                       |
| 28250                            | 28125                                    | 224,775     | -48,375  | 1,55642      | 1,16741    | 2,41222                                 | 9,7201                                                       |
| 28300                            | 28175                                    | 224,825     | -48,325  | 1,54474      | 1,15865    | 2,39359                                 | 9,7199                                                       |
| 28350                            | 28224                                    | 224,874     | -48,276  | 1,53315      | 1,14996    | 2,37511                                 | 9,7198                                                       |
| 28400                            | 28274                                    | 224,924     | -48,226  | 1,52166      | 1,14134    | 2,35678                                 | 9,7196                                                       |
| 28450                            | 28323                                    | 224,973     | -48,177  | 1,51025      | 1,13278    | 2,33859                                 | 9,7195                                                       |
| 28500                            | 28373                                    | 225,023     | -48,127  | 1,49893+3    | 1,12429+1  | 2,32055-2                               | 9,7193                                                       |
| 28550                            | 28422                                    | 225,072     | -48,078  | 1,48769      | 1,11586    | 2,30266                                 | 9,7192                                                       |
| 28600                            | 28472                                    | 225,122     | -48,028  | 1,47655      | 1,10750    | 2,28490                                 | 9,7190                                                       |
| 28650                            | 28521                                    | 225,171     | -47,979  | 1,46548      | 1,09920    | 2,26728                                 | 9,7188                                                       |
| 28700                            | 28571                                    | 225,221     | -47,929  | 1,45451      | 1,09097    | 2,24981                                 | 9,7187                                                       |
| 28750                            | 28621                                    | 225,271     | -47,879  | 1,44362      | 1,08280    | 2,23247                                 | 9,7185                                                       |
| 28800                            | 28670                                    | 225,320     | -47,830  | 1,43281      | 1,07470    | 2,21528                                 | 9,7184                                                       |
| 28850                            | 28720                                    | 225,370     | -47,780  | 1,42209      | 1,06666    | 2,19821                                 | 9,7182                                                       |
| 28900                            | 28769                                    | 225,419     | -47,731  | 1,41145      | 1,05867    | 2,18129                                 | 9,7181                                                       |
| 28950                            | 28819                                    | 225,469     | -47,681  | 1,40089      | 1,05076    | 2,16449                                 | 9,7179                                                       |
| 29000                            | 28868                                    | 225,518     | -47,632  | 1,39042+3    | 1,04290+1  | 2,14783-2                               | 9,7178                                                       |
| 29050                            | 28918                                    | 225,568     | -47,582  | 1,38002      | 1,03510    | 2,13131                                 | 9,7176                                                       |
| 29100                            | 28967                                    | 225,617     | -47,533  | 1,36970      | 1,02736    | 2,11491                                 | 9,7175                                                       |
| 29150                            | 29017                                    | 225,667     | -47,483  | 1,35947      | 1,01968    | 2,09865                                 | 9,7173                                                       |
| 29200                            | 29066                                    | 225,716     | -47,434  | 1,34931      | 1,01207    | 2,08251                                 | 9,7172                                                       |
| 29250                            | 29116                                    | 225,766     | -47,384  | 1,33923      | 1,00451    | 2,06650                                 | 9,7170                                                       |
| 29300                            | 29166                                    | 225,816     | -47,334  | 1,32923      | 9,97005 0  | 2,05062                                 | 9,7169                                                       |
| 29350                            | 29215                                    | 225,865     | -47,285  | 1,31931      | 9,89561    | 2,03486                                 | 9,7167                                                       |
| 29400                            | 29265                                    | 225,915     | -47,235  | 1,30946      | 9,82174    | 2,01923                                 | 9,7166                                                       |
| 29450                            | 29314                                    | 225,964     | -47,186  | 1,29969      | 9,74845    | 2,00372                                 | 9,7164                                                       |
| 29500                            | 29364                                    | 226,014     | -47,136  | 1,28999+3    | 9,67571 0  | 1,98833-2                               | 9,7163                                                       |
| 29550                            | 29413                                    | 226,063     | -47,087  | 1,28037      | 9,60354    | 1,97307                                 | 9,7161                                                       |
| 29600                            | 29463                                    | 226,113     | -47,037  | 1,27082      | 9,53192    | 1,95793                                 | 9,7160                                                       |
| 29650                            | 29512                                    | 226,162     | -46,988  | 1,26134      | 9,46085    | 1,94290                                 | 9,7158                                                       |
| 29700                            | 29562                                    | 226,212     | -46,938  | 1,25194      | 9,39033    | 1,92800                                 | 9,7157                                                       |
| 29750                            | 29611                                    | 226,261     | -46,889  | 1,24261      | 9,32035    | 1,91321                                 | 9,7155                                                       |
| 29800                            | 29661                                    | 226,311     | -46,839  | 1,23335      | 9,25091    | 1,89854                                 | 9,7153                                                       |
| 29850                            | 29710                                    | 226,360     | -46,790  | 1,22417      | 9,18200    | 1,88399                                 | 9,7152                                                       |
| 29900                            | 29760                                    | 226,410     | -46,740  | 1,21505      | 9,11362    | 1,86955                                 | 9,7150                                                       |
| 29950                            | 29810                                    | 226,460     | -46,690  | 1,20600      | 9,04577    | 1,85522                                 | 9,7149                                                       |

Продолжение табл. 1

Продолжение табл.

Величины в функции геопотенциальной высоты

| Геопотенциальная высота $H$ , м | геометрическая высота $h$ , м | температура |          | давление $p$ |            | плотность $\rho$ , кг/м <sup>3</sup> | ускорение свободного падения $g$ , м/с <sup>2</sup> |  |  |
|---------------------------------|-------------------------------|-------------|----------|--------------|------------|--------------------------------------|-----------------------------------------------------|--|--|
|                                 |                               | $T$ , К     | $t$ , °C | Па           | мм рт. ст. |                                      |                                                     |  |  |
|                                 |                               |             |          |              |            |                                      |                                                     |  |  |
| 28000                           | 28124                         | 224,650     | -48,500  | 1,58628 +3   | 1,18981 +1 | 2,45987 -2                           | 9,7204                                              |  |  |
| 28050                           | 28174                         | 224,700     | -48,450  | 1,57427      | 1,18080    | 2,44070                              | 9,7203                                              |  |  |
| 28100                           | 28225                         | 224,750     | -48,400  | 1,56235      | 1,17186    | 2,42167                              | 9,7201                                              |  |  |
| 28150                           | 28275                         | 224,800     | -48,350  | 1,55052      | 1,16298    | 2,40281                              | 9,7200                                              |  |  |
| 28200                           | 28326                         | 224,850     | -48,300  | 1,53878      | 1,15418    | 2,38409                              | 9,7198                                              |  |  |
| 28250                           | 28376                         | 224,900     | -48,250  | 1,52714      | 1,14545    | 2,36552                              | 9,7197                                              |  |  |
| 28300                           | 28427                         | 224,950     | -48,200  | 1,51559      | 1,13678    | 2,34710                              | 9,7195                                              |  |  |
| 28350                           | 28477                         | 225,000     | -48,150  | 1,50412      | 1,12818    | 2,32883                              | 9,7194                                              |  |  |
| 28400                           | 28527                         | 225,050     | -48,100  | 1,49275      | 1,11965    | 2,31071                              | 9,7192                                              |  |  |
| 28450                           | 28578                         | 225,100     | -48,050  | 1,48146      | 1,11119    | 2,29273                              | 9,7191                                              |  |  |
| 28500                           | 28628                         | 225,150     | -48,000  | 1,47026 +3   | 1,10279 +1 | 2,27489 -2                           | 9,7189                                              |  |  |
| 28550                           | 28679                         | 225,200     | -47,950  | 1,45915      | 1,09445    | 2,25720                              | 9,7188                                              |  |  |
| 28600                           | 28729                         | 225,250     | -47,900  | 1,44813      | 1,08618    | 2,23965                              | 9,7186                                              |  |  |
| 28650                           | 28780                         | 225,300     | -47,850  | 1,43719      | 1,07798    | 2,22224                              | 9,7185                                              |  |  |
| 28700                           | 28830                         | 225,350     | -47,800  | 1,42633      | 1,06984    | 2,20497                              | 9,7183                                              |  |  |
| 28750                           | 28881                         | 225,400     | -47,750  | 1,41556      | 1,06176    | 2,18783                              | 9,7181                                              |  |  |
| 28800                           | 28931                         | 225,450     | -47,700  | 1,40488      | 1,05374    | 2,17083                              | 9,7180                                              |  |  |
| 28850                           | 28982                         | 225,500     | -47,650  | 1,39428      | 1,04579    | 2,15397                              | 9,7178                                              |  |  |
| 28900                           | 29032                         | 225,550     | -47,600  | 1,38376      | 1,03790    | 2,13725                              | 9,7177                                              |  |  |
| 28950                           | 29082                         | 225,600     | -47,550  | 1,37332      | 1,03007    | 2,12065                              | 9,7175                                              |  |  |
| 29000                           | 29133                         | 225,650     | -47,500  | 1,36296 +3   | 1,02230 +1 | 2,10419 -2                           | 9,7174                                              |  |  |
| 29050                           | 29183                         | 225,700     | -47,450  | 1,35268      | 1,01459    | 2,08786                              | 9,7172                                              |  |  |
| 29100                           | 29234                         | 225,750     | -47,400  | 1,34248      | 1,00694    | 2,07166                              | 9,7171                                              |  |  |
| 29150                           | 29284                         | 225,800     | -47,350  | 1,33236      | 9,99355 0  | 2,05559                              | 9,7169                                              |  |  |
| 29200                           | 29335                         | 225,850     | -47,300  | 1,32232      | 9,981825   | 2,03965                              | 9,7168                                              |  |  |
| 29250                           | 29385                         | 225,900     | -47,250  | 1,31236      | 9,84353    | 2,02384                              | 9,7166                                              |  |  |
| 29300                           | 29436                         | 225,950     | -47,200  | 1,30248      | 9,76938    | 2,00815                              | 9,7165                                              |  |  |
| 29350                           | 29486                         | 226,000     | -47,150  | 1,29267      | 9,69581    | 1,99259                              | 9,7163                                              |  |  |
| 29400                           | 29537                         | 226,050     | -47,100  | 1,28294      | 9,62281    | 1,97715                              | 9,7161                                              |  |  |
| 29450                           | 29587                         | 226,100     | -47,050  | 1,27328      | 9,55038    | 1,96183                              | 9,7160                                              |  |  |
| 29500                           | 29638                         | 226,150     | -47,000  | 1,26370 +3   | 9,47851 0  | 1,94663 -2                           | 9,7158                                              |  |  |
| 29550                           | 29688                         | 226,200     | -46,950  | 1,25419      | 9,40719    | 1,93156                              | 9,7157                                              |  |  |
| 29600                           | 29738                         | 226,250     | -46,900  | 1,24475      | 9,33643    | 1,91661                              | 9,7155                                              |  |  |
| 29650                           | 29789                         | 226,300     | -46,850  | 1,23539      | 9,26621    | 1,90177                              | 9,7154                                              |  |  |
| 29700                           | 29839                         | 226,350     | -46,800  | 1,22610      | 9,19654    | 1,88706                              | 9,7152                                              |  |  |
| 29750                           | 29890                         | 226,400     | -46,750  | 1,21689      | 9,12741    | 1,87246                              | 9,7151                                              |  |  |
| 29800                           | 29940                         | 226,450     | -46,700  | 1,20774      | 9,05881    | 1,85797                              | 9,7149                                              |  |  |
| 29850                           | 29991                         | 226,500     | -46,650  | 1,19867      | 8,99074    | 1,84361                              | 9,7148                                              |  |  |
| 29900                           | 30041                         | 226,550     | -46,600  | 1,18966      | 8,92320    | 1,82935                              | 9,7146                                              |  |  |
| 29950                           | 30092                         | 226,600     | -46,550  | 1,18073      | 8,85618    | 1,81521                              | 9,7145                                              |  |  |

От 30000 до 31950 м

| Геометричес-<br>кая высота $H$ , м | Величины в функции геометрической высоты    |             |          |              |            |                                         | ускорение<br>свободного<br>падения $g$ ,<br>м/с <sup>2</sup> |
|------------------------------------|---------------------------------------------|-------------|----------|--------------|------------|-----------------------------------------|--------------------------------------------------------------|
|                                    | геопотенци-<br>альная высо-<br>та $H^*$ , м | температура |          | давление $p$ |            | плотность<br>$\rho$ , кг/м <sup>3</sup> |                                                              |
|                                    |                                             | $T$ , К     | $t$ , °C | Па           | мм рт. ст. |                                         |                                                              |
| 30000                              | 29859                                       | 226,509     | -46,641  | 1,19703+3    | 8,97843 0  | 1,84101-2                               | 9,7147                                                       |
| 30050                              | 29909                                       | 226,559     | -46,591  | 1,18812      | 8,91162    | 1,82691                                 | 9,7146                                                       |
| 30100                              | 29958                                       | 226,608     | -46,542  | 1,17928      | 8,84531    | 1,81292                                 | 9,7144                                                       |
| 30150                              | 30008                                       | 226,658     | -46,492  | 1,17051      | 8,77952    | 1,79904                                 | 9,7143                                                       |
| 30200                              | 30057                                       | 226,707     | -46,443  | 1,16180      | 8,71423    | 1,78527                                 | 9,7141                                                       |
| 30250                              | 30107                                       | 226,757     | -46,393  | 1,15316      | 8,64944    | 1,77161                                 | 9,7140                                                       |
| 30300                              | 30156                                       | 226,806     | -46,344  | 1,14459      | 8,58514    | 1,75806                                 | 9,7138                                                       |
| 30350                              | 30206                                       | 226,856     | -46,294  | 1,13609      | 8,52135    | 1,74461                                 | 9,7137                                                       |
| 30400                              | 30255                                       | 226,905     | -46,245  | 1,12764      | 8,45804    | 1,73127                                 | 9,7135                                                       |
| 30450                              | 30305                                       | 226,955     | -46,195  | 1,11927      | 8,39521    | 1,71804                                 | 9,7134                                                       |
| 30500                              | 30354                                       | 227,004     | -46,146  | 1,11096+3    | 8,33287 0  | 1,70491-2                               | 9,7132                                                       |
| 30550                              | 30404                                       | 227,054     | -46,096  | 1,10271      | 8,27100    | 1,69188                                 | 9,7131                                                       |
| 30600                              | 30453                                       | 227,103     | -46,047  | 1,09452      | 8,20960    | 1,67896                                 | 9,7129                                                       |
| 30650                              | 30503                                       | 227,153     | -45,997  | 1,08640      | 8,14868    | 1,66613                                 | 9,7128                                                       |
| 30700                              | 30552                                       | 227,202     | -45,948  | 1,07834      | 8,08822    | 1,65341                                 | 9,7126                                                       |
| 30750                              | 30602                                       | 227,252     | -45,898  | 1,07034      | 8,02823    | 1,64079                                 | 9,7125                                                       |
| 30800                              | 30651                                       | 227,301     | -45,849  | 1,06240      | 7,96869    | 1,62827                                 | 9,7123                                                       |
| 30850                              | 30701                                       | 227,351     | -45,799  | 1,05453      | 7,90961    | 1,61584                                 | 9,7122                                                       |
| 30900                              | 30751                                       | 227,401     | -45,749  | 1,04671      | 7,85098    | 1,60352                                 | 9,7120                                                       |
| 30950                              | 30800                                       | 227,450     | -45,700  | 1,03895      | 7,79280    | 1,59129                                 | 9,7118                                                       |
| 31000                              | 30850                                       | 227,500     | -45,650  | 1,03126+3    | 7,73506 0  | 1,57915-2                               | 9,7117                                                       |
| 31050                              | 30899                                       | 227,549     | -45,601  | 1,02362      | 7,67777    | 1,56711                                 | 9,7115                                                       |
| 31100                              | 30949                                       | 227,599     | -45,551  | 1,01604      | 7,62091    | 1,55517                                 | 9,7114                                                       |
| 31150                              | 30998                                       | 227,648     | -45,502  | 1,00851      | 7,56448    | 1,54332                                 | 9,7112                                                       |
| 31200                              | 31048                                       | 227,698     | -45,452  | 1,00105      | 7,50849    | 1,53156                                 | 9,7111                                                       |
| 31250                              | 31097                                       | 227,747     | -45,403  | 9,93841+2    | 7,45292    | 1,51990                                 | 9,7109                                                       |
| 31300                              | 31147                                       | 227,797     | -45,353  | 9,86289      | 7,39778    | 1,50833                                 | 9,7108                                                       |
| 31350                              | 31196                                       | 227,846     | -45,304  | 9,78994      | 7,34306    | 1,49684                                 | 9,7106                                                       |
| 31400                              | 31246                                       | 227,896     | -45,254  | 9,71754      | 7,28876    | 1,48545                                 | 9,7105                                                       |
| 31450                              | 31295                                       | 227,945     | -45,205  | 9,64569      | 7,23487    | 1,47415                                 | 9,7103                                                       |
| 31500                              | 31345                                       | 227,995     | -45,155  | 9,57440+2    | 7,18139 0  | 1,46293-2                               | 9,7102                                                       |
| 31550                              | 31394                                       | 228,044     | -45,106  | 9,50364      | 7,12832    | 1,45181                                 | 9,7100                                                       |
| 31600                              | 31444                                       | 228,094     | -45,056  | 9,43342      | 7,07565    | 1,44077                                 | 9,7099                                                       |
| 31650                              | 31493                                       | 228,143     | -45,007  | 9,36374      | 7,02338    | 1,42982                                 | 9,7097                                                       |
| 31700                              | 31543                                       | 228,193     | -44,957  | 9,29459      | 6,97152    | 1,41895                                 | 9,7096                                                       |
| 31750                              | 31592                                       | 228,242     | -44,908  | 9,22597      | 6,92004    | 1,40817                                 | 9,7094                                                       |
| 31800                              | 31642                                       | 228,292     | -44,858  | 9,15787      | 6,86896    | 1,39747                                 | 9,7093                                                       |
| 31850                              | 31691                                       | 228,341     | -44,809  | 9,09028      | 6,81827    | 1,38686                                 | 9,7091                                                       |
| 31900                              | 31741                                       | 228,391     | -44,759  | 9,02322      | 6,76797    | 1,37632                                 | 9,7090                                                       |
| 31950                              | 31790                                       | 228,440     | -44,710  | 8,95665      | 6,71804    | 1,36588                                 | 9,7088                                                       |

| Величины в функции геопотенциальной высоты |                               |             |          |              |            |                                      |                                                     |        |
|--------------------------------------------|-------------------------------|-------------|----------|--------------|------------|--------------------------------------|-----------------------------------------------------|--------|
| Геопотенциальная высота $H$ , м            | геомеридианная высота $h$ , м | температура |          | давление $p$ |            | плотность $\rho$ , кг/м <sup>3</sup> | ускорение свободного падения $g$ , м/с <sup>2</sup> |        |
|                                            |                               | $T$ , К     | $t$ , °С | Па           | мм рт. ст. |                                      |                                                     |        |
| 30000                                      | 30142                         | 226,650     | -46,500  | 1,17186+3    | 8,78968    | 0                                    | 1,80119-2                                           | 9,7143 |
| 30050                                      | 30193                         | 226,700     | -46,450  | 1,16306      | 8,72369    |                                      | 1,78727                                             | 9,7142 |
| 30100                                      | 30243                         | 226,750     | -46,400  | 1,15433      | 8,65821    |                                      | 1,77346                                             | 9,7140 |
| 30150                                      | 30294                         | 226,800     | -46,350  | 1,14567      | 8,59324    |                                      | 1,75977                                             | 9,7138 |
| 30200                                      | 30344                         | 226,850     | -46,300  | 1,13708      | 8,52877    |                                      | 1,74618                                             | 9,7137 |
| 30250                                      | 30395                         | 226,900     | -46,250  | 1,12855      | 8,46480    |                                      | 1,73270                                             | 9,7135 |
| 30300                                      | 30445                         | 226,950     | -46,200  | 1,12008      | 8,40132    |                                      | 1,71933                                             | 9,7134 |
| 30350                                      | 30496                         | 227,000     | -46,150  | 1,11169      | 8,33833    |                                      | 1,70606                                             | 9,7132 |
| 30400                                      | 30546                         | 227,050     | -46,100  | 1,10335      | 8,27583    |                                      | 1,69290                                             | 9,7131 |
| 30450                                      | 30597                         | 227,100     | -46,050  | 1,09508      | 8,21380    |                                      | 1,67984                                             | 9,7129 |
| 30500                                      | 30647                         | 227,150     | -46,000  | 1,08688+3    | 8,15226    | 0                                    | 1,66689-2                                           | 9,7128 |
| 30550                                      | 30698                         | 227,200     | -45,950  | 1,07874      | 8,09119    |                                      | 1,65404                                             | 9,7126 |
| 30600                                      | 30748                         | 227,250     | -45,900  | 1,07066      | 8,03059    |                                      | 1,64129                                             | 9,7125 |
| 30650                                      | 30799                         | 227,300     | -45,850  | 1,06264      | 7,97047    |                                      | 1,62864                                             | 9,7123 |
| 30700                                      | 30849                         | 227,350     | -45,800  | 1,05469      | 7,91080    |                                      | 1,61609                                             | 9,7122 |
| 30750                                      | 30899                         | 227,400     | -45,750  | 1,04679      | 7,85159    |                                      | 1,60365                                             | 9,7120 |
| 30800                                      | 30950                         | 227,450     | -45,700  | 1,03896      | 7,79284    |                                      | 1,59130                                             | 9,7118 |
| 30850                                      | 31000                         | 227,500     | -45,650  | 1,03119      | 7,73454    |                                      | 1,57904                                             | 9,7117 |
| 30900                                      | 31051                         | 227,550     | -45,600  | 1,02347      | 7,67669    |                                      | 1,56689                                             | 9,7115 |
| 30950                                      | 31101                         | 227,600     | -45,550  | 1,01582      | 7,61929    |                                      | 1,55483                                             | 9,7114 |
| 31000                                      | 31152                         | 227,650     | -45,500  | 1,00823+3    | 7,56232    | 0                                    | 1,54287-2                                           | 9,7112 |
| 31050                                      | 31202                         | 227,700     | -45,450  | 1,00069      | 7,50580    |                                      | 1,53100                                             | 9,7111 |
| 31100                                      | 31253                         | 227,750     | -45,400  | 9,93213+2    | 7,44971    |                                      | 1,51922                                             | 9,7109 |
| 31150                                      | 31303                         | 227,800     | -45,350  | 9,85792      | 7,39405    |                                      | 1,50754                                             | 9,7108 |
| 31200                                      | 31354                         | 227,850     | -45,300  | 9,78429      | 7,33882    |                                      | 1,49595                                             | 9,7106 |
| 31250                                      | 31404                         | 227,900     | -45,250  | 9,71121      | 7,28401    |                                      | 1,48446                                             | 9,7105 |
| 31300                                      | 31455                         | 227,950     | -45,200  | 9,63871      | 7,22963    |                                      | 1,47305                                             | 9,7103 |
| 31350                                      | 31505                         | 228,000     | -45,150  | 9,56676      | 7,17566    |                                      | 1,46173                                             | 9,7102 |
| 31400                                      | 31556                         | 228,050     | -45,100  | 9,49536      | 7,12211    |                                      | 1,45051                                             | 9,7100 |
| 31450                                      | 31606                         | 228,100     | -45,050  | 9,42451      | 7,06897    |                                      | 1,43937                                             | 9,7099 |
| 31500                                      | 31657                         | 228,150     | -45,000  | 9,35420+2    | 7,01623    | 0                                    | 1,42832-2                                           | 9,7097 |
| 31550                                      | 31707                         | 228,200     | -44,950  | 9,28444      | 6,96390    |                                      | 1,41735                                             | 9,7095 |
| 31600                                      | 31758                         | 228,250     | -44,900  | 9,21521      | 6,91197    |                                      | 1,40648                                             | 9,7094 |
| 31650                                      | 31808                         | 228,300     | -44,850  | 9,14651      | 6,86045    |                                      | 1,39569                                             | 9,7092 |
| 31700                                      | 31859                         | 228,350     | -44,800  | 9,07834      | 6,80931    |                                      | 1,38498                                             | 9,7091 |
| 31750                                      | 31909                         | 228,400     | -44,750  | 9,01069      | 6,75857    |                                      | 1,37436                                             | 9,7089 |
| 31800                                      | 31960                         | 228,450     | -44,700  | 8,94356      | 6,70822    |                                      | 1,36382                                             | 9,7088 |
| 31850                                      | 32010                         | 228,500     | -44,650  | 8,87694      | 6,65825    |                                      | 1,35337                                             | 9,7086 |
| 31900                                      | 32061                         | 228,550     | -44,600  | 8,81083      | 6,60867    |                                      | 1,34299                                             | 9,7085 |
| 31950                                      | 32111                         | 228,600     | -44,550  | 8,74524      | 6,55947    |                                      | 1,33270                                             | 9,7083 |



От 32000 до 35900 м

| Величины в функции геометрической высоты |                                             |             |          |              |            |                                         |                                                              |
|------------------------------------------|---------------------------------------------|-------------|----------|--------------|------------|-----------------------------------------|--------------------------------------------------------------|
| Геометрическая<br>высота $H$ , м         | геопотенци-<br>альная вы-<br>сота $H_p$ , м | температура |          | давление $p$ |            | плотность<br>$\rho$ , кг/м <sup>3</sup> | ускорение<br>свободного<br>падения $g$ ,<br>м/с <sup>2</sup> |
|                                          |                                             | $T$ , К     | $t$ , °C | Па           | мм рт. ст. |                                         |                                                              |
| 32000                                    | 31840                                       | 228,490     | -44,660  | 8,89060+2    | 6,66850 0  | 1,35551-2                               | 9,7087                                                       |
| 32100                                    | 31939                                       | 228,589     | -44,561  | 8,76000      | 6,57054    | 1,33502                                 | 9,7084                                                       |
| 32200                                    | 32038                                       | 228,756     | -44,394  | 8,63138      | 6,47407    | 1,31446                                 | 9,7080                                                       |
| 32300                                    | 32137                                       | 229,033     | -44,117  | 8,50479      | 6,37912    | 1,29361                                 | 9,7077                                                       |
| 32400                                    | 32236                                       | 229,310     | -43,840  | 8,38021      | 6,28568    | 1,27312                                 | 9,7074                                                       |
| 32500                                    | 32335                                       | 229,587     | -43,563  | 8,25760      | 6,19371    | 1,25298                                 | 9,7071                                                       |
| 32600                                    | 32434                                       | 229,864     | -43,286  | 8,13694      | 6,10321    | 1,23318                                 | 9,7068                                                       |
| 32700                                    | 32533                                       | 230,141     | -43,009  | 8,01819      | 6,01414    | 1,21372                                 | 9,7065                                                       |
| 32800                                    | 32632                                       | 230,419     | -42,731  | 7,90131      | 5,92647    | 1,19459                                 | 9,7062                                                       |
| 32900                                    | 32731                                       | 230,696     | -42,454  | 7,78628      | 5,84019    | 1,17579                                 | 9,7059                                                       |
| 33000                                    | 32830                                       | 230,973     | -42,177  | 7,67306+2    | 5,75527 0  | 1,15730-2                               | 9,7056                                                       |
| 33100                                    | 32929                                       | 231,250     | -41,900  | 7,56162      | 5,67168    | 1,13912                                 | 9,7053                                                       |
| 33200                                    | 33028                                       | 231,527     | -41,623  | 7,45194      | 5,58941    | 1,12126                                 | 9,7050                                                       |
| 33300                                    | 33126                                       | 231,804     | -41,346  | 7,34398      | 5,50843    | 1,10369                                 | 9,7047                                                       |
| 33400                                    | 33225                                       | 232,081     | -41,069  | 7,23771      | 5,42873    | 1,08642                                 | 9,7044                                                       |
| 33500                                    | 33324                                       | 232,358     | -40,792  | 7,13310      | 5,35027    | 1,06945                                 | 9,7041                                                       |
| 33600                                    | 33423                                       | 232,635     | -40,515  | 7,03014      | 5,27304    | 1,05275                                 | 9,7038                                                       |
| 33700                                    | 33522                                       | 232,912     | -40,238  | 6,92878      | 5,19701    | 1,03634                                 | 9,7035                                                       |
| 33800                                    | 33621                                       | 233,189     | -39,961  | 6,82901      | 5,12218    | 1,02020                                 | 9,7032                                                       |
| 33900                                    | 33720                                       | 233,466     | -39,684  | 6,73079      | 5,04851    | 1,00434                                 | 9,7029                                                       |
| 34000                                    | 33819                                       | 233,744     | -39,406  | 6,63410+2    | 4,97598 0  | 9,88736-3                               | 9,7026                                                       |
| 34100                                    | 33918                                       | 234,021     | -39,129  | 6,53891      | 4,90459    | 9,73396                                 | 9,7023                                                       |
| 34200                                    | 34017                                       | 234,298     | -38,852  | 6,44521      | 4,83430    | 9,58313                                 | 9,7020                                                       |
| 34300                                    | 34116                                       | 234,575     | -38,575  | 6,35296      | 4,76511    | 9,43481                                 | 9,7017                                                       |
| 34400                                    | 34215                                       | 234,852     | -38,298  | 6,26213      | 4,69699    | 9,28896                                 | 9,7014                                                       |
| 34500                                    | 34314                                       | 235,129     | -38,021  | 6,17272      | 4,62992    | 9,14553                                 | 9,7011                                                       |
| 34600                                    | 34413                                       | 235,406     | -37,744  | 6,08468      | 4,56389    | 9,00449                                 | 9,7008                                                       |
| 34700                                    | 34512                                       | 235,682     | -37,468  | 5,99801      | 4,49888    | 8,86580                                 | 9,7005                                                       |
| 34800                                    | 34611                                       | 235,959     | -37,191  | 5,91267      | 4,43487    | 8,72940                                 | 9,7002                                                       |
| 34900                                    | 34709                                       | 236,236     | -36,914  | 5,82865      | 4,37184    | 8,59526                                 | 9,6998                                                       |
| 35000                                    | 34808                                       | 236,513     | -36,637  | 5,74592+2    | 4,30979 0  | 8,46334-3                               | 9,6995                                                       |
| 35100                                    | 34907                                       | 236,790     | -36,360  | 5,66446      | 4,24869    | 8,33360                                 | 9,6992                                                       |
| 35200                                    | 35006                                       | 237,067     | -36,083  | 5,58425      | 4,18853    | 8,20600                                 | 9,6989                                                       |
| 35300                                    | 35105                                       | 237,344     | -35,806  | 5,50527      | 4,12930    | 8,08050                                 | 9,6986                                                       |
| 35400                                    | 35204                                       | 237,621     | -35,529  | 5,42751      | 4,07096    | 7,95707                                 | 9,6983                                                       |
| 35500                                    | 35303                                       | 237,898     | -35,252  | 5,35093      | 4,01353    | 7,83567                                 | 9,6980                                                       |
| 35600                                    | 35402                                       | 238,175     | -34,975  | 5,27552      | 3,95696    | 7,71627                                 | 9,6977                                                       |
| 35700                                    | 35501                                       | 238,452     | -34,698  | 5,20126      | 3,90126    | 7,59882                                 | 9,6974                                                       |
| 35800                                    | 35600                                       | 238,729     | -34,421  | 5,12813      | 3,84642    | 7,48330                                 | 9,6971                                                       |
| 35900                                    | 35698                                       | 239,005     | -34,145  | 5,05612      | 3,79240    | 7,36966                                 | 9,6968                                                       |

Продолжение табл. 1

| Геопотенциальная высота $H$ , м | Геометрическая высота $h$ , м | Величины в функции геопотенциальной высоты |          |              |            |                                      |                                                     |
|---------------------------------|-------------------------------|--------------------------------------------|----------|--------------|------------|--------------------------------------|-----------------------------------------------------|
|                                 |                               | температура                                |          | давление $p$ |            | плотность $\rho$ , кг/м <sup>3</sup> | ускорение свободного падения $g$ , м/с <sup>2</sup> |
|                                 |                               | $T$ , К                                    | $t$ , °С | Па           | мм рт. ст. |                                      |                                                     |
| 32000                           | 32162                         | 228,650                                    | -44,500  | 8,68014+2    | 6,51064 0  | 1,32249-2                            | 9,7082                                              |
| 32100                           | 32263                         | 228,930                                    | -44,220  | 8,55149      | 6,41415    | 1,30130                              | 9,7079                                              |
| 32200                           | 32364                         | 229,210                                    | -43,940  | 8,42490      | 6,31920    | 1,28047                              | 9,7076                                              |
| 32300                           | 32465                         | 229,490                                    | -43,660  | 8,30034      | 6,22577    | 1,26000                              | 9,7072                                              |
| 32400                           | 32566                         | 229,770                                    | -43,380  | 8,17776      | 6,13383    | 1,23988                              | 9,7069                                              |
| 32500                           | 32667                         | 230,050                                    | -43,100  | 8,05715      | 6,04336    | 1,22010                              | 9,7066                                              |
| 32600                           | 32768                         | 230,330                                    | -42,820  | 7,93845      | 5,95433    | 1,20067                              | 9,7063                                              |
| 32700                           | 32869                         | 230,610                                    | -42,540  | 7,82164      | 5,86671    | 1,18156                              | 9,7060                                              |
| 32800                           | 32970                         | 230,890                                    | -42,260  | 7,70669      | 5,78050    | 1,16279                              | 9,7057                                              |
| 32900                           | 33071                         | 231,170                                    | -41,980  | 7,59357      | 5,69565    | 1,14433                              | 9,7054                                              |
| 33000                           | 33172                         | 231,450                                    | -41,700  | 7,48224+2    | 5,61214 0  | 1,12619-2                            | 9,7051                                              |
| 33100                           | 33273                         | 231,730                                    | -41,420  | 7,37268      | 5,52996    | 1,10836                              | 9,7048                                              |
| 33200                           | 33374                         | 232,010                                    | -41,140  | 7,26485      | 5,44908    | 1,09083                              | 9,7045                                              |
| 33300                           | 33475                         | 232,290                                    | -40,860  | 7,15872      | 5,36948    | 1,07360                              | 9,7042                                              |
| 33400                           | 33576                         | 232,570                                    | -40,580  | 7,05427      | 5,29114    | 1,05666                              | 9,7039                                              |
| 33500                           | 33677                         | 232,850                                    | -40,300  | 6,95147      | 5,21403    | 1,04001                              | 9,7036                                              |
| 33600                           | 33779                         | 233,130                                    | -40,020  | 6,85028      | 5,13813    | 1,02364                              | 9,7033                                              |
| 33700                           | 33880                         | 233,410                                    | -39,740  | 6,75069      | 5,06343    | 1,00755                              | 9,7029                                              |
| 33800                           | 33981                         | 233,690                                    | -39,460  | 6,65266      | 4,98890    | 9,91729-3                            | 9,7026                                              |
| 33900                           | 34082                         | 233,970                                    | -39,180  | 6,55617      | 4,91753    | 9,76175                              | 9,7023                                              |
| 34000                           | 34183                         | 234,250                                    | -38,900  | 6,46119+2    | 4,84629 0  | 9,60884-3                            | 9,7020                                              |
| 34100                           | 34284                         | 234,530                                    | -38,620  | 6,36770      | 4,77617    | 9,45849                              | 9,7017                                              |
| 34200                           | 34385                         | 234,810                                    | -38,340  | 6,27567      | 4,70714    | 9,31068                              | 9,7014                                              |
| 34300                           | 34486                         | 235,090                                    | -38,060  | 6,18508      | 4,63919    | 9,16535                              | 9,7011                                              |
| 34400                           | 34587                         | 235,370                                    | -37,780  | 6,09590      | 4,57230    | 9,02245                              | 9,7008                                              |
| 34500                           | 34688                         | 235,650                                    | -37,500  | 6,00811      | 4,50645    | 8,88195                              | 9,7005                                              |
| 34600                           | 34789                         | 235,930                                    | -37,220  | 5,92168      | 4,44163    | 8,74380                              | 9,7002                                              |
| 34700                           | 34890                         | 236,210                                    | -36,940  | 5,83661      | 4,37781    | 8,60796                              | 9,6999                                              |
| 34800                           | 34992                         | 236,490                                    | -36,660  | 5,75285      | 4,31499    | 8,47438                              | 9,6996                                              |
| 34900                           | 35093                         | 236,770                                    | -36,380  | 5,67039      | 4,25314    | 8,34304                              | 9,6993                                              |
| 35000                           | 35194                         | 237,050                                    | -36,100  | 5,58921+2    | 4,19225 0  | 8,21388-3                            | 9,6990                                              |
| 35100                           | 35295                         | 237,330                                    | -35,820  | 5,50928      | 4,13230    | 8,08687                              | 9,6987                                              |
| 35200                           | 35396                         | 237,610                                    | -35,540  | 5,43059      | 4,07328    | 7,96196                              | 9,6983                                              |
| 35300                           | 35497                         | 237,890                                    | -35,260  | 5,35311      | 4,01516    | 7,83914                              | 9,6980                                              |
| 35400                           | 35598                         | 238,170                                    | -34,980  | 5,27683      | 3,95795    | 7,71835                              | 9,6977                                              |
| 35500                           | 35699                         | 238,450                                    | -34,700  | 5,20172      | 3,90161    | 7,59955                              | 9,6974                                              |
| 35600                           | 35800                         | 238,730                                    | -34,420  | 5,12777      | 3,84614    | 7,48272                              | 9,6971                                              |
| 35700                           | 35902                         | 239,010                                    | -34,140  | 5,05496      | 3,79153    | 7,36783                              | 9,6968                                              |
| 35800                           | 36003                         | 239,290                                    | -33,860  | 4,98326      | 3,73775    | 7,25482                              | 9,6965                                              |
| 35900                           | 36104                         | 239,570                                    | -33,580  | 4,91266      | 3,68480    | 7,14368                              | 9,6962                                              |

| Геометрическая<br>высота $h$ , м | Величины в функции геометрической высоты  |             |          |              |            |           | плотность<br>$\rho$ , кг/м <sup>3</sup> | ускорение<br>свободного<br>падения $g$ ,<br>м/с <sup>2</sup> |
|----------------------------------|-------------------------------------------|-------------|----------|--------------|------------|-----------|-----------------------------------------|--------------------------------------------------------------|
|                                  | геопотенци-<br>альная вы-<br>сота $H$ , м | температура |          | давление $p$ |            |           |                                         |                                                              |
|                                  |                                           | $T$ , К     | $t$ , °С | Па           | мм рт. ст. |           |                                         |                                                              |
| 36000                            | 35797                                     | 239,282     | -33,868  | 4,98520+2    | 3,73921 0  | 7,25789-3 | 9,6965                                  |                                                              |
| 36100                            | 35896                                     | 239,559     | -33,591  | 4,91536      | 3,68682    | 7,14794   | 9,6962                                  |                                                              |
| 36200                            | 35995                                     | 239,836     | -33,314  | 4,84658      | 3,63524    | 7,03978   | 9,6959                                  |                                                              |
| 36300                            | 36094                                     | 240,113     | -33,037  | 4,77884      | 3,58443    | 6,93339   | 9,6956                                  |                                                              |
| 36400                            | 36193                                     | 240,390     | -32,760  | 4,71213      | 3,53439    | 6,82872   | 9,6953                                  |                                                              |
| 36500                            | 36292                                     | 240,667     | -32,483  | 4,64642      | 3,48510    | 6,72576   | 9,6950                                  |                                                              |
| 36600                            | 36390                                     | 240,943     | -32,207  | 4,58171      | 3,43657    | 6,62447   | 9,6947                                  |                                                              |
| 36700                            | 36489                                     | 241,220     | -31,930  | 4,51797      | 3,38876    | 6,52482   | 9,6944                                  |                                                              |
| 36800                            | 36588                                     | 241,497     | -31,653  | 4,45520      | 3,34167    | 6,42678   | 9,6941                                  |                                                              |
| 36900                            | 36687                                     | 241,774     | -31,376  | 4,39337      | 3,29530    | 6,33033   | 9,6938                                  |                                                              |
| 37000                            | 36786                                     | 242,050     | -31,100  | 4,33246+2    | 3,24961 0  | 6,23544-3 | 9,6935                                  |                                                              |
| 37100                            | 36885                                     | 242,327     | -30,823  | 4,27247      | 3,20462    | 6,14208   | 9,6932                                  |                                                              |
| 37200                            | 36984                                     | 242,604     | -30,546  | 4,21339      | 3,16030    | 6,05022   | 9,6929                                  |                                                              |
| 37300                            | 37082                                     | 242,881     | -30,269  | 4,15518      | 3,11664    | 5,95985   | 9,6926                                  |                                                              |
| 37400                            | 37181                                     | 243,157     | -29,993  | 4,09785      | 3,07364    | 5,87092   | 9,6923                                  |                                                              |
| 37500                            | 37280                                     | 243,434     | -29,716  | 4,04137      | 3,03128    | 5,78343   | 9,6920                                  |                                                              |
| 37600                            | 37379                                     | 243,711     | -29,439  | 3,98574      | 2,98955    | 5,69734   | 9,6917                                  |                                                              |
| 37700                            | 37478                                     | 243,988     | -29,162  | 3,93093      | 2,94844    | 5,61263   | 9,6914                                  |                                                              |
| 37800                            | 37577                                     | 244,264     | -28,886  | 3,87695      | 2,90795    | 5,52927   | 9,6911                                  |                                                              |
| 37900                            | 37675                                     | 244,541     | -28,609  | 3,82376      | 2,86806    | 5,44725   | 9,6908                                  |                                                              |
| 38000                            | 37774                                     | 244,818     | -28,332  | 3,77137+2    | 2,82876 0  | 5,36653-3 | 9,6904                                  |                                                              |
| 38100                            | 37873                                     | 245,094     | -28,056  | 3,71975      | 2,79004    | 5,28711   | 9,6901                                  |                                                              |
| 38200                            | 37972                                     | 245,371     | -27,779  | 3,66890      | 2,75190    | 5,20895   | 9,6898                                  |                                                              |
| 38300                            | 38071                                     | 245,648     | -27,502  | 3,61880      | 2,71432    | 5,13203   | 9,6895                                  |                                                              |
| 38400                            | 38169                                     | 245,924     | -27,226  | 3,56944      | 2,67730    | 5,05634   | 9,6892                                  |                                                              |
| 38500                            | 38268                                     | 246,201     | -26,949  | 3,52081      | 2,64082    | 4,98185   | 9,6889                                  |                                                              |
| 38600                            | 38367                                     | 246,478     | -26,672  | 3,47290      | 2,60489    | 4,90854   | 9,6886                                  |                                                              |
| 38700                            | 38466                                     | 246,754     | -26,396  | 3,42569      | 2,56948    | 4,83639   | 9,6883                                  |                                                              |
| 38800                            | 38565                                     | 247,031     | -26,119  | 3,37918      | 2,53459    | 4,76539   | 9,6880                                  |                                                              |
| 38900                            | 38663                                     | 247,308     | -25,842  | 3,33335      | 2,50022    | 4,69550   | 9,6877                                  |                                                              |
| 39000                            | 38762                                     | 247,584     | -25,566  | 3,28820+2    | 2,46635 0  | 4,62672-3 | 9,6874                                  |                                                              |
| 39100                            | 38861                                     | 247,861     | -25,289  | 3,24371      | 2,43298    | 4,55903   | 9,6871                                  |                                                              |
| 39200                            | 38960                                     | 248,137     | -25,013  | 3,19987      | 2,40010    | 4,49240   | 9,6868                                  |                                                              |
| 39300                            | 39059                                     | 248,414     | -24,736  | 3,15667      | 2,36770    | 4,42682   | 9,6865                                  |                                                              |
| 39400                            | 39157                                     | 248,690     | -24,460  | 3,11410      | 2,33577    | 4,36227   | 9,6862                                  |                                                              |
| 39500                            | 39256                                     | 248,967     | -24,183  | 3,07216      | 2,30431    | 4,29873   | 9,6859                                  |                                                              |
| 39600                            | 39355                                     | 249,244     | -23,906  | 3,03083      | 2,27331    | 4,23619   | 9,6856                                  |                                                              |
| 39700                            | 39454                                     | 249,520     | -23,630  | 2,99010      | 2,24276    | 4,17463   | 9,6853                                  |                                                              |
| 39800                            | 39552                                     | 249,797     | -23,353  | 2,94996      | 2,21265    | 4,11403   | 9,6850                                  |                                                              |
| 39900                            | 39651                                     | 250,073     | -23,077  | 2,91040      | 2,18298    | 4,05438   | 9,6847                                  |                                                              |

Продолжение табл. 1

| Геопотенциальная высота $H$ , м | Величины в функции геопотенциальной высоты |             |          |              |            |   | Плотность $\rho$ , кг/м <sup>3</sup> | Ускорение свободного падения $g$ , м/с <sup>2</sup> |
|---------------------------------|--------------------------------------------|-------------|----------|--------------|------------|---|--------------------------------------|-----------------------------------------------------|
|                                 | геометрическая высота $h$ , м              | температура |          | давление $p$ |            |   |                                      |                                                     |
|                                 |                                            | $T$ , К     | $t$ , °С | Па           | мм рт. ст. |   |                                      |                                                     |
| 36000                           | 36205                                      | 239,850     | -33,300  | 4,84314+2    | 3,63265    | 0 | 7,03437-3                            | 9,6959                                              |
| 36100                           | 36306                                      | 240,130     | -33,020  | 4,77469      | 3,58131    |   | 6,92686                              | 9,6956                                              |
| 36200                           | 36407                                      | 240,410     | -32,740  | 4,70728      | 3,53075    |   | 6,82111                              | 9,6953                                              |
| 36300                           | 36508                                      | 240,690     | -32,460  | 4,64090      | 3,48096    |   | 6,71710                              | 9,6950                                              |
| 36400                           | 36610                                      | 240,970     | -32,180  | 4,57553      | 3,43193    |   | 6,61479                              | 9,6947                                              |
| 36500                           | 36711                                      | 241,250     | -31,900  | 4,51115      | 3,38364    |   | 6,51416                              | 9,6944                                              |
| 36600                           | 36812                                      | 241,530     | -31,620  | 4,44776      | 3,33609    |   | 6,41517                              | 9,6940                                              |
| 36700                           | 36913                                      | 241,810     | -31,340  | 4,38532      | 3,28926    |   | 6,31779                              | 9,6937                                              |
| 36800                           | 37014                                      | 242,090     | -31,060  | 4,32384      | 3,24315    |   | 6,22201                              | 9,6934                                              |
| 36900                           | 37115                                      | 242,370     | -30,780  | 4,26329      | 3,19773    |   | 6,12779                              | 9,6931                                              |
| 37000                           | 37217                                      | 242,650     | -30,500  | 4,20365+2    | 3,15300    | 0 | 6,03509-3                            | 9,6928                                              |
| 37100                           | 37318                                      | 242,930     | -30,220  | 4,14491      | 3,10894    |   | 5,94391                              | 9,6925                                              |
| 37200                           | 37419                                      | 243,210     | -29,940  | 4,08706      | 3,06555    |   | 5,85421                              | 9,6922                                              |
| 37300                           | 37520                                      | 243,490     | -29,660  | 4,03009      | 3,02281    |   | 5,76596                              | 9,6919                                              |
| 37400                           | 37621                                      | 243,770     | -29,380  | 3,97397      | 2,98072    |   | 5,67914                              | 9,6916                                              |
| 37500                           | 37723                                      | 244,050     | -29,100  | 3,91870      | 2,93926    |   | 5,59372                              | 9,6913                                              |
| 37600                           | 37824                                      | 244,330     | -28,820  | 3,86425      | 2,89843    |   | 5,50959                              | 9,6910                                              |
| 37700                           | 37925                                      | 244,610     | -28,540  | 3,81063      | 2,85821    |   | 5,42701                              | 9,6907                                              |
| 37800                           | 38026                                      | 244,890     | -28,260  | 3,75781      | 2,81859    |   | 5,34566                              | 9,6904                                              |
| 37900                           | 38127                                      | 245,170     | -27,980  | 3,70578      | 2,77956    |   | 5,26563                              | 9,6901                                              |
| 38000                           | 38229                                      | 245,450     | -27,700  | 3,65453+2    | 2,74112    | 0 | 5,18688-3                            | 9,6898                                              |
| 38100                           | 38330                                      | 245,730     | -27,420  | 3,60404      | 2,70325    |   | 5,10940                              | 9,6894                                              |
| 38200                           | 38431                                      | 246,010     | -27,140  | 3,55431      | 2,66595    |   | 5,03316                              | 9,6891                                              |
| 38300                           | 38532                                      | 246,290     | -26,860  | 3,50532      | 2,62921    |   | 4,95814                              | 9,6888                                              |
| 38400                           | 38633                                      | 246,570     | -26,580  | 3,45706      | 2,59301    |   | 4,88433                              | 9,6885                                              |
| 38500                           | 38735                                      | 246,850     | -26,300  | 3,40952      | 2,55735    |   | 4,81169                              | 9,6882                                              |
| 38600                           | 38836                                      | 247,130     | -26,020  | 3,36268      | 2,52222    |   | 4,74022                              | 9,6879                                              |
| 38700                           | 38937                                      | 247,410     | -25,740  | 3,31654      | 2,48761    |   | 4,66989                              | 9,6876                                              |
| 38800                           | 39038                                      | 247,690     | -25,460  | 3,27109      | 2,45352    |   | 4,60068                              | 9,6873                                              |
| 38900                           | 39140                                      | 247,970     | -25,180  | 3,22631      | 2,41993    |   | 4,53257                              | 9,6870                                              |
| 39000                           | 39241                                      | 248,250     | -24,900  | 3,18219+2    | 2,38684    | 0 | 4,46554-3                            | 9,6867                                              |
| 39100                           | 39342                                      | 248,530     | -24,620  | 3,13872      | 2,35423    |   | 4,39958                              | 9,6864                                              |
| 39200                           | 39443                                      | 248,810     | -24,340  | 3,09589      | 2,32211    |   | 4,33467                              | 9,6861                                              |
| 39300                           | 39544                                      | 249,090     | -24,060  | 3,05370      | 2,29046    |   | 4,27079                              | 9,6858                                              |
| 39400                           | 39646                                      | 249,370     | -23,780  | 3,01212      | 2,25928    |   | 4,20791                              | 9,6855                                              |
| 39500                           | 39747                                      | 249,650     | -23,500  | 2,97116      | 2,22856    |   | 4,14604                              | 9,6852                                              |
| 39600                           | 39848                                      | 249,930     | -23,220  | 2,93080      | 2,19828    |   | 4,08514                              | 9,6848                                              |
| 39700                           | 39950                                      | 250,210     | -22,940  | 2,89104      | 2,16846    |   | 4,02520                              | 9,6845                                              |
| 39800                           | 40051                                      | 250,490     | -22,660  | 2,85185      | 2,13907    |   | 3,96620                              | 9,6842                                              |
| 39900                           | 40152                                      | 250,770     | -22,380  | 2,81324      | 2,11011    |   | 3,90814                              | 9,6839                                              |

От 40000 до 43900 м

| Геометрическая<br>высота $h$ , м | Величины в функции геометрической высоты |             |          |              |            |                                         |                                                              |
|----------------------------------|------------------------------------------|-------------|----------|--------------|------------|-----------------------------------------|--------------------------------------------------------------|
|                                  | геодезическая<br>высота $H$ , м          | температура |          | давление $p$ |            | плотность<br>$\rho$ , кг/м <sup>3</sup> | ускорение<br>свободного<br>падения $g$ ,<br>м/с <sup>2</sup> |
|                                  |                                          | $T$ , К     | $t$ , °С | Па           | мм рт. ст. |                                         |                                                              |
| 40000                            | 39750                                    | 250,350     | -22,800  | 2,87143+2    | 2,15375 0  | 3,99566-3                               | 9,6844                                                       |
| 40100                            | 39849                                    | 250,626     | -22,524  | 2,83301      | 2,12493    | 3,93786                                 | 9,6841                                                       |
| 40200                            | 39947                                    | 250,903     | -22,247  | 2,79515      | 2,09654    | 3,88095                                 | 9,6838                                                       |
| 40300                            | 40046                                    | 251,179     | -21,971  | 2,75784      | 2,06855    | 3,82494                                 | 9,6835                                                       |
| 40400                            | 40145                                    | 251,456     | -21,694  | 2,72107      | 2,04097    | 3,76979                                 | 9,6832                                                       |
| 40500                            | 40244                                    | 251,732     | -21,418  | 2,68483      | 2,01379    | 3,71550                                 | 9,6829                                                       |
| 40600                            | 40342                                    | 252,009     | -21,141  | 2,64912      | 1,98700    | 3,66205                                 | 9,6826                                                       |
| 40700                            | 40441                                    | 252,285     | -20,865  | 2,61391      | 1,96060    | 3,60943                                 | 9,6823                                                       |
| 40800                            | 40540                                    | 252,561     | -20,589  | 2,57922      | 1,93457    | 3,55762                                 | 9,6820                                                       |
| 40900                            | 40639                                    | 252,838     | -20,312  | 2,54502      | 1,90892    | 3,50661                                 | 9,6817                                                       |
| 41000                            | 40737                                    | 253,114     | -20,036  | 2,51132+2    | 1,88364 0  | 3,45639-3                               | 9,6814                                                       |
| 41100                            | 40836                                    | 253,391     | -19,759  | 2,47810      | 1,85872    | 3,40695                                 | 9,6811                                                       |
| 41200                            | 40935                                    | 253,667     | -19,483  | 2,44535      | 1,83416    | 3,35826                                 | 9,6808                                                       |
| 41300                            | 41033                                    | 253,944     | -19,206  | 2,41307      | 1,80995    | 3,31033                                 | 9,6805                                                       |
| 41400                            | 41132                                    | 254,220     | -18,930  | 2,38126      | 1,78609    | 3,26313                                 | 9,6802                                                       |
| 41500                            | 41231                                    | 254,496     | -18,654  | 2,34989      | 1,76257    | 3,21666                                 | 9,6798                                                       |
| 41600                            | 41330                                    | 254,773     | -18,377  | 2,31898      | 1,73938    | 3,17090                                 | 9,6795                                                       |
| 41700                            | 41428                                    | 255,049     | -18,101  | 2,28851      | 1,71652    | 3,12584                                 | 9,6792                                                       |
| 41800                            | 41527                                    | 255,325     | -17,825  | 2,25847      | 1,69399    | 3,08147                                 | 9,6789                                                       |
| 41900                            | 41626                                    | 255,602     | -17,548  | 2,22885      | 1,67178    | 3,03778                                 | 9,6786                                                       |
| 42000                            | 41724                                    | 255,878     | -17,272  | 2,19966+2    | 1,64988 0  | 2,99475-3                               | 9,6783                                                       |
| 42100                            | 41823                                    | 256,154     | -16,996  | 2,17085      | 1,62830    | 2,95238                                 | 9,6780                                                       |
| 42200                            | 41922                                    | 256,431     | -16,719  | 2,14251      | 1,60702    | 2,91066                                 | 9,6777                                                       |
| 42300                            | 42020                                    | 256,707     | -16,443  | 2,11454      | 1,58604    | 2,86957                                 | 9,6774                                                       |
| 42400                            | 42119                                    | 256,983     | -16,167  | 2,08697      | 1,56536    | 2,82911                                 | 9,6771                                                       |
| 42500                            | 42218                                    | 257,260     | -15,890  | 2,05979      | 1,54497    | 2,78926                                 | 9,6768                                                       |
| 42600                            | 42316                                    | 257,536     | -15,614  | 2,03299      | 1,52487    | 2,75001                                 | 9,6765                                                       |
| 42700                            | 42415                                    | 257,812     | -15,338  | 2,00656      | 1,50505    | 2,71136                                 | 9,6762                                                       |
| 42800                            | 42514                                    | 258,088     | -15,062  | 1,98051      | 1,48551    | 2,67330                                 | 9,6759                                                       |
| 42900                            | 42612                                    | 258,365     | -14,785  | 1,95483      | 1,46624    | 2,63581                                 | 9,6756                                                       |
| 43000                            | 42711                                    | 258,641     | -14,509  | 1,92950+2    | 1,44725 0  | 2,59888-3                               | 9,6753                                                       |
| 43100                            | 42810                                    | 258,917     | -14,233  | 1,90454      | 1,42852    | 2,56252                                 | 9,6750                                                       |
| 43200                            | 42908                                    | 259,193     | -13,957  | 1,87992      | 1,41005    | 2,52670                                 | 9,6747                                                       |
| 43300                            | 43007                                    | 259,470     | -13,680  | 1,85564      | 1,39185    | 2,49142                                 | 9,6744                                                       |
| 43400                            | 43106                                    | 259,746     | -13,404  | 1,83171      | 1,37390    | 2,45667                                 | 9,6741                                                       |
| 43500                            | 43204                                    | 260,022     | -13,128  | 1,80811      | 1,35619    | 2,42244                                 | 9,6738                                                       |
| 43600                            | 43303                                    | 260,298     | -12,852  | 1,78484      | 1,33874    | 2,38872                                 | 9,6735                                                       |
| 43700                            | 43402                                    | 260,575     | -12,575  | 1,76189      | 1,32153    | 2,35552                                 | 9,6732                                                       |
| 43800                            | 43500                                    | 260,851     | -12,299  | 1,73927      | 1,30456    | 2,32280                                 | 9,6729                                                       |
| 43900                            | 43599                                    | 261,127     | -12,023  | 1,71696      | 1,28782    | 2,29058                                 | 9,6726                                                       |

Продолжение табл. 1

Продолжение табл.

| Геопотенциаль-<br>ная высота $H$ , м | Величины и функции геопотенциальной высоты |             |          |              |            |                                         | ускорение<br>свободного<br>падения $g$ ,<br>м/с <sup>2</sup> |
|--------------------------------------|--------------------------------------------|-------------|----------|--------------|------------|-----------------------------------------|--------------------------------------------------------------|
|                                      | геометричес-<br>кая высота<br>$h$ , м      | температура |          | давление $p$ |            | плотность<br>$\rho$ , кг/м <sup>3</sup> |                                                              |
|                                      |                                            | $T$ , К     | $t$ , °С | Па           | мм рт. ст. |                                         |                                                              |
| 40000                                | 40253                                      | 251,050     | -22,100  | 2,77520+2    | 2,08157 0  | 3,85099-3                               | 9,6836                                                       |
| 40100                                | 40355                                      | 251,330     | -21,820  | 2,73771      | 2,05345    | 3,79473                                 | 9,6833                                                       |
| 40200                                | 40456                                      | 251,610     | -21,540  | 2,70077      | 2,02574    | 3,73936                                 | 9,6830                                                       |
| 40300                                | 40557                                      | 251,890     | -21,260  | 2,66437      | 1,99844    | 3,68486                                 | 9,6827                                                       |
| 40400                                | 40658                                      | 252,170     | -20,980  | 2,62849      | 1,97153    | 3,63121                                 | 9,6824                                                       |
| 40500                                | 40760                                      | 252,450     | -20,700  | 2,59314      | 1,94502    | 3,57840                                 | 9,6821                                                       |
| 40600                                | 40861                                      | 252,730     | -20,420  | 2,55831      | 1,91889    | 3,52642                                 | 9,6818                                                       |
| 40700                                | 40962                                      | 253,010     | -20,140  | 2,52398      | 1,89314    | 3,47525                                 | 9,6815                                                       |
| 40800                                | 41064                                      | 253,290     | -19,860  | 2,49014      | 1,86776    | 3,42487                                 | 9,6812                                                       |
| 40900                                | 41165                                      | 253,570     | -19,580  | 2,45680      | 1,84275    | 3,37528                                 | 9,6809                                                       |
| 41000                                | 41266                                      | 253,850     | -19,300  | 2,42394+2    | 1,81810 0  | 3,32646-3                               | 9,6806                                                       |
| 41100                                | 41367                                      | 254,130     | -19,020  | 2,39156      | 1,79381    | 3,27840                                 | 9,6802                                                       |
| 41200                                | 41469                                      | 254,410     | -18,740  | 2,35964      | 1,76987    | 3,23109                                 | 9,6799                                                       |
| 41300                                | 41570                                      | 254,690     | -18,460  | 2,32818      | 1,74628    | 3,18451                                 | 9,6796                                                       |
| 41400                                | 41671                                      | 254,970     | -18,180  | 2,29718      | 1,72302    | 3,13865                                 | 9,6793                                                       |
| 41500                                | 41773                                      | 255,250     | -17,900  | 2,26662      | 1,70010    | 3,09351                                 | 9,6790                                                       |
| 41600                                | 41874                                      | 255,530     | -17,620  | 2,23650      | 1,67751    | 3,04905                                 | 9,6787                                                       |
| 41700                                | 41975                                      | 255,810     | -17,340  | 2,20681      | 1,65525    | 3,00529                                 | 9,6784                                                       |
| 41800                                | 42077                                      | 256,090     | -17,060  | 2,17755      | 1,63330    | 2,96220                                 | 9,6781                                                       |
| 41900                                | 42178                                      | 256,370     | -16,780  | 2,14871      | 1,61167    | 2,91978                                 | 9,6778                                                       |
| 42000                                | 42279                                      | 256,650     | -16,500  | 2,12029+2    | 1,59035 0  | 2,87860-3                               | 9,6775                                                       |
| 42100                                | 42381                                      | 256,930     | -16,220  | 2,09226      | 1,56933    | 2,83687                                 | 9,6772                                                       |
| 42200                                | 42482                                      | 257,210     | -15,940  | 2,06464      | 1,54861    | 2,79637                                 | 9,6769                                                       |
| 42300                                | 42583                                      | 257,490     | -15,660  | 2,03742      | 1,52819    | 2,75650                                 | 9,6766                                                       |
| 42400                                | 42685                                      | 257,770     | -15,380  | 2,01058      | 1,50806    | 2,71723                                 | 9,6763                                                       |
| 42500                                | 42786                                      | 258,050     | -15,100  | 1,98412      | 1,48821    | 2,67857                                 | 9,6760                                                       |
| 42600                                | 42887                                      | 258,330     | -14,820  | 1,95804      | 1,46865    | 2,64049                                 | 9,6757                                                       |
| 42700                                | 42989                                      | 258,610     | -14,540  | 1,93233      | 1,44937    | 2,60300                                 | 9,6753                                                       |
| 42800                                | 43090                                      | 258,890     | -14,260  | 1,90698      | 1,43036    | 2,56608                                 | 9,6750                                                       |
| 42900                                | 43191                                      | 259,170     | -13,980  | 1,88200      | 1,41162    | 2,52972                                 | 9,6747                                                       |
| 43000                                | 43293                                      | 259,450     | -13,700  | 1,85737+2    | 1,39314 0  | 2,49392-3                               | 9,6744                                                       |
| 43100                                | 43394                                      | 259,730     | -13,420  | 1,83308      | 1,37492    | 2,45866                                 | 9,6741                                                       |
| 43200                                | 43496                                      | 260,010     | -13,140  | 1,80914      | 1,35697    | 2,42393                                 | 9,6738                                                       |
| 43300                                | 43597                                      | 260,290     | -12,860  | 1,78554      | 1,33926    | 2,38974                                 | 9,6735                                                       |
| 43400                                | 43698                                      | 260,570     | -12,580  | 1,76227      | 1,32181    | 2,35606                                 | 9,6732                                                       |
| 43500                                | 43800                                      | 260,850     | -12,300  | 1,73933      | 1,30460    | 2,32289                                 | 9,6729                                                       |
| 43600                                | 43901                                      | 261,130     | -12,020  | 1,71671      | 1,28764    | 2,29022                                 | 9,6726                                                       |
| 43700                                | 44003                                      | 261,410     | -11,740  | 1,69441      | 1,27091    | 2,25805                                 | 9,6723                                                       |
| 43800                                | 44104                                      | 261,690     | -11,460  | 1,67242      | 1,25442    | 2,22636                                 | 9,6720                                                       |
| 43900                                | 44205                                      | 261,970     | -11,180  | 1,65074      | 1,23816    | 2,19515                                 | 9,6717                                                       |

От 44000 до 47900 м

| Геопотенциальная высота $H, \text{ м}$ | геометрическая высота $h, \text{ м}$ | Величины в функции геопотенциальной высоты |                             |              |                     |                                  |                                                 |
|----------------------------------------|--------------------------------------|--------------------------------------------|-----------------------------|--------------|---------------------|----------------------------------|-------------------------------------------------|
|                                        |                                      | температура                                |                             | давление $p$ |                     | плотность $\rho, \text{ кг/м}^3$ | ускорение свободного падения $g, \text{ м/с}^2$ |
|                                        |                                      | $T, \text{ К}$                             | $t, \text{ }^\circ\text{C}$ | $\text{Па}$  | $\text{мм рт. ст.}$ |                                  |                                                 |
| 44000                                  | 43698                                | 261,403                                    | -11,747                     | 1,69496+2    | 1,27132 0           | 2,25884-3                        | 9,6723                                          |
| 44100                                  | 43796                                | 261,679                                    | -11,471                     | 1,67326      | 1,25505             | 2,22757                          | 9,6720                                          |
| 44200                                  | 43895                                | 261,955                                    | -11,195                     | 1,65186      | 1,23900             | 2,19677                          | 9,6717                                          |
| 44300                                  | 43993                                | 262,232                                    | -10,918                     | 1,63076      | 1,22317             | 2,16543                          | 9,6714                                          |
| 44400                                  | 44092                                | 262,508                                    | -10,642                     | 1,60996      | 1,20757             | 2,13654                          | 9,6711                                          |
| 44500                                  | 44191                                | 262,784                                    | -10,366                     | 1,58944      | 1,19218             | 2,10709                          | 9,6708                                          |
| 44600                                  | 44289                                | 263,060                                    | -10,090                     | 1,56920      | 1,17700             | 2,07808                          | 9,6705                                          |
| 44700                                  | 44388                                | 263,336                                    | -9,814                      | 1,54924      | 1,16203             | 2,04950                          | 9,6702                                          |
| 44800                                  | 44486                                | 263,612                                    | -9,538                      | 1,52956      | 1,14727             | 2,02134                          | 9,6699                                          |
| 44900                                  | 44585                                | 263,888                                    | -9,262                      | 1,51015      | 1,13271             | 1,99360                          | 9,6696                                          |
| 45000                                  | 44684                                | 264,164                                    | -8,986                      | 1,49101+2    | 1,11835 0           | 1,96627-3                        | 9,6693                                          |
| 45100                                  | 44782                                | 264,440                                    | -8,710                      | 1,47213      | 1,10418             | 1,93934                          | 9,6690                                          |
| 45200                                  | 44881                                | 264,716                                    | -8,434                      | 1,45350      | 1,09022             | 1,91281                          | 9,6687                                          |
| 45300                                  | 44979                                | 264,992                                    | -8,158                      | 1,43514      | 1,07644             | 1,88668                          | 9,6684                                          |
| 45400                                  | 45078                                | 265,269                                    | -7,881                      | 1,41702      | 1,06285             | 1,86092                          | 9,6681                                          |
| 45500                                  | 45177                                | 265,545                                    | -7,605                      | 1,39915      | 1,04945             | 1,83555                          | 9,6678                                          |
| 45600                                  | 45275                                | 265,821                                    | -7,329                      | 1,38153      | 1,03623             | 1,81054                          | 9,6675                                          |
| 45700                                  | 45374                                | 266,097                                    | -7,053                      | 1,36414      | 1,02319             | 1,78590                          | 9,6672                                          |
| 45800                                  | 45472                                | 266,373                                    | -6,777                      | 1,34700      | 1,01033             | 1,76163                          | 9,6669                                          |
| 45900                                  | 45571                                | 266,649                                    | -6,501                      | 1,33008      | 9,97644-1           | 1,73771                          | 9,6665                                          |
| 46000                                  | 45670                                | 266,925                                    | -6,225                      | 1,31340+2    | 9,85131-1           | 1,71414-3                        | 9,6662                                          |
| 46100                                  | 45768                                | 267,201                                    | -5,949                      | 1,29694      | 9,72787             | 1,69091                          | 9,6659                                          |
| 46200                                  | 45867                                | 267,477                                    | -5,673                      | 1,28071      | 9,60612             | 1,66803                          | 9,6656                                          |
| 46300                                  | 45965                                | 267,753                                    | -5,397                      | 1,26470      | 9,48001             | 1,64547                          | 9,6653                                          |
| 46400                                  | 46064                                | 268,029                                    | -5,121                      | 1,24890      | 9,36753             | 1,62325                          | 9,6650                                          |
| 46500                                  | 46162                                | 268,304                                    | -4,846                      | 1,23332      | 9,25065             | 1,60135                          | 9,6647                                          |
| 46600                                  | 46261                                | 268,580                                    | -4,570                      | 1,21795      | 9,13535             | 1,57976                          | 9,6644                                          |
| 46700                                  | 46359                                | 268,856                                    | -4,294                      | 1,20278      | 9,02161             | 1,55849                          | 9,6641                                          |
| 46800                                  | 46458                                | 269,132                                    | -4,018                      | 1,18732      | 8,90940             | 1,53753                          | 9,6638                                          |
| 46900                                  | 46556                                | 269,408                                    | -3,742                      | 1,17306      | 8,79871             | 1,51687                          | 9,6635                                          |
| 47000                                  | 46655                                | 269,684                                    | -3,466                      | 1,15851+2    | 8,68950-1           | 1,49651-3                        | 9,6632                                          |
| 47100                                  | 46754                                | 269,960                                    | -3,190                      | 1,14414      | 8,58177             | 1,47615                          | 9,6629                                          |
| 47200                                  | 46852                                | 270,236                                    | -2,914                      | 1,12997      | 8,47548             | 1,45667                          | 9,6626                                          |
| 47300                                  | 46951                                | 270,512                                    | -2,638                      | 1,11599      | 8,37061             | 1,43718                          | 9,6623                                          |
| 47400                                  | 47049                                | 270,788                                    | -2,362                      | 1,10219      | 8,26714             | 1,41869                          | 9,6620                                          |
| 47500                                  | 47148                                | 271,064                                    | -2,086                      | 1,08857      | 8,16497             | 1,40116                          | 9,6617                                          |
| 47600                                  | 47246                                | 271,340                                    | -1,810                      | 1,07512      | 8,06406             | 1,38384                          | 9,6614                                          |
| 47700                                  | 47345                                | 271,616                                    | -1,534                      | 1,06183      | 7,96440             | 1,36674                          | 9,6611                                          |
| 47800                                  | 47443                                | 271,892                                    | -1,258                      | 1,04871      | 7,86597             | 1,34985                          | 9,6608                                          |
| 47900                                  | 47542                                | 272,168                                    | -0,982                      | 1,03575      | 7,76877             | 1,33317                          | 9,6605                                          |

Продолжение табл. 1

| Геопотенциальная высота $H$ , м | Величины в функции геопотенциальной высоты |             |          |              |            |           | плотность $\rho$ , кг/м <sup>3</sup> | ускорение свободного падения $g$ , м/с <sup>2</sup> |
|---------------------------------|--------------------------------------------|-------------|----------|--------------|------------|-----------|--------------------------------------|-----------------------------------------------------|
|                                 | геомерическая высота $A$ , м               | температура |          | давление $p$ |            |           |                                      |                                                     |
|                                 |                                            | $T$ , К     | $t$ , °C | Па           | мм рт. ст. |           |                                      |                                                     |
| 44000                           | 44307                                      | 262,250     | -10,900  | 1,62936+2    | 1,22212 0  | 2,16441-3 | 9,6714                               |                                                     |
| 44100                           | 44408                                      | 262,530     | -10,620  | 1,60829      | 1,20631    | 2,13414   | 9,6711                               |                                                     |
| 44200                           | 44509                                      | 262,810     | -10,340  | 1,58751      | 1,19073    | 2,10432   | 9,6707                               |                                                     |
| 44300                           | 44611                                      | 263,090     | -10,060  | 1,56701      | 1,17535    | 2,07494   | 9,6704                               |                                                     |
| 44400                           | 44712                                      | 263,370     | -9,780   | 1,54681      | 1,16020    | 2,04601   | 9,6701                               |                                                     |
| 44500                           | 44814                                      | 263,650     | -9,500   | 1,52688      | 1,14526    | 2,01751   | 9,6698                               |                                                     |
| 44600                           | 44915                                      | 263,930     | -9,220   | 1,50723      | 1,13052    | 1,98944   | 9,6695                               |                                                     |
| 44700                           | 45017                                      | 264,210     | -8,940   | 1,48786      | 1,11599    | 1,96178   | 9,6692                               |                                                     |
| 44800                           | 45118                                      | 264,490     | -8,660   | 1,46876      | 1,10166    | 1,93454   | 9,6689                               |                                                     |
| 44900                           | 45219                                      | 264,770     | -8,380   | 1,44992      | 1,08753    | 1,90771   | 9,6686                               |                                                     |
| 45000                           | 45321                                      | 265,050     | -8,100   | 1,43134+2    | 1,07359 0  | 1,88128-3 | 9,6683                               |                                                     |
| 45100                           | 45422                                      | 265,330     | -7,820   | 1,41302      | 1,05985    | 1,85524   | 9,6680                               |                                                     |
| 45200                           | 45524                                      | 265,610     | -7,540   | 1,39495      | 1,04630    | 1,82958   | 9,6677                               |                                                     |
| 45300                           | 45625                                      | 265,890     | -7,260   | 1,37713      | 1,03293    | 1,80431   | 9,6674                               |                                                     |
| 45400                           | 45727                                      | 266,170     | -6,980   | 1,35956      | 1,01975    | 1,77942   | 9,6671                               |                                                     |
| 45500                           | 45828                                      | 266,450     | -6,700   | 1,34223      | 1,00676    | 1,75489   | 9,6668                               |                                                     |
| 45600                           | 45929                                      | 266,730     | -6,420   | 1,32514      | 9,93937-1  | 1,73073   | 9,6665                               |                                                     |
| 45700                           | 46031                                      | 267,010     | -6,140   | 1,30829      | 9,81295    | 1,70692   | 9,6662                               |                                                     |
| 45800                           | 46132                                      | 267,290     | -5,860   | 1,29166      | 9,68826    | 1,68346   | 9,6658                               |                                                     |
| 45900                           | 46234                                      | 267,570     | -5,580   | 1,27527      | 9,56528    | 1,66036   | 9,6655                               |                                                     |
| 46000                           | 46335                                      | 267,850     | -5,300   | 1,25910+2    | 9,44399-1  | 1,63759-3 | 9,6652                               |                                                     |
| 46100                           | 46437                                      | 268,130     | -5,020   | 1,24315      | 9,32436    | 1,61516   | 9,6649                               |                                                     |
| 46200                           | 46538                                      | 268,410     | -4,740   | 1,22741      | 9,20637    | 1,59306   | 9,6646                               |                                                     |
| 46300                           | 46640                                      | 268,690     | -4,460   | 1,21190      | 9,09000    | 1,57128   | 9,6643                               |                                                     |
| 46400                           | 46741                                      | 268,970     | -4,180   | 1,19660      | 8,97521    | 1,54982   | 9,6640                               |                                                     |
| 46500                           | 46843                                      | 269,250     | -3,900   | 1,18150      | 8,86199    | 1,52868   | 9,6637                               |                                                     |
| 46600                           | 46944                                      | 269,530     | -3,620   | 1,16661      | 8,75032    | 1,50785   | 9,6634                               |                                                     |
| 46700                           | 47046                                      | 269,810     | -3,340   | 1,15193      | 8,64016    | 1,48732   | 9,6631                               |                                                     |
| 46800                           | 47147                                      | 270,090     | -3,060   | 1,13744      | 8,53151    | 1,46710   | 9,6628                               |                                                     |
| 46900                           | 47249                                      | 270,370     | -2,780   | 1,12315      | 8,42433    | 1,44716   | 9,6625                               |                                                     |
| 47000                           | 47350                                      | 270,650     | -2,500   | 1,10906+2    | 8,31860-1  | 1,42752-3 | 9,6622                               |                                                     |
| 47100                           | 47452                                      | 270,930     | -2,220   | 1,09514      | 8,21426    | 1,40962   | 9,6619                               |                                                     |
| 47200                           | 47553                                      | 271,210     | -1,940   | 1,08141      | 8,11123    | 1,39194   | 9,6616                               |                                                     |
| 47300                           | 47655                                      | 271,490     | -1,660   | 1,06784      | 8,00949    | 1,37448   | 9,6613                               |                                                     |
| 47400                           | 47756                                      | 271,770     | -1,380   | 1,05445      | 7,90902    | 1,35724   | 9,6609                               |                                                     |
| 47500                           | 47858                                      | 272,050     | -1,100   | 1,04122      | 7,80981    | 1,34021   | 9,6606                               |                                                     |
| 47600                           | 47959                                      | 272,330     | -0,820   | 1,02816      | 7,71185    | 1,32340   | 9,6603                               |                                                     |
| 47700                           | 48061                                      | 272,610     | -0,540   | 1,01526      | 7,61512    | 1,30680   | 9,6600                               |                                                     |
| 47800                           | 48162                                      | 272,890     | -0,260   | 1,00253      | 7,51960    | 1,29041   | 9,6597                               |                                                     |
| 47900                           | 48264                                      | 273,170     | -0,000   | 9,89956+1    | 7,42528    | 1,27422   | 9,6594                               |                                                     |



| Геометрическая<br>высота $H$ , м | Величины и функции геометрической высоты   |             |          |              |            |                                         |
|----------------------------------|--------------------------------------------|-------------|----------|--------------|------------|-----------------------------------------|
|                                  | геоцентри-<br>ческая вы-<br>сота $H_g$ , м | температура |          | давление $p$ |            | плотность<br>$\rho$ , кг/м <sup>3</sup> |
|                                  |                                            | $T$ , К     | $t$ , °C | Па           | мм рт. ст. |                                         |
| 48000                            | 47640                                      | 270,650     | -2,500   | 1,02295+2    | 7,67276-1  | 1,31669-3                               |
| 48100                            | 47739                                      | 270,650     | -2,500   | 1,01031      | 7,57795    | 1,30042                                 |
| 48200                            | 47837                                      | 270,650     | -2,500   | 9,97826+1    | 7,48431    | 1,28435                                 |
| 48300                            | 47936                                      | 270,650     | -2,500   | 9,85497      | 7,39184    | 1,26849                                 |
| 48400                            | 48034                                      | 270,650     | -2,500   | 9,73320      | 7,30050    | 1,25281                                 |
| 48500                            | 48133                                      | 270,650     | -2,500   | 9,61295      | 7,21030    | 1,23733                                 |
| 48600                            | 48231                                      | 270,650     | -2,500   | 9,49418      | 7,12122    | 1,22205                                 |
| 48700                            | 48330                                      | 270,650     | -2,500   | 9,37688      | 7,03324    | 1,20695                                 |
| 48800                            | 48428                                      | 270,650     | -2,500   | 9,26103      | 6,94635    | 1,19204                                 |
| 48900                            | 48527                                      | 270,650     | -2,500   | 9,14663      | 6,86053    | 1,17731                                 |
| 49000                            | 48625                                      | 270,650     | -2,500   | 9,03363+1    | 6,77578-1  | 1,16277-3                               |
| 49100                            | 48724                                      | 270,650     | -2,500   | 8,92204      | 6,69208    | 1,14840                                 |
| 49200                            | 48822                                      | 270,650     | -2,500   | 8,81183      | 6,60941    | 1,13422                                 |
| 49300                            | 48921                                      | 270,650     | -2,500   | 8,70298      | 6,52777    | 1,12021                                 |
| 49400                            | 49019                                      | 270,650     | -2,500   | 8,59548      | 6,44714    | 1,10637                                 |
| 49500                            | 49118                                      | 270,650     | -2,500   | 8,48931      | 6,36751    | 1,09270                                 |
| 49600                            | 49216                                      | 270,650     | -2,500   | 8,38446      | 6,28886    | 1,07921                                 |
| 49700                            | 49314                                      | 270,650     | -2,500   | 8,28090      | 6,21119    | 1,06588                                 |
| 49800                            | 49413                                      | 270,650     | -2,500   | 8,17863      | 6,13448    | 1,05271                                 |
| 49900                            | 49511                                      | 270,650     | -2,500   | 8,07762      | 6,05872    | 1,03971                                 |
| 50000                            | 49610                                      | 270,650     | -2,500   | 7,97787+1    | 5,98389-1  | 1,02687-3                               |
| 50100                            | 49708                                      | 270,650     | -2,500   | 7,87935      | 5,91000    | 1,01419                                 |
| 50200                            | 49807                                      | 270,650     | -2,500   | 7,78205      | 5,83701    | 1,00167                                 |
| 50300                            | 49905                                      | 270,650     | -2,500   | 7,68595      | 5,76494    | 9,89299-4                               |
| 50400                            | 50004                                      | 270,650     | -2,500   | 7,59104      | 5,69375    | 9,77083                                 |
| 50500                            | 50102                                      | 270,650     | -2,500   | 7,49731      | 5,62344    | 9,65018                                 |
| 50600                            | 50200                                      | 270,650     | -2,500   | 7,40474      | 5,55401    | 9,53102                                 |
| 50700                            | 50299                                      | 270,650     | -2,500   | 7,31331      | 5,48543    | 9,41335                                 |
| 50800                            | 50397                                      | 270,650     | -2,500   | 7,22302      | 5,41771    | 9,29712                                 |
| 50900                            | 50496                                      | 270,650     | -2,500   | 7,13384      | 5,35082    | 9,18234                                 |
| 51000                            | 50594                                      | 270,650     | -2,500   | 7,04576+1    | 5,28476-1  | 9,06897-4                               |
| 51200                            | 50791                                      | 270,650     | -2,500   | 6,87287      | 5,15508    | 8,84644                                 |
| 51400                            | 50988                                      | 270,650     | -2,500   | 6,70124      | 5,02859    | 8,62938                                 |
| 51600                            | 51185                                      | 270,133     | -3,017   | 6,53960      | 4,90511    | 8,41356                                 |
| 51800                            | 51381                                      | 269,582     | -3,568   | 6,37870      | 4,78442    | 8,24287                                 |
| 52000                            | 51578                                      | 269,031     | -4,119   | 6,22144      | 4,66647    | 8,05613                                 |
| 52200                            | 51775                                      | 268,480     | -4,670   | 6,06777      | 4,55120    | 7,87325                                 |
| 52400                            | 51972                                      | 267,930     | -5,220   | 5,91759      | 4,43856    | 7,69418                                 |
| 52600                            | 52168                                      | 267,379     | -5,771   | 5,77084      | 4,32818    | 7,51883                                 |
| 52800                            | 52365                                      | 266,828     | -6,322   | 5,62745      | 4,22093    | 7,34714                                 |
|                                  |                                            |             |          |              |            | 9,6502                                  |
|                                  |                                            |             |          |              |            | 9,6599                                  |
|                                  |                                            |             |          |              |            | 9,6596                                  |
|                                  |                                            |             |          |              |            | 9,6593                                  |
|                                  |                                            |             |          |              |            | 9,6590                                  |
|                                  |                                            |             |          |              |            | 9,6587                                  |
|                                  |                                            |             |          |              |            | 9,6584                                  |
|                                  |                                            |             |          |              |            | 9,6581                                  |
|                                  |                                            |             |          |              |            | 9,6578                                  |
|                                  |                                            |             |          |              |            | 9,6575                                  |
|                                  |                                            |             |          |              |            | 9,6572                                  |
|                                  |                                            |             |          |              |            | 9,6569                                  |
|                                  |                                            |             |          |              |            | 9,6566                                  |
|                                  |                                            |             |          |              |            | 9,6563                                  |
|                                  |                                            |             |          |              |            | 9,6560                                  |
|                                  |                                            |             |          |              |            | 9,6557                                  |
|                                  |                                            |             |          |              |            | 9,6554                                  |
|                                  |                                            |             |          |              |            | 9,6551                                  |
|                                  |                                            |             |          |              |            | 9,6548                                  |
|                                  |                                            |             |          |              |            | 9,6545                                  |
|                                  |                                            |             |          |              |            | 9,6542                                  |
|                                  |                                            |             |          |              |            | 9,6539                                  |
|                                  |                                            |             |          |              |            | 9,6536                                  |
|                                  |                                            |             |          |              |            | 9,6533                                  |
|                                  |                                            |             |          |              |            | 9,6530                                  |
|                                  |                                            |             |          |              |            | 9,6527                                  |
|                                  |                                            |             |          |              |            | 9,6524                                  |
|                                  |                                            |             |          |              |            | 9,6521                                  |
|                                  |                                            |             |          |              |            | 9,6518                                  |
|                                  |                                            |             |          |              |            | 9,6515                                  |
|                                  |                                            |             |          |              |            | 9,6512                                  |
|                                  |                                            |             |          |              |            | 9,6506                                  |
|                                  |                                            |             |          |              |            | 9,6500                                  |
|                                  |                                            |             |          |              |            | 9,6494                                  |
|                                  |                                            |             |          |              |            | 9,6488                                  |
|                                  |                                            |             |          |              |            | 9,6482                                  |
|                                  |                                            |             |          |              |            | 9,6476                                  |
|                                  |                                            |             |          |              |            | 9,6470                                  |
|                                  |                                            |             |          |              |            | 9,6463                                  |
|                                  |                                            |             |          |              |            | 9,6457                                  |

Продолжение табл. 1

Продолжение табл. 2

| Геопотенциаль-<br>ная высота $H$ , м | Величины в функции геопотенциальной высоты |             |          |              |            |           | Плотность<br>$\rho$ , кг/м <sup>3</sup> | Ускорение<br>свободного<br>падения $g$ ,<br>м/с <sup>2</sup> |
|--------------------------------------|--------------------------------------------|-------------|----------|--------------|------------|-----------|-----------------------------------------|--------------------------------------------------------------|
|                                      | геометриче-<br>ская высота<br>$H_0$ , м    | температура |          | давление $p$ |            |           |                                         |                                                              |
|                                      |                                            | $T$ , К     | $t$ , °C | Па           | мм рт. ст. |           |                                         |                                                              |
| 48000                                | 48365                                      | 270,650     | -2,500   | 9,77539+1    | 7,33214-1  | 1,25824-3 | 9,6560                                  |                                                              |
| 48100                                | 48467                                      | 270,650     | -2,500   | 9,65277      | 7,24017    | 1,24246   | 9,6588                                  |                                                              |
| 48200                                | 48568                                      | 270,650     | -2,500   | 9,53169      | 7,14936    | 1,22687   | 9,6585                                  |                                                              |
| 48300                                | 48670                                      | 270,650     | -2,500   | 9,41213      | 7,05968    | 1,21149   | 9,6582                                  |                                                              |
| 48400                                | 48771                                      | 270,650     | -2,500   | 9,29408      | 6,97113    | 1,19629   | 9,6579                                  |                                                              |
| 48500                                | 48873                                      | 270,650     | -2,500   | 9,17750      | 6,88369    | 1,18128   | 9,6576                                  |                                                              |
| 48600                                | 48974                                      | 270,650     | -2,500   | 9,06238      | 6,79734    | 1,16647   | 9,6573                                  |                                                              |
| 48700                                | 49076                                      | 270,650     | -2,500   | 8,94871      | 6,71208    | 1,15183   | 9,6570                                  |                                                              |
| 48800                                | 49178                                      | 270,650     | -2,500   | 8,83646      | 6,62789    | 1,13739   | 9,6567                                  |                                                              |
| 48900                                | 49279                                      | 270,650     | -2,500   | 8,72562      | 6,54476    | 1,12312   | 9,6564                                  |                                                              |
| 49000                                | 49381                                      | 270,650     | -2,500   | 8,61617+1    | 6,46266-1  | 1,10903-3 | 9,6560                                  |                                                              |
| 49100                                | 49482                                      | 270,650     | -2,500   | 8,50810      | 6,38160    | 1,09512   | 9,6557                                  |                                                              |
| 49200                                | 49584                                      | 270,650     | -2,500   | 8,40138      | 6,30155    | 1,08139   | 9,6554                                  |                                                              |
| 49300                                | 49685                                      | 270,650     | -2,500   | 8,29600      | 6,22251    | 1,06782   | 9,6551                                  |                                                              |
| 49400                                | 49787                                      | 270,650     | -2,500   | 8,19194      | 6,14446    | 1,05443   | 9,6548                                  |                                                              |
| 49500                                | 49888                                      | 270,650     | -2,500   | 8,08918      | 6,06739    | 1,04120   | 9,6545                                  |                                                              |
| 49600                                | 49990                                      | 270,650     | -2,500   | 7,98772      | 5,99128    | 1,02814   | 9,6542                                  |                                                              |
| 49700                                | 50092                                      | 270,650     | -2,500   | 7,88753      | 5,91613    | 1,01525   | 9,6539                                  |                                                              |
| 49800                                | 50193                                      | 270,650     | -2,500   | 7,78859      | 5,84192    | 1,00251   | 9,6536                                  |                                                              |
| 49900                                | 50295                                      | 270,650     | -2,500   | 7,69090      | 5,76865    | 9,89936-4 | 9,6533                                  |                                                              |
| 50000                                | 50396                                      | 270,650     | -2,500   | 7,59443+1    | 5,69629-1  | 9,77519-4 | 9,6530                                  |                                                              |
| 50100                                | 50498                                      | 270,650     | -2,500   | 7,49917      | 5,62484    | 9,65257   | 9,6527                                  |                                                              |
| 50200                                | 50600                                      | 270,650     | -2,500   | 7,40510      | 5,55428    | 9,53150   | 9,6524                                  |                                                              |
| 50300                                | 50701                                      | 270,650     | -2,500   | 7,31222      | 5,48462    | 9,41194   | 9,6521                                  |                                                              |
| 50400                                | 50803                                      | 270,650     | -2,500   | 7,22050      | 5,41582    | 9,29388   | 9,6518                                  |                                                              |
| 50500                                | 50904                                      | 270,650     | -2,500   | 7,12993      | 5,34789    | 9,17731   | 9,6515                                  |                                                              |
| 50600                                | 51006                                      | 270,650     | -2,500   | 7,04050      | 5,28081    | 9,06219   | 9,6511                                  |                                                              |
| 50700                                | 51108                                      | 270,650     | -2,500   | 6,95219      | 5,21457    | 8,94852   | 9,6508                                  |                                                              |
| 50800                                | 51209                                      | 270,650     | -2,500   | 6,86498      | 5,14916    | 8,83628   | 9,6505                                  |                                                              |
| 50900                                | 51311                                      | 270,650     | -2,500   | 6,77887      | 5,08457    | 8,72544   | 9,6502                                  |                                                              |
| 51000                                | 51412                                      | 270,650     | -2,500   | 6,69384+1    | 5,02080-1  | 8,61600-4 | 9,6499                                  |                                                              |
| 51200                                | 51616                                      | 270,090     | -3,060   | 6,52680      | 4,89550    | 8,41840   | 9,6493                                  |                                                              |
| 51400                                | 51819                                      | 269,530     | -3,620   | 6,36359      | 4,77308    | 8,22495   | 9,6487                                  |                                                              |
| 51600                                | 52022                                      | 268,970     | -4,180   | 6,20414      | 4,65349    | 8,03555   | 9,6481                                  |                                                              |
| 51800                                | 52226                                      | 268,410     | -4,740   | 6,04836      | 4,53664    | 7,85013   | 9,6475                                  |                                                              |
| 52000                                | 52429                                      | 267,850     | -5,300   | 5,89618      | 4,42250    | 7,66861   | 9,6469                                  |                                                              |
| 52200                                | 52632                                      | 267,290     | -5,860   | 5,74752      | 4,31090    | 7,49093   | 9,6463                                  |                                                              |
| 52400                                | 52836                                      | 266,730     | -6,420   | 5,60231      | 4,20208    | 7,31700   | 9,6456                                  |                                                              |
| 52600                                | 53039                                      | 266,170     | -6,980   | 5,46047      | 4,09569    | 7,14676   | 9,6450                                  |                                                              |
| 52800                                | 53242                                      | 265,610     | -7,540   | 5,32194      | 3,99178    | 6,98013   | 9,6444                                  |                                                              |

| Геометрическая<br>высота $h$ , м | Геометрическая<br>высота $h$ , м | Величины в функции геометрической высоты |          |              |            |                                         |                                                              |
|----------------------------------|----------------------------------|------------------------------------------|----------|--------------|------------|-----------------------------------------|--------------------------------------------------------------|
|                                  |                                  | температура                              |          | давление $p$ |            | плотность<br>$\rho$ , кг/м <sup>3</sup> | ускорение<br>свободного<br>падения $g$ ,<br>м/с <sup>2</sup> |
|                                  |                                  | $T$ , К                                  | $t$ , °С | Па           | мм рт. ст. |                                         |                                                              |
| 53000                            | 52562                            | 266,277                                  | -6,873   | 5,48734+1    | 4,11584-1  | 7,17904-4                               | 9,6451                                                       |
| 53200                            | 52758                            | 265,726                                  | -7,424   | 5,35045      | 4,01317    | 7,01446                                 | 9,6445                                                       |
| 53400                            | 52955                            | 265,176                                  | -7,974   | 5,21671      | 3,91286    | 6,85333                                 | 9,6439                                                       |
| 53600                            | 53152                            | 264,625                                  | -8,525   | 5,08606      | 3,81486    | 6,69559                                 | 9,6433                                                       |
| 53800                            | 53348                            | 264,074                                  | -9,076   | 4,95842      | 3,71912    | 6,54117                                 | 9,6427                                                       |
| 54000                            | 53545                            | 263,524                                  | -9,626   | 4,83374      | 3,62560    | 6,39001                                 | 9,6421                                                       |
| 54200                            | 53742                            | 262,973                                  | -10,177  | 4,71195      | 3,53425    | 6,24205                                 | 9,6415                                                       |
| 54400                            | 53938                            | 262,423                                  | -10,727  | 4,59299      | 3,44502    | 6,09723                                 | 9,6409                                                       |
| 54600                            | 54135                            | 261,872                                  | -11,278  | 4,47680      | 3,35787    | 5,95547                                 | 9,6403                                                       |
| 54800                            | 54332                            | 261,322                                  | -11,828  | 4,36332      | 3,27276    | 5,81674                                 | 9,6397                                                       |
| 55000                            | 54528                            | 260,771                                  | -12,379  | 4,25249+1    | 3,18963-1  | 5,68096-4                               | 9,6391                                                       |
| 55200                            | 54725                            | 260,221                                  | -12,929  | 4,14426      | 3,10845    | 5,54809                                 | 9,6385                                                       |
| 55400                            | 54921                            | 259,670                                  | -13,480  | 4,03857      | 3,02918    | 5,41806                                 | 9,6379                                                       |
| 55600                            | 55118                            | 259,120                                  | -14,030  | 3,93537      | 2,95177    | 5,29081                                 | 9,6373                                                       |
| 55800                            | 55314                            | 258,570                                  | -14,580  | 3,83460      | 2,87618    | 5,16631                                 | 9,6367                                                       |
| 56000                            | 55511                            | 258,019                                  | -15,131  | 3,73621      | 2,80238    | 5,04448                                 | 9,6361                                                       |
| 56200                            | 55707                            | 257,469                                  | -15,681  | 3,64014      | 2,73033    | 4,92528                                 | 9,6355                                                       |
| 56400                            | 55904                            | 256,919                                  | -16,231  | 3,54636      | 2,65999    | 4,80867                                 | 9,6349                                                       |
| 56600                            | 56100                            | 256,369                                  | -16,781  | 3,45480      | 2,59131    | 4,69457                                 | 9,6343                                                       |
| 56800                            | 56297                            | 255,819                                  | -17,331  | 3,36543      | 2,52428    | 4,58296                                 | 9,6337                                                       |
| 57000                            | 56493                            | 255,268                                  | -17,882  | 3,27818+1    | 2,45884-1  | 4,47377-4                               | 9,6331                                                       |
| 57200                            | 56690                            | 254,718                                  | -18,432  | 3,19302      | 2,39497    | 4,36697                                 | 9,6325                                                       |
| 57400                            | 56886                            | 254,168                                  | -18,982  | 3,10991      | 2,33262    | 4,26250                                 | 9,6319                                                       |
| 57600                            | 57083                            | 253,618                                  | -19,532  | 3,02879      | 2,27178    | 4,16031                                 | 9,6313                                                       |
| 57800                            | 57279                            | 253,068                                  | -20,082  | 2,94962      | 2,21239    | 4,06037                                 | 9,6307                                                       |
| 58000                            | 57476                            | 252,518                                  | -20,632  | 2,87236      | 2,15444    | 3,96263                                 | 9,6301                                                       |
| 58200                            | 57672                            | 251,969                                  | -21,181  | 2,79696      | 2,09789    | 3,86703                                 | 9,6295                                                       |
| 58400                            | 57868                            | 251,419                                  | -21,731  | 2,72339      | 2,04271    | 3,77355                                 | 9,6289                                                       |
| 58600                            | 58065                            | 250,869                                  | -22,281  | 2,65161      | 1,98887    | 3,68214                                 | 9,6283                                                       |
| 58800                            | 58261                            | 250,319                                  | -22,831  | 2,58157      | 1,93633    | 3,59275                                 | 9,6277                                                       |
| 59000                            | 58457                            | 249,769                                  | -23,381  | 2,51323+1    | 1,88508-1  | 3,50535-4                               | 9,6271                                                       |
| 59200                            | 58654                            | 249,220                                  | -23,930  | 2,44657      | 1,83508    | 3,41990                                 | 9,6265                                                       |
| 59400                            | 58850                            | 248,670                                  | -24,480  | 2,38153      | 1,78630    | 3,33635                                 | 9,6259                                                       |
| 59600                            | 59046                            | 248,120                                  | -25,030  | 2,31809      | 1,73871    | 3,25467                                 | 9,6253                                                       |
| 59800                            | 59243                            | 247,571                                  | -25,579  | 2,25621      | 1,69230    | 3,17482                                 | 9,6247                                                       |
| 60000                            | 59439                            | 247,021                                  | -26,129  | 2,19586      | 1,64703    | 3,09676                                 | 9,6241                                                       |
| 60200                            | 59635                            | 246,471                                  | -26,679  | 2,13699      | 1,60287    | 3,02046                                 | 9,6235                                                       |
| 60400                            | 59831                            | 245,922                                  | -27,228  | 2,07958      | 1,55981    | 2,94588                                 | 9,6229                                                       |
| 60600                            | 60028                            | 245,372                                  | -27,778  | 2,02359      | 1,51781    | 2,87299                                 | 9,6223                                                       |
| 60800                            | 60224                            | 244,823                                  | -28,327  | 1,96899      | 1,47685    | 2,80174                                 | 9,6217                                                       |

Продолжение табл. 1

| Геопотенциальная высота $H$ , м | геометрическая высота $H$ , м | Величины и функции геопотенциальной высоты |          |              |            |                                      |                                                     |
|---------------------------------|-------------------------------|--------------------------------------------|----------|--------------|------------|--------------------------------------|-----------------------------------------------------|
|                                 |                               | температура                                |          | давление $p$ |            | плотность $\rho$ , кг/м <sup>3</sup> | ускорение свободного падения $g$ , м/с <sup>2</sup> |
|                                 |                               | $T$ , К                                    | $t$ , °С | Па           | мм рт. ст. |                                      |                                                     |
| 53000                           | 53446                         | 265,050                                    | - 8,100  | 5,18664+1    | 3,89030-1  | 6,81705-4                            | 9,6438                                              |
| 53200                           | 53649                         | 264,490                                    | - 3,660  | 5,05451      | 3,79119    | 6,65745                              | 9,6432                                              |
| 53400                           | 53852                         | 263,930                                    | - 9,220  | 4,92547      | 3,69441    | 6,50125                              | 9,6426                                              |
| 53600                           | 54056                         | 263,370                                    | - 9,780  | 4,79947      | 3,59989    | 6,34840                              | 9,6420                                              |
| 53800                           | 54259                         | 262,810                                    | -10,340  | 4,67642      | 3,50761    | 6,19883                              | 9,6414                                              |
| 54000                           | 54463                         | 262,250                                    | -10,900  | 4,55628      | 3,41749    | 6,05248                              | 9,6407                                              |
| 54200                           | 54666                         | 261,690                                    | -11,460  | 4,43898      | 3,32951    | 5,90928                              | 9,6401                                              |
| 54400                           | 54870                         | 261,130                                    | -12,020  | 4,32446      | 3,24361    | 5,76917                              | 9,6395                                              |
| 54600                           | 55073                         | 260,570                                    | -12,580  | 4,21266      | 3,15976    | 5,63210                              | 9,6389                                              |
| 54800                           | 55277                         | 260,010                                    | -13,140  | 4,10352      | 3,07789    | 5,49799                              | 9,6383                                              |
| 55000                           | 55480                         | 259,450                                    | -13,700  | 3,99697+1    | 2,99798-1  | 5,36680-4                            | 9,6377                                              |
| 55200                           | 55684                         | 258,890                                    | -14,260  | 3,89298      | 2,91997    | 5,23847                              | 9,6371                                              |
| 55400                           | 55887                         | 258,330                                    | -14,820  | 3,79147      | 2,84383    | 5,11294                              | 9,6365                                              |
| 55600                           | 56091                         | 257,770                                    | -15,380  | 3,69239      | 2,76952    | 4,99015                              | 9,6359                                              |
| 55800                           | 56294                         | 257,210                                    | -15,940  | 3,59570      | 2,69700    | 4,87006                              | 9,6352                                              |
| 56000                           | 56498                         | 256,650                                    | -16,500  | 3,50134      | 2,62622    | 4,75260                              | 9,6346                                              |
| 56200                           | 56701                         | 256,090                                    | -17,060  | 3,40926      | 2,55715    | 4,63773                              | 9,6340                                              |
| 56400                           | 56905                         | 255,530                                    | -17,620  | 3,31940      | 2,48976    | 4,52539                              | 9,6334                                              |
| 56600                           | 57109                         | 254,970                                    | -18,180  | 3,23173      | 2,42399    | 4,41554                              | 9,6328                                              |
| 56800                           | 57312                         | 254,410                                    | -18,740  | 3,14618      | 2,35983    | 4,30812                              | 9,6322                                              |
| 57000                           | 57516                         | 253,850                                    | -19,300  | 3,06272+1    | 2,29723-1  | 4,20308-4                            | 9,6316                                              |
| 57200                           | 57719                         | 253,290                                    | -19,860  | 2,98129      | 2,23615    | 4,10038                              | 9,6310                                              |
| 57400                           | 57923                         | 252,730                                    | -20,420  | 2,90186      | 2,17657    | 3,99998                              | 9,6303                                              |
| 57600                           | 58127                         | 252,170                                    | -20,980  | 2,82437      | 2,11845    | 3,90181                              | 9,6297                                              |
| 57800                           | 58330                         | 251,610                                    | -21,540  | 2,74879      | 2,06176    | 3,80585                              | 9,6291                                              |
| 58000                           | 58534                         | 251,050                                    | -22,100  | 2,67507      | 2,00647    | 3,71204                              | 9,6285                                              |
| 58200                           | 58738                         | 250,490                                    | -22,660  | 2,60316      | 1,95253    | 3,62034                              | 9,6279                                              |
| 58400                           | 58942                         | 249,930                                    | -23,220  | 2,53304      | 1,89994    | 3,53071                              | 9,6273                                              |
| 58600                           | 59145                         | 249,370                                    | -23,780  | 2,46465      | 1,84884    | 3,44310                              | 9,6267                                              |
| 58800                           | 59349                         | 248,810                                    | -24,340  | 2,39797      | 1,79882    | 3,35748                              | 9,6261                                              |
| 59000                           | 59553                         | 248,250                                    | -24,900  | 2,33294+1    | 1,74985-1  | 3,27380-4                            | 9,6255                                              |
| 59200                           | 59757                         | 247,690                                    | -25,460  | 2,26953      | 1,70229    | 3,19202                              | 9,6248                                              |
| 59400                           | 59960                         | 247,130                                    | -26,020  | 2,20771      | 1,65592    | 3,11211                              | 9,6242                                              |
| 59600                           | 60164                         | 246,570                                    | -26,580  | 2,14744      | 1,61072    | 3,03403                              | 9,6236                                              |
| 59800                           | 60368                         | 246,010                                    | -27,140  | 2,08869      | 1,56665    | 2,95773                              | 9,6230                                              |
| 60000                           | 60572                         | 245,450                                    | -27,700  | 2,03141      | 1,52368    | 2,88319                              | 9,6224                                              |
| 60200                           | 60776                         | 244,890                                    | -28,260  | 1,97558      | 1,48181    | 2,81036                              | 9,6218                                              |
| 60400                           | 60979                         | 244,330                                    | -28,820  | 1,92116      | 1,44099    | 2,73921                              | 9,6212                                              |
| 60600                           | 61183                         | 243,770                                    | -29,380  | 1,86812      | 1,40120    | 2,66970                              | 9,6206                                              |
| 60800                           | 61387                         | 243,210                                    | -29,940  | 1,81643      | 1,36243    | 2,60180                              | 9,6200                                              |

От 61000 до 68800 м

| Геометрическая<br>высота $h$ , м | геопотенциал<br>для высоты<br>$H$ , м | Величины в функции геометрической высоты |          |              |            |                                                              |        | плотность<br>$\rho$ , кг/м <sup>3</sup> | ускорение<br>свободного<br>падения $g$ ,<br>м/с <sup>2</sup> |
|----------------------------------|---------------------------------------|------------------------------------------|----------|--------------|------------|--------------------------------------------------------------|--------|-----------------------------------------|--------------------------------------------------------------|
|                                  |                                       | температура                              |          | давление $p$ |            | ускорение<br>свободного<br>падения $g$ ,<br>м/с <sup>2</sup> |        |                                         |                                                              |
|                                  |                                       | $T$ , К                                  | $t$ , °С | Па           | мм рт. ст. |                                                              |        |                                         |                                                              |
| 61000                            | 60420                                 | 244,273                                  | -28,877  | 1,91574+1    | 1,43693-1  | 2,73212-4                                                    | 9,6211 |                                         |                                                              |
| 61200                            | 60616                                 | 243,724                                  | -29,426  | 1,86383      | 1,39799    | 2,66407                                                      | 9,6205 |                                         |                                                              |
| 61400                            | 60813                                 | 243,175                                  | -29,975  | 1,81322      | 1,36002    | 2,59758                                                      | 9,6199 |                                         |                                                              |
| 61600                            | 61009                                 | 242,625                                  | -30,525  | 1,76387      | 1,32301    | 2,53261                                                      | 9,6193 |                                         |                                                              |
| 61800                            | 61205                                 | 242,076                                  | -31,074  | 1,71576      | 1,28692    | 2,46912                                                      | 9,6187 |                                         |                                                              |
| 62000                            | 61401                                 | 241,527                                  | -31,623  | 1,66886      | 1,25175    | 2,40709                                                      | 9,6181 |                                         |                                                              |
| 62200                            | 61597                                 | 240,978                                  | -32,172  | 1,62314      | 1,21746    | 2,34649                                                      | 9,6175 |                                         |                                                              |
| 62400                            | 61793                                 | 240,428                                  | -32,722  | 1,57858      | 1,18403    | 2,28728                                                      | 9,6169 |                                         |                                                              |
| 62600                            | 61990                                 | 239,879                                  | -33,271  | 1,53515      | 1,15145    | 2,22944                                                      | 9,6163 |                                         |                                                              |
| 62800                            | 62186                                 | 239,330                                  | -33,820  | 1,49282      | 1,11970    | 2,17294                                                      | 9,6157 |                                         |                                                              |
| 63000                            | 62382                                 | 238,781                                  | -34,369  | 1,45156+1    | 1,08876-1  | 2,11774-4                                                    | 9,6151 |                                         |                                                              |
| 63200                            | 62578                                 | 238,232                                  | -34,918  | 1,41136      | 1,05861    | 2,06384                                                      | 9,6145 |                                         |                                                              |
| 63400                            | 62774                                 | 237,683                                  | -35,467  | 1,37218      | 1,02922    | 2,01118                                                      | 9,6139 |                                         |                                                              |
| 63600                            | 62970                                 | 237,134                                  | -36,016  | 1,33401      | 1,00059    | 1,95976                                                      | 9,6133 |                                         |                                                              |
| 63800                            | 63166                                 | 236,585                                  | -36,565  | 1,29682      | 9,72692-2  | 1,90954                                                      | 9,6127 |                                         |                                                              |
| 64000                            | 63362                                 | 236,036                                  | -37,114  | 1,26058      | 9,45512    | 1,86050                                                      | 9,6121 |                                         |                                                              |
| 64200                            | 63558                                 | 235,487                                  | -37,663  | 1,22527      | 9,19032    | 1,81261                                                      | 9,6115 |                                         |                                                              |
| 64400                            | 63754                                 | 234,939                                  | -38,211  | 1,19088      | 8,93236    | 1,76585                                                      | 9,6109 |                                         |                                                              |
| 64600                            | 63950                                 | 234,390                                  | -38,760  | 1,15738      | 8,68108    | 1,72019                                                      | 9,6103 |                                         |                                                              |
| 64800                            | 64146                                 | 233,841                                  | -39,309  | 1,12475      | 8,43632    | 1,67561                                                      | 9,6097 |                                         |                                                              |
| 65000                            | 64342                                 | 233,292                                  | -39,858  | 1,09297+1    | 8,19793-2  | 1,63209-4                                                    | 9,6091 |                                         |                                                              |
| 65200                            | 64538                                 | 232,744                                  | -40,406  | 1,06201      | 7,96574    | 1,58961                                                      | 9,6085 |                                         |                                                              |
| 65400                            | 64734                                 | 232,195                                  | -40,955  | 1,03186      | 7,73963    | 1,54813                                                      | 9,6079 |                                         |                                                              |
| 65600                            | 64930                                 | 231,646                                  | -41,504  | 1,00251      | 7,51943    | 1,50765                                                      | 9,6073 |                                         |                                                              |
| 65800                            | 65126                                 | 231,098                                  | -42,052  | 9,73921 0    | 7,30501    | 1,46814                                                      | 9,6067 |                                         |                                                              |
| 66000                            | 65322                                 | 230,549                                  | -42,601  | 9,46086      | 7,09623    | 1,42957                                                      | 9,6061 |                                         |                                                              |
| 66200                            | 65518                                 | 230,001                                  | -43,149  | 9,18985      | 6,89295    | 1,39193                                                      | 9,6055 |                                         |                                                              |
| 66400                            | 65714                                 | 229,452                                  | -43,698  | 8,92599      | 6,69505    | 1,35520                                                      | 9,6049 |                                         |                                                              |
| 66600                            | 65909                                 | 228,904                                  | -44,246  | 8,66913      | 6,50238    | 1,31935                                                      | 9,6043 |                                         |                                                              |
| 66800                            | 66105                                 | 228,355                                  | -44,795  | 8,41908      | 6,31483    | 1,28437                                                      | 9,6037 |                                         |                                                              |
| 67000                            | 66301                                 | 227,807                                  | -45,343  | 8,17568 0    | 6,13227-2  | 1,25025-4                                                    | 9,6031 |                                         |                                                              |
| 67200                            | 66497                                 | 227,258                                  | -45,892  | 7,93877      | 5,95457    | 1,21695                                                      | 9,6026 |                                         |                                                              |
| 67400                            | 66693                                 | 226,710                                  | -46,440  | 7,70820      | 5,78162    | 1,18446                                                      | 9,6020 |                                         |                                                              |
| 67600                            | 66889                                 | 226,162                                  | -46,988  | 7,48380      | 5,61331    | 1,15277                                                      | 9,6014 |                                         |                                                              |
| 67800                            | 67084                                 | 225,614                                  | -47,536  | 7,26542      | 5,44952    | 1,12185                                                      | 9,6008 |                                         |                                                              |
| 68000                            | 67280                                 | 225,065                                  | -48,085  | 7,05293      | 5,29013    | 1,09169                                                      | 9,6002 |                                         |                                                              |
| 68200                            | 67476                                 | 224,517                                  | -48,633  | 6,84616      | 5,13504    | 1,06227                                                      | 9,5996 |                                         |                                                              |
| 68400                            | 67672                                 | 223,969                                  | -49,181  | 6,64499      | 4,98415    | 1,03358                                                      | 9,5990 |                                         |                                                              |
| 68600                            | 67868                                 | 223,421                                  | -49,729  | 6,44926      | 4,83735    | 1,00560                                                      | 9,5984 |                                         |                                                              |
| 68800                            | 68063                                 | 222,873                                  | -50,277  | 6,25886      | 4,69453    | 9,78309-5                                                    | 9,5978 |                                         |                                                              |

Продолжение табл. 1

продолжение табл.

| Геопотенциальная высота $H$ , м | Величины и функции геопотенциальной высоты |             |          |              |            |                                      | ускорение свободного падения $g$ , м/с <sup>2</sup> |
|---------------------------------|--------------------------------------------|-------------|----------|--------------|------------|--------------------------------------|-----------------------------------------------------|
|                                 | геометрическая высота $h$ , м              | температура |          | давление $p$ |            | плотность $\rho$ , кг/м <sup>3</sup> |                                                     |
|                                 |                                            | $T$ , К     | $t$ , °С | Па           | мм рт. ст. |                                      |                                                     |
| 61000                           | 61591                                      | 242,650     | -30,500  | 1,76605+1    | 1,32465-1  | 2,53548-4                            | 9,6193                                              |
| 61200                           | 61795                                      | 242,090     | -31,060  | 1,71698      | 1,28782    | 2,47070                              | 9,6187                                              |
| 61400                           | 61999                                      | 241,530     | -31,620  | 1,66912      | 1,25194    | 2,40744                              | 9,6181                                              |
| 61600                           | 62203                                      | 240,970     | -32,180  | 1,62251      | 1,21698    | 2,34565                              | 9,6175                                              |
| 61800                           | 62407                                      | 240,410     | -32,740  | 1,57710      | 1,18292    | 2,28531                              | 9,6169                                              |
| 62000                           | 62611                                      | 239,850     | -33,300  | 1,53286      | 1,14974    | 2,22638                              | 9,6163                                              |
| 62200                           | 62815                                      | 239,290     | -33,860  | 1,48976      | 1,11741    | 2,16885                              | 9,6157                                              |
| 62400                           | 63019                                      | 238,730     | -34,420  | 1,44777      | 1,08592    | 2,11267                              | 9,6151                                              |
| 62600                           | 63223                                      | 238,170     | -34,980  | 1,40688      | 1,05524    | 2,05782                              | 9,6145                                              |
| 62800                           | 63427                                      | 237,610     | -35,540  | 1,36704      | 1,02537    | 2,00427                              | 9,6138                                              |
| 63000                           | 63631                                      | 237,050     | -36,100  | 1,32825+1    | 9,96267-2  | 1,95199-4                            | 9,6132                                              |
| 63200                           | 63835                                      | 236,490     | -36,660  | 1,29046      | 9,67928    | 1,90095                              | 9,6126                                              |
| 63400                           | 64039                                      | 235,930     | -37,220  | 1,25367      | 9,40331    | 1,85114                              | 9,6120                                              |
| 63600                           | 64243                                      | 235,370     | -37,780  | 1,21784      | 9,13458    | 1,80251                              | 9,6114                                              |
| 63800                           | 64447                                      | 234,810     | -38,340  | 1,18296      | 8,87291    | 1,75505                              | 9,6108                                              |
| 64000                           | 64651                                      | 234,250     | -38,900  | 1,14899      | 8,61814    | 1,70874                              | 9,6102                                              |
| 64200                           | 64855                                      | 233,690     | -39,460  | 1,11592      | 8,37010    | 1,66353                              | 9,6096                                              |
| 64400                           | 65059                                      | 233,130     | -40,020  | 1,08373      | 8,12864    | 1,61942                              | 9,6090                                              |
| 64600                           | 65263                                      | 232,570     | -40,580  | 1,05239      | 7,89358    | 1,57638                              | 9,6083                                              |
| 64800                           | 65467                                      | 232,010     | -41,140  | 1,02189      | 7,66478    | 1,53438                              | 9,6077                                              |
| 65000                           | 65672                                      | 231,450     | -41,700  | 9,92195 0    | 7,44208-2  | 1,49341-4                            | 9,6071                                              |
| 65200                           | 65876                                      | 230,890     | -42,260  | 9,63298      | 7,22533    | 1,45343                              | 9,6065                                              |
| 65400                           | 66080                                      | 230,330     | -42,820  | 9,35176      | 7,01439    | 1,41443                              | 9,6059                                              |
| 65600                           | 66284                                      | 229,770     | -43,380  | 9,07809      | 6,80913    | 1,37638                              | 9,6053                                              |
| 65800                           | 66488                                      | 229,210     | -43,940  | 8,81179      | 6,60939    | 1,33927                              | 9,6047                                              |
| 66000                           | 66692                                      | 228,650     | -44,500  | 8,55268      | 6,41504    | 1,30307                              | 9,6041                                              |
| 66200                           | 66897                                      | 228,090     | -45,060  | 8,30058      | 6,22595    | 1,26777                              | 9,6035                                              |
| 66400                           | 67101                                      | 227,530     | -45,620  | 8,05532      | 6,04199    | 1,23334                              | 9,6028                                              |
| 66600                           | 67305                                      | 226,970     | -46,180  | 7,81673      | 5,86303    | 1,19976                              | 9,6022                                              |
| 66800                           | 67509                                      | 226,410     | -46,740  | 7,58464      | 5,68895    | 1,16702                              | 9,6016                                              |
| 67000                           | 67714                                      | 225,850     | -47,300  | 7,35889 0    | 5,51962-2  | 1,13509-4                            | 9,6010                                              |
| 67200                           | 67918                                      | 225,290     | -47,860  | 7,13933      | 5,35494    | 1,10396                              | 9,6004                                              |
| 67400                           | 68122                                      | 224,730     | -48,420  | 6,92580      | 5,19477    | 1,07361                              | 9,5998                                              |
| 67600                           | 68327                                      | 224,170     | -48,980  | 6,71814      | 5,03902    | 1,04402                              | 9,5992                                              |
| 67800                           | 68531                                      | 223,610     | -49,540  | 6,51621      | 4,88756    | 1,01518                              | 9,5986                                              |
| 68000                           | 68735                                      | 223,050     | -50,100  | 6,31987      | 4,74029    | 9,87061-5                            | 9,5980                                              |
| 68200                           | 68940                                      | 222,490     | -50,660  | 6,12898      | 4,59711    | 9,59656                              | 9,5974                                              |
| 68400                           | 69144                                      | 221,930     | -51,220  | 5,94339      | 4,45791    | 9,32945                              | 9,5967                                              |
| 68600                           | 69348                                      | 221,370     | -51,780  | 5,76297      | 4,32258    | 9,06913                              | 9,5961                                              |
| 68800                           | 69553                                      | 220,810     | -52,340  | 5,58759      | 4,19104    | 8,81544                              | 9,5955                                              |

| Геометрическая<br>высота $h$ , м | Величины в функции геометрической высоты  |             |          |              |            |                                         |                                                              |
|----------------------------------|-------------------------------------------|-------------|----------|--------------|------------|-----------------------------------------|--------------------------------------------------------------|
|                                  | геопотенци-<br>альная высо-<br>та $H$ , м | температура |          | давление $p$ |            | плотность<br>$\rho$ , кг/м <sup>3</sup> | ускорение<br>свободного<br>падения $g$ ,<br>м/с <sup>2</sup> |
|                                  |                                           | $T$ , К     | $t$ , °С | Па           | мм рт. ст. |                                         |                                                              |
| 69000                            | 68259                                     | 222,325     | -50,825  | 6,07364      | 0          | 4,55560-2                               | 9,51698-5                                                    |
| 69200                            | 68455                                     | 221,777     | -51,373  | 5,89347      | 0          | 4,42047                                 | 9,25749                                                      |
| 69400                            | 68650                                     | 221,229     | -51,921  | 5,71824      | 0          | 4,28903                                 | 9,00448                                                      |
| 69600                            | 68845                                     | 220,681     | -52,469  | 5,54780      | 0          | 4,16120                                 | 8,75780                                                      |
| 69800                            | 69042                                     | 220,133     | -53,017  | 5,38206      | 0          | 4,03687                                 | 8,51730                                                      |
| 70000                            | 69238                                     | 219,585     | -53,565  | 5,22088      | 0          | 3,91598                                 | 8,28284                                                      |
| 70200                            | 69433                                     | 219,037     | -54,113  | 5,06415      | 0          | 3,79843                                 | 8,05429                                                      |
| 70400                            | 69629                                     | 218,489     | -54,661  | 4,91176      | 0          | 3,68413                                 | 7,83151                                                      |
| 70600                            | 69824                                     | 217,941     | -55,209  | 4,76360      | 0          | 3,57300                                 | 7,61437                                                      |
| 70800                            | 70020                                     | 217,394     | -55,756  | 4,61957      | 0          | 3,46496                                 | 7,40274                                                      |
| 71000                            | 70216                                     | 216,846     | -56,304  | 4,47955      | 0          | 3,35994-2                               | 7,19649-5                                                    |
| 71200                            | 70411                                     | 216,298     | -56,852  | 4,34344      | 0          | 3,25785                                 | 6,99551                                                      |
| 71400                            | 70607                                     | 215,751     | -57,399  | 4,21115      | 0          | 3,15862                                 | 6,79965                                                      |
| 71600                            | 70802                                     | 215,203     | -57,947  | 4,08258      | 0          | 3,06218                                 | 6,60882                                                      |
| 71800                            | 70998                                     | 214,655     | -58,495  | 3,95762      | 0          | 2,96846                                 | 6,42289                                                      |
| 72000                            | 71194                                     | 214,107     | -59,043  | 3,83624      | 0          | 2,87742                                 | 6,23730                                                      |
| 72200                            | 71389                                     | 213,559     | -59,591  | 3,71837      | 0          | 2,78901                                 | 6,05672                                                      |
| 72400                            | 71585                                     | 213,011     | -60,139  | 3,60393      | 0          | 2,70317                                 | 5,88106                                                      |
| 72600                            | 71780                                     | 212,463     | -60,687  | 3,49281      | 0          | 2,61983                                 | 5,71020                                                      |
| 72800                            | 71976                                     | 211,915     | -61,235  | 3,38494      | 0          | 2,53891                                 | 5,54401                                                      |
| 73000                            | 72171                                     | 211,367     | -61,783  | 3,28021      | 0          | 2,46036-2                               | 5,38238-5                                                    |
| 73200                            | 72367                                     | 210,819     | -62,331  | 3,17854      | 0          | 2,38410                                 | 5,22518                                                      |
| 73400                            | 72562                                     | 210,271     | -62,879  | 3,07986      | 0          | 2,31008                                 | 5,07230                                                      |
| 73600                            | 72758                                     | 210,723     | -63,427  | 2,98406      | 0          | 2,23823                                 | 4,92364                                                      |
| 73800                            | 72953                                     | 210,175     | -63,975  | 2,89109      | 0          | 2,16849                                 | 4,77908                                                      |
| 74000                            | 73148                                     | 210,627     | -64,523  | 2,80085      | 0          | 2,10081                                 | 4,63852                                                      |
| 74200                            | 73344                                     | 209,079     | -65,071  | 2,71327      | 0          | 2,03512                                 | 4,50184                                                      |
| 74400                            | 73539                                     | 209,531     | -65,619  | 2,62828      | 0          | 1,97138                                 | 4,36896                                                      |
| 74600                            | 73735                                     | 208,983     | -66,167  | 2,54581      | 0          | 1,90952                                 | 4,23978                                                      |
| 74800                            | 73930                                     | 208,435     | -66,715  | 2,46579      | 0          | 1,84949                                 | 4,11419                                                      |
| 75000                            | 74125                                     | 207,887     | -67,263  | 2,38814      | 0          | 1,79125-2                               | 3,99210-5                                                    |
| 75200                            | 74321                                     | 207,339     | -67,811  | 2,31280      | 0          | 1,73474                                 | 3,87342                                                      |
| 75400                            | 74516                                     | 206,791     | -68,359  | 2,23971      | 0          | 1,67992                                 | 3,75807                                                      |
| 75600                            | 74711                                     | 206,243     | -68,907  | 2,16880      | 0          | 1,62673                                 | 3,64595                                                      |
| 75800                            | 74907                                     | 205,695     | -69,455  | 2,10001      | 0          | 1,57514                                 | 3,53698                                                      |
| 76000                            | 75102                                     | 205,147     | -70,003  | 1,03329      | 0          | 1,52509                                 | 3,43108                                                      |
| 76200                            | 75297                                     | 204,599     | -70,551  | 1,96856      | 0          | 1,47654                                 | 3,32816                                                      |
| 76400                            | 75493                                     | 204,051     | -71,099  | 1,90579      | 0          | 1,42946                                 | 3,22815                                                      |
| 76600                            | 75688                                     | 203,503     | -71,647  | 1,84481      | 0          | 1,38379                                 | 3,13097                                                      |
| 76800                            | 75883                                     | 202,955     | -72,195  | 1,78586      | 0          | 1,33951                                 | 3,03654                                                      |

Продолжение табл. 1

продолжение табл.

| Геопотенциаль-<br>ная высота $H$ , м | Величины в функции геопотенциальной высоты |             |          |              |            |           | плотность<br>$\rho$ , кг/м <sup>3</sup> | ускорение<br>свободного<br>падения $g$ ,<br>м/с <sup>2</sup> |
|--------------------------------------|--------------------------------------------|-------------|----------|--------------|------------|-----------|-----------------------------------------|--------------------------------------------------------------|
|                                      | геометричес-<br>кая высота<br>$H$ , м      | температура |          | давление $p$ |            |           |                                         |                                                              |
|                                      |                                            | $T$ , К     | $t$ , °C | Па           | мм рт. ст. |           |                                         |                                                              |
| 69000                                | 69757                                      | 220,250     | -52,900  | 5,41713      | 0          | 4,06318-2 | 8,56823-5                               | 9,5949                                                       |
| 69200                                | 69962                                      | 219,690     | -53,460  | 5,25145      |            | 3,93891   | 8,32735                                 | 9,5943                                                       |
| 69400                                | 70166                                      | 219,130     | -54,020  | 5,09043      |            | 3,81814   | 8,09265                                 | 9,5937                                                       |
| 69600                                | 70371                                      | 218,570     | -54,580  | 4,93396      |            | 3,70077   | 7,86399                                 | 9,5931                                                       |
| 69800                                | 70575                                      | 218,010     | -55,140  | 4,78192      |            | 3,58673   | 7,64124                                 | 9,5925                                                       |
| 70000                                | 70779                                      | 217,450     | -55,700  | 4,63418      |            | 3,47592   | 7,42424                                 | 9,5919                                                       |
| 70200                                | 70984                                      | 216,890     | -56,260  | 4,49065      |            | 3,36827   | 7,21287                                 | 9,5912                                                       |
| 70400                                | 71188                                      | 216,330     | -56,820  | 4,35121      |            | 3,26368   | 7,00699                                 | 9,5906                                                       |
| 70600                                | 71393                                      | 215,770     | -57,380  | 4,21575      |            | 3,16208   | 6,80648                                 | 9,5900                                                       |
| 70800                                | 71597                                      | 215,210     | -57,940  | 4,08418      |            | 3,06339   | 6,61121                                 | 9,5894                                                       |
| 71000                                | 71802                                      | 214,650     | -58,500  | 3,95639      | 0          | 2,96753-2 | 6,42105-5                               | 9,5888                                                       |
| 71200                                | 72007                                      | 214,250     | -58,900  | 3,83232      |            | 2,87448   | 6,23130                                 | 9,5882                                                       |
| 71400                                | 72211                                      | 213,850     | -59,300  | 3,71192      |            | 2,78417   | 6,04683                                 | 9,5876                                                       |
| 71600                                | 72416                                      | 213,450     | -59,700  | 3,59509      |            | 2,69654   | 5,86748                                 | 9,5870                                                       |
| 71800                                | 72620                                      | 213,050     | -60,100  | 3,48173      |            | 2,61151   | 5,69313                                 | 9,5864                                                       |
| 72000                                | 72825                                      | 212,650     | -60,500  | 3,37174      |            | 2,52901   | 5,52365                                 | 9,5858                                                       |
| 72200                                | 73030                                      | 212,250     | -60,900  | 3,26502      |            | 2,44897   | 5,35891                                 | 9,5851                                                       |
| 72400                                | 73234                                      | 211,850     | -61,300  | 3,16149      |            | 2,37132   | 5,19879                                 | 9,5845                                                       |
| 72600                                | 73439                                      | 211,450     | -61,700  | 3,06106      |            | 2,29598   | 5,04316                                 | 9,5839                                                       |
| 72800                                | 73643                                      | 211,050     | -62,100  | 2,96364      |            | 2,22291   | 4,89191                                 | 9,5833                                                       |
| 73000                                | 73848                                      | 210,650     | -62,500  | 2,86914      | 0          | 2,15203-2 | 4,74492-5                               | 9,5827                                                       |
| 73200                                | 74053                                      | 210,250     | -62,900  | 2,77749      |            | 2,08328   | 4,60208                                 | 9,5821                                                       |
| 73400                                | 74257                                      | 209,850     | -63,300  | 2,68859      |            | 2,01661   | 4,46328                                 | 9,5815                                                       |
| 73600                                | 74462                                      | 209,450     | -63,700  | 2,60238      |            | 1,95195   | 4,32841                                 | 9,5809                                                       |
| 73800                                | 74667                                      | 209,050     | -64,100  | 2,51878      |            | 1,88924   | 4,19737                                 | 9,5803                                                       |
| 74000                                | 74872                                      | 208,650     | -64,500  | 2,43771      |            | 1,82843   | 4,07006                                 | 9,5797                                                       |
| 74200                                | 75076                                      | 208,250     | -64,900  | 2,35910      |            | 1,76947   | 3,94638                                 | 9,5790                                                       |
| 74400                                | 75281                                      | 207,850     | -65,300  | 2,28288      |            | 1,71230   | 3,82623                                 | 9,5784                                                       |
| 74600                                | 75486                                      | 207,450     | -65,700  | 2,20899      |            | 1,65688   | 3,70952                                 | 9,5778                                                       |
| 74800                                | 75691                                      | 207,050     | -66,100  | 2,13735      |            | 1,60314   | 3,59615                                 | 9,5772                                                       |
| 75000                                | 75895                                      | 206,650     | -66,500  | 2,06790      | 0          | 1,55105-2 | 3,48604-5                               | 9,5766                                                       |
| 75200                                | 76100                                      | 206,250     | -66,900  | 2,00058      |            | 1,50056   | 3,37909                                 | 9,5760                                                       |
| 75400                                | 76305                                      | 205,850     | -67,300  | 1,93533      |            | 1,45162   | 3,27523                                 | 9,5754                                                       |
| 75600                                | 76510                                      | 205,450     | -67,700  | 1,87209      |            | 1,40418   | 3,17437                                 | 9,5748                                                       |
| 75800                                | 76715                                      | 205,050     | -68,100  | 1,81079      |            | 1,35820   | 3,07643                                 | 9,5742                                                       |
| 76000                                | 76920                                      | 204,650     | -68,500  | 1,75139      |            | 1,31365   | 2,98132                                 | 9,5736                                                       |
| 76200                                | 77125                                      | 204,250     | -68,900  | 1,69383      |            | 1,27047   | 2,88898                                 | 9,5729                                                       |
| 76400                                | 77329                                      | 203,850     | -69,300  | 1,63805      |            | 1,22864   | 2,79933                                 | 9,5723                                                       |
| 76600                                | 77534                                      | 203,450     | -69,700  | 1,58400      |            | 1,18810   | 2,71229                                 | 9,5717                                                       |
| 76800                                | 77739                                      | 203,050     | -70,100  | 1,53163      |            | 1,14882   | 2,62779                                 | 9,5711                                                       |



От 77000 до 80000 м

| Геометрическая<br>высота $H$ , м | Величины в функции геометрической высоты |             |          |              |            |                                         |                                                              |        |
|----------------------------------|------------------------------------------|-------------|----------|--------------|------------|-----------------------------------------|--------------------------------------------------------------|--------|
|                                  | геоцентрическая<br>высота $H_g$ , м      | температура |          | давление $p$ |            | плотность<br>$\rho$ , кг/м <sup>3</sup> | ускорение<br>свободного<br>падения $g$ ,<br>м/с <sup>2</sup> |        |
|                                  |                                          | $T$ , К     | $t$ , °C | Па           | мм рт. ст. |                                         |                                                              |        |
| 77000                            | 76078                                    | 204,493     | -68,657  | 1,72860      | 0          | 1,29656—2                               | 2,94479—5                                                    | 9,5733 |
| 77200                            | 76274                                    | 204,103     | -69,047  | 1,67308      |            | 1,25491                                 | 2,85566                                                      | 9,5727 |
| 77400                            | 76469                                    | 203,712     | -69,438  | 1,61924      |            | 1,21453                                 | 2,76906                                                      | 9,5721 |
| 77600                            | 76664                                    | 203,322     | -69,828  | 1,56704      |            | 1,17538                                 | 2,68494                                                      | 9,5715 |
| 77800                            | 76859                                    | 202,931     | -70,219  | 1,51643      |            | 1,13742                                 | 2,60322                                                      | 9,5709 |
| 78000                            | 77054                                    | 202,541     | -70,609  | 1,46737      |            | 1,10061                                 | 2,52385                                                      | 9,5703 |
| 78200                            | 77250                                    | 202,151     | -70,999  | 1,41980      |            | 1,06494                                 | 2,44675                                                      | 9,5698 |
| 78400                            | 77445                                    | 201,760     | -71,390  | 1,37369      |            | 1,03035                                 | 2,37187                                                      | 9,5692 |
| 78600                            | 77640                                    | 201,370     | -71,780  | 1,32900      |            | 9,96831—3                               | 2,29915                                                      | 9,5686 |
| 78800                            | 77835                                    | 200,980     | -72,170  | 1,28568      |            | 9,64340                                 | 2,22853                                                      | 9,5680 |
| 79000                            | 78030                                    | 200,590     | -72,560  | 1,24370      | 0          | 9,32819—3                               | 2,15995—5                                                    | 9,5674 |
| 79200                            | 78225                                    | 200,199     | -72,951  | 1,20301      |            | 9,02330                                 | 2,09336                                                      | 9,5668 |
| 79400                            | 78420                                    | 199,809     | -73,341  | 1,16358      |            | 8,72755                                 | 2,02870                                                      | 9,5662 |
| 79600                            | 78616                                    | 199,419     | -73,731  | 1,12537      |            | 8,44096                                 | 1,96592                                                      | 9,5656 |
| 79800                            | 78811                                    | 199,029     | -74,121  | 1,08834      |            | 8,16326                                 | 1,90497                                                      | 9,5650 |
| 80000                            | 79006                                    | 198,639     | -74,511  | 1,05247      |            | 7,89419                                 | 1,84580                                                      | 9,5644 |

Примечание. Однозначное или двузначное число со знаком плюс или — сомножителя данного и каждого последующего значений.

Продолжение табл. 1

| Геопотенциальная высота $H$ , м | геометрическая высота $H$ , м | Величины в функции геопотенциальной высоты |                          |              |            |                                    |           | ускорение свободного падения $g$ , $\text{м/с}^2$ |
|---------------------------------|-------------------------------|--------------------------------------------|--------------------------|--------------|------------|------------------------------------|-----------|---------------------------------------------------|
|                                 |                               | температура                                |                          | давление $p$ |            | плотность $\rho$ , $\text{кг/м}^3$ |           |                                                   |
|                                 |                               | $T$ , К                                    | $t$ , $^{\circ}\text{C}$ | Па           | мм рт. ст. |                                    |           |                                                   |
| 77000                           | 77944                         | 202,650                                    | -70,500                  | 1,48090      | 0          | 1,11077-2                          | 2,54577-5 | 9,5705                                            |
| 77200                           | 78149                         | 202,250                                    | -70,900                  | 1,43176      |            | 1,07391                            | 2,46615   | 9,5699                                            |
| 77400                           | 78354                         | 201,850                                    | -71,300                  | 1,38415      |            | 1,03820                            | 2,38887   | 9,5693                                            |
| 77600                           | 78559                         | 201,450                                    | -71,700                  | 1,33804      |            | 1,00361                            | 2,31387   | 9,5687                                            |
| 77800                           | 78764                         | 201,050                                    | -72,100                  | 1,29337      |            | 9,70108-3                          | 2,24108   | 9,5681                                            |
| 78000                           | 78969                         | 200,650                                    | -72,500                  | 1,25011      |            | 9,37661                            | 2,17044   | 9,5675                                            |
| 78200                           | 79174                         | 200,250                                    | -72,900                  | 1,20822      |            | 9,06238                            | 2,10190   | 9,5669                                            |
| 78400                           | 79379                         | 199,850                                    | -73,300                  | 1,16765      |            | 8,75809                            | 2,03538   | 9,5662                                            |
| 78600                           | 79584                         | 199,450                                    | -73,700                  | 1,12836      |            | 8,46343                            | 1,97085   | 9,5656                                            |
| 78800                           | 79789                         | 199,050                                    | -74,100                  | 1,09033      |            | 8,17812                            | 1,90824   | 9,5650                                            |
| 79000                           | 79994                         | 198,650                                    | -74,500                  | 1,05350      | 0          | 7,90189-3                          | 1,84750-5 | 9,5644                                            |
| 79200                           | 80199                         | 198,250                                    | -74,900                  | 1,01784      |            | 7,63446                            | 1,78857   | 9,5638                                            |
| 79400                           | 80404                         | 197,850                                    | -75,300                  | 9,83327-1    |            | 7,37556                            | 1,73141   | 9,5632                                            |
| 79600                           | 80609                         | 197,450                                    | -75,700                  | 9,49915      |            | 7,12495                            | 1,67597   | 9,5626                                            |
| 79800                           | 80815                         | 197,050                                    | -76,100                  | 9,17574      |            | 6,88237                            | 1,62219   | 9,5620                                            |
| 80000                           | 81020                         | 196,650                                    | -76,500                  | 8,86272      |            | 6,64758                            | 1,57004   | 9,5619                                            |

минус, стоящее после значения параметра, является показателем степени десяти

Отношения  $\rho/\rho_c$ ,  $\eta/\eta_c$  и  $\sqrt{\eta/\rho_c}$  скорость звука, вязкость и  
От —2000 до —50 м

| Геометриче-<br>ская высота<br>$h$ , м | Величины и функции геометрической высоты |               |                      |                                |                          |                                         |                                                  |          |
|---------------------------------------|------------------------------------------|---------------|----------------------|--------------------------------|--------------------------|-----------------------------------------|--------------------------------------------------|----------|
|                                       | $\rho/\rho_c$                            | $\eta/\eta_c$ | $\sqrt{\eta/\rho_c}$ | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                         | теплопро-<br>водность<br>$\lambda$ ,<br>Вт/(м·К) |          |
|                                       |                                          |               |                      |                                | динамич.<br>$\mu$ , Па·с | кинематич.<br>$\nu$ , м <sup>2</sup> /с |                                                  |          |
| —2000                                 | 1,26112                                  | 0             | 1,09848              | 0                              | 347,888                  | 1,8515—5                                | 1,2525—5                                         | 2,6359—2 |
| —1950                                 | 1,25398                                  | 1,20113       | 1,09596              | 347,700                        | 1,8499                   | 1,2573                                  | 2,6334                                           |          |
| —1900                                 | 1,24687                                  | 1,19561       | 1,09344              | 347,512                        | 1,8484                   | 1,2620                                  | 2,6309                                           |          |
| —1850                                 | 1,23979                                  | 1,19011       | 1,09092              | 347,324                        | 1,8468                   | 1,2668                                  | 2,6283                                           |          |
| —1800                                 | 1,23275                                  | 1,18464       | 1,08841              | 347,136                        | 1,8453                   | 1,2716                                  | 2,6258                                           |          |
| —1750                                 | 1,22574                                  | 1,17918       | 1,08590              | 346,948                        | 1,8438                   | 1,2764                                  | 2,6233                                           |          |
| —1700                                 | 1,21876                                  | 1,17374       | 1,08339              | 346,759                        | 1,8422                   | 1,2813                                  | 2,6208                                           |          |
| —1650                                 | 1,21182                                  | 1,16832       | 1,08089              | 346,571                        | 1,8407                   | 1,2861                                  | 2,6182                                           |          |
| —1600                                 | 1,20490                                  | 1,16292       | 1,07839              | 346,382                        | 1,8391                   | 1,2910                                  | 2,6157                                           |          |
| —1550                                 | 1,19802                                  | 1,15754       | 1,07589              | 346,193                        | 1,8376                   | 1,2959                                  | 2,6132                                           |          |
| —1500                                 | 1,19117                                  | 0             | 1,07340              | 0                              | 346,005                  | 1,8361—5                                | 1,3009—5                                         | 2,6106—2 |
| —1450                                 | 1,18436                                  | 1,14684       | 1,07090              | 345,816                        | 1,8345                   | 1,3058                                  | 2,6081                                           |          |
| —1400                                 | 1,17757                                  | 1,14151       | 1,06842              | 345,627                        | 1,8330                   | 1,3108                                  | 2,6056                                           |          |
| —1350                                 | 1,17082                                  | 1,13621       | 1,06593              | 345,438                        | 1,8314                   | 1,3158                                  | 2,6030                                           |          |
| —1300                                 | 1,16409                                  | 1,13092       | 1,06345              | 345,249                        | 1,8299                   | 1,3208                                  | 2,6005                                           |          |
| —1250                                 | 1,15740                                  | 1,12566       | 1,06097              | 345,059                        | 1,8283                   | 1,3259                                  | 2,5980                                           |          |
| —1200                                 | 1,15074                                  | 1,12041       | 1,05849              | 344,870                        | 1,8268                   | 1,3310                                  | 2,5954                                           |          |
| —1150                                 | 1,14411                                  | 1,11518       | 1,05602              | 344,680                        | 1,8252                   | 1,3361                                  | 2,5929                                           |          |
| —1100                                 | 1,13752                                  | 1,10997       | 1,05355              | 344,491                        | 1,8237                   | 1,3412                                  | 2,5903                                           |          |
| —1050                                 | 1,13095                                  | 1,10478       | 1,05108              | 344,301                        | 1,8221                   | 1,3464                                  | 2,5878                                           |          |
| —1000                                 | 1,12441                                  | 0             | 1,04862              | 0                              | 344,111                  | 1,8206—5                                | 1,3516—5                                         | 2,5853—2 |
| —950                                  | 1,11791                                  | 1,09445       | 1,04616              | 343,921                        | 1,8190                   | 1,3568                                  | 2,5827                                           |          |
| —900                                  | 1,11143                                  | 1,08932       | 1,04370              | 343,731                        | 1,8175                   | 1,3620                                  | 2,5802                                           |          |
| —850                                  | 1,10499                                  | 1,08420       | 1,04125              | 343,541                        | 1,8159                   | 1,3673                                  | 2,5776                                           |          |
| —800                                  | 1,09858                                  | 1,07910       | 1,03880              | 343,351                        | 1,8144                   | 1,3725                                  | 2,5751                                           |          |
| —750                                  | 1,09219                                  | 1,07402       | 1,03635              | 343,161                        | 1,8128                   | 1,3779                                  | 2,5725                                           |          |
| —700                                  | 1,08584                                  | 1,06896       | 1,03390              | 342,970                        | 1,8113                   | 1,3832                                  | 2,5700                                           |          |
| —650                                  | 1,07952                                  | 1,06391       | 1,03146              | 342,780                        | 1,8097                   | 1,3886                                  | 2,5675                                           |          |
| —600                                  | 1,07322                                  | 1,05889       | 1,02902              | 342,589                        | 1,8081                   | 1,3939                                  | 2,5649                                           |          |
| —550                                  | 1,06696                                  | 1,05388       | 1,02659              | 342,399                        | 1,8066                   | 1,3994                                  | 2,5624                                           |          |
| —500                                  | 1,06073                                  | 0             | 1,02416              | 0                              | 342,208                  | 1,8050—5                                | 1,4048—5                                         | 2,5598—2 |
| —450                                  | 1,05452                                  | 1,04899       | 1,02173              | 342,017                        | 1,8035                   | 1,4103                                  | 2,5573                                           |          |
| —400                                  | 1,04835                                  | 1,04397       | 1,01930              | 341,826                        | 1,8019                   | 1,4158                                  | 2,5547                                           |          |
| —350                                  | 1,04220                                  | 1,03904       | 1,01688              | 341,635                        | 1,8003                   | 1,4213                                  | 2,5522                                           |          |
| —300                                  | 1,03609                                  | 1,03412       | 1,01446              | 341,444                        | 1,7988                   | 1,4268                                  | 2,5496                                           |          |
| —250                                  | 1,03000                                  | 1,02922       | 1,01204              | 341,252                        | 1,7972                   | 1,4324                                  | 2,5471                                           |          |
| —200                                  | 1,02394                                  | 1,02434       | 1,00962              | 341,061                        | 1,7956                   | 1,4380                                  | 2,5445                                           |          |
| —150                                  | 1,01791                                  | 1,01948       | 1,00721              | 340,869                        | 1,7941                   | 1,4437                                  | 2,5419                                           |          |
| —100                                  | 1,01191                                  | 1,00964       | 1,00481              | 340,678                        | 1,7925                   | 1,4493                                  | 2,5394                                           |          |
| —50                                   | 1,00594                                  | 1,00481       | 1,00240              | 340,486                        | 1,7909                   | 1,4550                                  | 2,5368                                           |          |

Таблица 2  
теплопроводность в функции геометрической и геопотенциальной высот

| Геопотенци-<br>альная высота<br>H, м | Величины в функции геопотенциальной высоты |               |                      |                             |                          |                                         |                                                  |        |    |        |    |          |
|--------------------------------------|--------------------------------------------|---------------|----------------------|-----------------------------|--------------------------|-----------------------------------------|--------------------------------------------------|--------|----|--------|----|----------|
|                                      | $\rho/\rho_c$                              | $\eta/\eta_c$ | $\sqrt{\eta/\rho_c}$ | скорость<br>звука<br>а, м/с | вязкость                 |                                         | теплопро-<br>водность<br>$\lambda$ ,<br>Вт/(м·К) |        |    |        |    |          |
|                                      |                                            |               |                      |                             | динамич.<br>$\mu$ , Па·с | кинематич.<br>$\nu$ , м <sup>2</sup> /с |                                                  |        |    |        |    |          |
| —2000                                | 1,26103                                    | 0             | 1,20659              | 0                           | 1,09845                  | 0                                       | 347,886                                          | 1,8514 | —5 | 1,2526 | —5 | 2,6359—2 |
| —1950                                | 1,25389                                    |               | 1,20106              |                             | 1,09593                  |                                         | 347,698                                          | 1,8499 |    | 1,2573 |    | 2,6334   |
| —1900                                | 1,24679                                    |               | 1,19555              |                             | 1,09341                  |                                         | 347,510                                          | 1,8484 |    | 1,2621 |    | 2,6308   |
| —1850                                | 1,23972                                    |               | 1,19005              |                             | 1,09090                  |                                         | 347,322                                          | 1,8468 |    | 1,2668 |    | 2,6283   |
| —1800                                | 1,23268                                    |               | 1,18458              |                             | 1,08838                  |                                         | 347,134                                          | 1,8453 |    | 1,2716 |    | 2,6258   |
| —1750                                | 1,22567                                    |               | 1,17913              |                             | 1,08588                  |                                         | 346,946                                          | 1,8438 |    | 1,2765 |    | 2,6233   |
| —1700                                | 1,21870                                    |               | 1,17369              |                             | 1,08337                  |                                         | 346,757                                          | 1,8422 |    | 1,2813 |    | 2,6207   |
| —1650                                | 1,21176                                    |               | 1,16827              |                             | 1,08087                  |                                         | 346,569                                          | 1,8407 |    | 1,2862 |    | 2,6182   |
| —1600                                | 1,20485                                    |               | 1,16288              |                             | 1,07837                  |                                         | 346,381                                          | 1,8391 |    | 1,2910 |    | 2,6157   |
| —1550                                | 1,19797                                    |               | 1,15750              |                             | 1,07587                  |                                         | 346,192                                          | 1,8376 |    | 1,2959 |    | 2,6131   |
| —1500                                | 1,19112                                    | 0             | 1,15214              | 0                           | 1,07338                  | 0                                       | 346,003                                          | 1,8360 | —5 | 1,3009 | —5 | 2,6106—2 |
| —1450                                | 1,18431                                    |               | 1,14680              |                             | 1,07089                  |                                         | 345,814                                          | 1,8345 |    | 1,3059 |    | 2,6081   |
| —1400                                | 1,17753                                    |               | 1,14148              |                             | 1,06840                  |                                         | 345,626                                          | 1,8330 |    | 1,3108 |    | 2,6055   |
| —1350                                | 1,17078                                    |               | 1,13618              |                             | 1,06592                  |                                         | 345,437                                          | 1,8314 |    | 1,3158 |    | 2,6030   |
| —1300                                | 1,16406                                    |               | 1,13089              |                             | 1,06344                  |                                         | 345,248                                          | 1,8299 |    | 1,3209 |    | 2,6005   |
| —1250                                | 1,15737                                    |               | 1,12563              |                             | 1,06096                  |                                         | 345,058                                          | 1,8283 |    | 1,3259 |    | 2,5979   |
| —1200                                | 1,15071                                    |               | 1,12038              |                             | 1,05848                  |                                         | 344,869                                          | 1,8268 |    | 1,3310 |    | 2,5954   |
| —1150                                | 1,14409                                    |               | 1,11516              |                             | 1,05601                  |                                         | 344,680                                          | 1,8252 |    | 1,3361 |    | 2,5929   |
| —1100                                | 1,13749                                    |               | 1,10995              |                             | 1,05354                  |                                         | 344,490                                          | 1,8237 |    | 1,3412 |    | 2,5903   |
| —1050                                | 1,13093                                    |               | 1,10476              |                             | 1,05108                  |                                         | 344,300                                          | 1,8221 |    | 1,3464 |    | 2,5878   |
| —1000                                | 1,12439                                    | 0             | 1,09959              | 0                           | 1,04861                  | 0                                       | 344,111                                          | 1,8206 | —5 | 1,3516 | —5 | 2,5853—2 |
| —950                                 | 1,11789                                    |               | 1,09444              |                             | 1,04615                  |                                         | 343,921                                          | 1,8190 |    | 1,3568 |    | 2,5827   |
| —900                                 | 1,11142                                    |               | 1,08930              |                             | 1,04370                  |                                         | 343,731                                          | 1,8175 |    | 1,3620 |    | 2,5802   |
| —850                                 | 1,10497                                    |               | 1,08419              |                             | 1,04124                  |                                         | 343,541                                          | 1,8159 |    | 1,3673 |    | 2,5776   |
| —800                                 | 1,09856                                    |               | 1,07909              |                             | 1,03879                  |                                         | 343,351                                          | 1,8144 |    | 1,3726 |    | 2,5751   |
| —750                                 | 1,09218                                    |               | 1,07401              |                             | 1,03634                  |                                         | 343,161                                          | 1,8128 |    | 1,3779 |    | 2,5725   |
| —700                                 | 1,08583                                    |               | 1,06895              |                             | 1,03390                  |                                         | 342,970                                          | 1,8113 |    | 1,3832 |    | 2,5700   |
| —650                                 | 1,07951                                    |               | 1,06391              |                             | 1,03146                  |                                         | 342,780                                          | 1,8097 |    | 1,3886 |    | 2,5674   |
| —600                                 | 1,07322                                    |               | 1,05888              |                             | 1,02902                  |                                         | 342,589                                          | 1,8081 |    | 1,3939 |    | 2,5649   |
| —550                                 | 1,06695                                    |               | 1,05388              |                             | 1,02659                  |                                         | 342,398                                          | 1,8066 |    | 1,3994 |    | 2,5624   |
| —500                                 | 1,06072                                    | 0             | 1,04889              | 0                           | 1,02415                  | 0                                       | 342,208                                          | 1,8050 | —5 | 1,4048 | —5 | 2,5598—2 |
| —450                                 | 1,05452                                    |               | 1,04392              |                             | 1,02172                  |                                         | 342,017                                          | 1,8035 |    | 1,4103 |    | 2,5573   |
| —400                                 | 1,04834                                    |               | 1,03897              |                             | 1,01930                  |                                         | 341,826                                          | 1,8019 |    | 1,4158 |    | 2,5547   |
| —350                                 | 1,04220                                    |               | 1,03404              |                             | 1,01688                  |                                         | 341,635                                          | 1,8003 |    | 1,4213 |    | 2,5522   |
| —300                                 | 1,03608                                    |               | 1,02912              |                             | 1,01446                  |                                         | 341,443                                          | 1,7988 |    | 1,4268 |    | 2,5496   |
| —250                                 | 1,03000                                    |               | 1,02422              |                             | 1,01204                  |                                         | 341,252                                          | 1,7972 |    | 1,4324 |    | 2,5471   |
| —200                                 | 1,02394                                    |               | 1,01934              |                             | 1,00962                  |                                         | 341,061                                          | 1,7956 |    | 1,4380 |    | 2,5445   |
| —150                                 | 1,01791                                    |               | 1,01448              |                             | 1,00721                  |                                         | 340,869                                          | 1,7941 |    | 1,4437 |    | 2,5419   |
| —100                                 | 1,01191                                    |               | 1,00964              |                             | 1,00481                  |                                         | 340,678                                          | 1,7925 |    | 1,4493 |    | 2,5394   |
| —50                                  | 1,00594                                    |               | 1,00481              |                             | 1,00240                  |                                         | 340,486                                          | 1,7909 |    | 1,4550 |    | 2,5368   |

От 0 до 1950 м

| Геометриче-<br>ская высота<br>h, м | Величины в функции геопотенциальной высоты |                   |                          |                                |                          |                                                  |
|------------------------------------|--------------------------------------------|-------------------|--------------------------|--------------------------------|--------------------------|--------------------------------------------------|
|                                    | $\rho/\rho_c$                              | $\sigma/\sigma_c$ | $\sqrt{\sigma/\sigma_c}$ | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                                  |
|                                    |                                            |                   |                          |                                | динамич.<br>$\mu$ , Па·с | теплопро-<br>водность<br>$\lambda$ ,<br>Вт/(м·К) |
| 0                                  | 1,00000 0                                  | 1,00000 0         | 1,00000 0                | 340,294                        | 1,7894-5                 | 1,4607-5                                         |
| 50                                 | 9,94086-1                                  | 9,95209-1         | 9,97601-1                | 340,102                        | 1,7878                   | 1,4665                                           |
| 100                                | 9,88201                                    | 9,90435           | 9,95206                  | 339,910                        | 1,7862                   | 1,4722                                           |
| 150                                | 9,82344                                    | 9,85679           | 9,92814                  | 339,718                        | 1,7847                   | 1,4780                                           |
| 200                                | 9,76515                                    | 9,80941           | 9,90424                  | 339,526                        | 1,7831                   | 1,4839                                           |
| 250                                | 9,70714                                    | 9,76220           | 9,88038                  | 339,333                        | 1,7815                   | 1,4897                                           |
| 300                                | 9,64942                                    | 9,71516           | 9,85655                  | 339,141                        | 1,7800                   | 1,4956                                           |
| 350                                | 9,59197                                    | 9,66830           | 9,83275                  | 338,948                        | 1,7784                   | 1,5015                                           |
| 400                                | 9,53480                                    | 9,62161           | 9,80898                  | 338,755                        | 1,7768                   | 1,5075                                           |
| 450                                | 9,47791                                    | 9,57510           | 9,78524                  | 338,563                        | 1,7752                   | 1,5135                                           |
| 500                                | 9,42130-1                                  | 9,52876-1         | 9,76154-1                | 338,370                        | 1,7737-5                 | 1,5195-5                                         |
| 550                                | 9,36496                                    | 9,48259           | 9,73786                  | 338,177                        | 1,7721                   | 1,5255                                           |
| 600                                | 9,30899                                    | 9,43660           | 9,71422                  | 337,983                        | 1,7705                   | 1,5316                                           |
| 650                                | 9,25310                                    | 9,39077           | 9,69060                  | 337,790                        | 1,7689                   | 1,5377                                           |
| 700                                | 9,19757                                    | 9,34512           | 9,66702                  | 337,597                        | 1,7673                   | 1,5438                                           |
| 750                                | 9,14232                                    | 9,29964           | 9,64346                  | 337,403                        | 1,7658                   | 1,5500                                           |
| 800                                | 9,08734                                    | 9,25433           | 9,61994                  | 337,210                        | 1,7642                   | 1,5562                                           |
| 850                                | 9,03263                                    | 9,20918           | 9,59645                  | 337,016                        | 1,7626                   | 1,5624                                           |
| 900                                | 8,97819                                    | 9,16421           | 9,57299                  | 336,822                        | 1,7610                   | 1,5687                                           |
| 950                                | 8,92401                                    | 9,11941           | 9,54956                  | 336,629                        | 1,7594                   | 1,5750                                           |
| 1000                               | 8,87010-1                                  | 9,07477-1         | 9,52616-1                | 336,435                        | 1,7579-5                 | 1,5813-5                                         |
| 1050                               | 8,81645                                    | 9,03030           | 9,50279                  | 336,240                        | 1,7563                   | 1,5876                                           |
| 1100                               | 8,76307                                    | 8,98601           | 9,47945                  | 336,046                        | 1,7547                   | 1,5940                                           |
| 1150                               | 8,70995                                    | 8,94187           | 9,45615                  | 335,852                        | 1,7531                   | 1,6004                                           |
| 1200                               | 8,65709                                    | 8,89791           | 9,43287                  | 335,658                        | 1,7515                   | 1,6069                                           |
| 1250                               | 8,60450                                    | 8,85411           | 9,40963                  | 335,463                        | 1,7499                   | 1,6134                                           |
| 1300                               | 8,55216                                    | 8,81047           | 9,38641                  | 335,268                        | 1,7483                   | 1,6199                                           |
| 1350                               | 8,50008                                    | 8,76700           | 9,36323                  | 335,074                        | 1,7467                   | 1,6264                                           |
| 1400                               | 8,44826                                    | 8,72370           | 9,34008                  | 334,879                        | 1,7451                   | 1,6330                                           |
| 1450                               | 8,39670                                    | 8,68056           | 9,31695                  | 334,684                        | 1,7436                   | 1,6396                                           |
| 1500                               | 8,34539-1                                  | 8,63759-1         | 9,29386-1                | 334,489                        | 1,7420-5                 | 1,6463-5                                         |
| 1550                               | 8,29434                                    | 8,59478           | 9,27080                  | 334,293                        | 1,7404                   | 1,6530                                           |
| 1600                               | 8,24354                                    | 8,55213           | 9,24777                  | 334,098                        | 1,7388                   | 1,6597                                           |
| 1650                               | 8,19299                                    | 8,50964           | 9,22477                  | 333,903                        | 1,7372                   | 1,6665                                           |
| 1700                               | 8,14270                                    | 8,46732           | 9,20180                  | 333,707                        | 1,7356                   | 1,6733                                           |
| 1750                               | 8,09266                                    | 8,42516           | 9,17887                  | 333,512                        | 1,7340                   | 1,6801                                           |
| 1800                               | 8,04287                                    | 8,38316           | 9,15596                  | 333,316                        | 1,7324                   | 1,6869                                           |
| 1850                               | 7,99332                                    | 8,34132           | 9,13308                  | 333,120                        | 1,7308                   | 1,6938                                           |
| 1900                               | 7,94403                                    | 8,29964           | 9,11024                  | 332,924                        | 1,7292                   | 1,7008                                           |
| 1950                               | 7,89498                                    | 8,25812           | 9,08742                  | 332,728                        | 1,7276                   | 1,7077                                           |

| Геотензи-<br>метр<br>гг Н. м. | Величины в функции геотензиальной высоты |               |                   |                             |                     |                                         |
|-------------------------------|------------------------------------------|---------------|-------------------|-----------------------------|---------------------|-----------------------------------------|
|                               | $p/p_c$                                  | $\rho/\rho_c$ | $\sqrt{p/\rho_c}$ | скорость<br>звука<br>а, м/с | вязкость            |                                         |
|                               |                                          |               |                   |                             | динамич.<br>м. Па·с | теплопро-<br>водность<br>λ,<br>Вт/(м·К) |
| 0                             | 1,00000 0                                | 1,00000 0     | 1,00000 0         | 340,294                     | 1,7894-5            | 2,5343-2                                |
| 50                            | 9,94086-1                                | 9,95208-1     | 9,97601-1         | 340,102                     | 1,7878              | 2,5317                                  |
| 100                           | 9,88201                                  | 9,90435       | 9,95206           | 339,910                     | 1,7862              | 2,5292                                  |
| 150                           | 9,82344                                  | 9,85679       | 9,92813           | 339,718                     | 1,7847              | 2,5266                                  |
| 200                           | 9,76514                                  | 9,80940       | 9,90424           | 339,525                     | 1,7831              | 2,5241                                  |
| 250                           | 9,70713                                  | 9,76219       | 9,88038           | 339,333                     | 1,7815              | 2,5215                                  |
| 300                           | 9,64940                                  | 9,71515       | 9,85654           | 339,141                     | 1,7800              | 2,5189                                  |
| 350                           | 9,59195                                  | 9,66828       | 9,83274           | 338,948                     | 1,7784              | 2,5164                                  |
| 400                           | 9,53477                                  | 9,62159       | 9,80897           | 338,755                     | 1,7768              | 2,5138                                  |
| 450                           | 9,47788                                  | 9,57507       | 9,78523           | 338,562                     | 1,7752              | 2,5112                                  |
| 500                           | 9,42125-1                                | 9,52872-1     | 9,76152-1         | 338,369                     | 1,7737-5            | 2,5087-2                                |
| 550                           | 9,36490                                  | 9,48255       | 9,73784           | 338,176                     | 1,7721              | 2,5061                                  |
| 600                           | 9,30883                                  | 9,43655       | 9,71419           | 337,983                     | 1,7705              | 2,5035                                  |
| 650                           | 9,25302                                  | 9,39071       | 9,69057           | 337,790                     | 1,7689              | 2,5010                                  |
| 700                           | 9,19749                                  | 9,34505       | 9,66698           | 337,597                     | 1,7673              | 2,4984                                  |
| 750                           | 9,14223                                  | 9,29956       | 9,64342           | 337,403                     | 1,7658              | 2,4958                                  |
| 800                           | 9,08723                                  | 9,25423       | 9,61989           | 337,210                     | 1,7642              | 2,4933                                  |
| 850                           | 9,03251                                  | 9,20908       | 9,59640           | 337,016                     | 1,7626              | 2,4907                                  |
| 900                           | 8,97806                                  | 9,16410       | 9,57293           | 336,822                     | 1,7610              | 2,4881                                  |
| 950                           | 8,92386                                  | 9,11928       | 9,54949           | 336,628                     | 1,7594              | 2,4856                                  |
| 1000                          | 8,86993-1                                | 9,07463-1     | 9,52609-1         | 336,434                     | 1,7578-5            | 2,4830-2                                |
| 1050                          | 8,81627                                  | 9,03015       | 9,50271           | 336,240                     | 1,7563              | 2,4804                                  |
| 1100                          | 8,76287                                  | 8,98584       | 9,47937           | 336,046                     | 1,7547              | 2,4778                                  |
| 1150                          | 8,70973                                  | 8,94169       | 9,45605           | 335,851                     | 1,7531              | 2,4753                                  |
| 1200                          | 8,65685                                  | 8,89771       | 9,43277           | 335,657                     | 1,7515              | 2,4727                                  |
| 1250                          | 8,60424                                  | 8,85389       | 9,40951           | 335,462                     | 1,7499              | 2,4701                                  |
| 1300                          | 8,55188                                  | 8,81024       | 9,38629           | 335,267                     | 1,7483              | 2,4675                                  |
| 1350                          | 8,49978                                  | 8,76676       | 9,36310           | 335,072                     | 1,7467              | 2,4650                                  |
| 1400                          | 8,44794                                  | 8,72343       | 9,33993           | 334,878                     | 1,7451              | 2,4624                                  |
| 1450                          | 8,39636                                  | 8,68028       | 9,31680           | 334,682                     | 1,7435              | 2,4598                                  |
| 1500                          | 8,34503-1                                | 8,63728-1     | 9,29370-1         | 334,487                     | 1,7419-5            | 2,4572-2                                |
| 1550                          | 8,29395                                  | 8,59445       | 9,27053           | 334,292                     | 1,7404              | 2,4546                                  |
| 1600                          | 8,24313                                  | 8,55178       | 9,24759           | 334,097                     | 1,7388              | 2,4521                                  |
| 1650                          | 8,19256                                  | 8,50928       | 9,22457           | 333,901                     | 1,7372              | 2,4495                                  |
| 1700                          | 8,14225                                  | 8,46694       | 9,20160           | 333,705                     | 1,7356              | 2,4469                                  |
| 1750                          | 8,09218                                  | 8,42475       | 9,17864           | 333,510                     | 1,7340              | 2,4443                                  |
| 1800                          | 8,04236                                  | 8,38273       | 9,15573           | 333,314                     | 1,7324              | 2,4417                                  |
| 1850                          | 7,99279                                  | 8,34087       | 9,13284           | 333,118                     | 1,7308              | 2,4391                                  |
| 1900                          | 7,94347                                  | 8,29917       | 9,10998           | 332,922                     | 1,7292              | 2,4365                                  |
| 1950                          | 7,89440                                  | 8,25763       | 9,08715           | 332,725                     | 1,7276              | 2,4340                                  |

От 2000 до 3950 м

| Геометричес-<br>кая высота<br>h, м | Величины и функции геометрической высоты |           |                |                                |                          |                                         |
|------------------------------------|------------------------------------------|-----------|----------------|--------------------------------|--------------------------|-----------------------------------------|
|                                    | $P/P_c$                                  | $P/P_c$   | $\sqrt{P/P_c}$ | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                         |
|                                    |                                          |           |                |                                | динамич.<br>$\mu$ , Па·с | кинематич.<br>$\nu$ , м <sup>2</sup> /с |
| 2000                               | 7,81618—1                                | 8,21676—1 | 9,06464—1      | 332,532                        | 1,7260—5                 | 1,7147—5                                |
| 2050                               | 7,79762                                  | 8,17557   | 9,04188        | 332,335                        | 1,7244                   | 1,7218                                  |
| 2100                               | 7,74931                                  | 8,13453   | 9,01916        | 332,139                        | 1,7228                   | 1,7289                                  |
| 2150                               | 7,70124                                  | 8,09364   | 8,99647        | 331,942                        | 1,7212                   | 1,7360                                  |
| 2200                               | 7,65342                                  | 8,05292   | 8,97381        | 331,746                        | 1,7196                   | 1,7431                                  |
| 2250                               | 7,60583                                  | 8,01235   | 8,95118        | 331,549                        | 1,7180                   | 1,7503                                  |
| 2300                               | 7,55849                                  | 7,97195   | 8,92857        | 331,352                        | 1,7164                   | 1,7575                                  |
| 2350                               | 7,51139                                  | 7,96169   | 8,90601        | 331,155                        | 1,7147                   | 1,7648                                  |
| 2400                               | 7,46452                                  | 7,89160   | 8,88347        | 330,958                        | 1,7131                   | 1,7721                                  |
| 2450                               | 7,41789                                  | 7,85166   | 8,86096        | 330,761                        | 1,7115                   | 1,7795                                  |
| 2500                               | 7,37150—1                                | 7,81187—1 | 8,83818—1      | 330,563                        | 1,7099—5                 | 1,7868—5                                |
| 2550                               | 7,32535                                  | 7,77224   | 8,81603        | 330,366                        | 1,7083                   | 1,7943                                  |
| 2600                               | 7,27943                                  | 7,73277   | 8,79362        | 330,168                        | 1,7067                   | 1,8017                                  |
| 2650                               | 7,23374                                  | 7,69345   | 8,77123        | 329,971                        | 1,7051                   | 1,8092                                  |
| 2700                               | 7,18829                                  | 7,65428   | 8,74887        | 329,773                        | 1,7035                   | 1,8167                                  |
| 2750                               | 7,14307                                  | 7,61527   | 8,72655        | 329,575                        | 1,7019                   | 1,8243                                  |
| 2800                               | 7,09808                                  | 7,57641   | 8,70426        | 329,377                        | 1,7002                   | 1,8319                                  |
| 2850                               | 7,05332                                  | 7,53770   | 8,68199        | 329,179                        | 1,6986                   | 1,8396                                  |
| 2900                               | 7,00879                                  | 7,49914   | 8,65976        | 328,980                        | 1,6970                   | 1,8473                                  |
| 2950                               | 6,96449                                  | 7,46074   | 8,63756        | 328,782                        | 1,6954                   | 1,8550                                  |
| 3000                               | 6,92042—1                                | 7,42248—1 | 8,61538—1      | 328,584                        | 1,6938—5                 | 1,8628—5                                |
| 3050                               | 6,87657                                  | 7,38438   | 8,59324        | 328,385                        | 1,6921                   | 1,8706                                  |
| 3100                               | 6,83295                                  | 7,34643   | 8,57113        | 328,186                        | 1,6905                   | 1,8785                                  |
| 3150                               | 6,78956                                  | 7,30863   | 8,54905        | 327,987                        | 1,6889                   | 1,8864                                  |
| 3200                               | 6,74639                                  | 7,27097   | 8,52700        | 327,788                        | 1,6873                   | 1,8943                                  |
| 3250                               | 6,70344                                  | 7,23347   | 8,50498        | 327,589                        | 1,6857                   | 1,9023                                  |
| 3300                               | 6,66071                                  | 7,19612   | 8,48299        | 327,390                        | 1,6840                   | 1,9104                                  |
| 3350                               | 6,61821                                  | 7,15891   | 8,46104        | 327,191                        | 1,6824                   | 1,9184                                  |
| 3400                               | 6,57593                                  | 7,12185   | 8,43911        | 326,991                        | 1,6808                   | 1,9266                                  |
| 3450                               | 6,53386                                  | 7,08494   | 8,41721        | 326,792                        | 1,6792                   | 1,9347                                  |
| 3500                               | 6,49202—1                                | 7,04818—1 | 8,39534—1      | 326,592                        | 1,6775—5                 | 1,9429—5                                |
| 3550                               | 6,45039                                  | 7,01156   | 8,37351        | 326,392                        | 1,6759                   | 1,9512                                  |
| 3600                               | 6,40898                                  | 6,97509   | 8,35170        | 326,192                        | 1,6743                   | 1,9595                                  |
| 3650                               | 6,36779                                  | 6,93877   | 8,32993        | 325,992                        | 1,6726                   | 1,9678                                  |
| 3700                               | 6,32681                                  | 6,90259   | 8,30818        | 325,792                        | 1,6710                   | 1,9762                                  |
| 3750                               | 6,28604                                  | 6,86655   | 8,28647        | 325,592                        | 1,6694                   | 1,9846                                  |
| 3800                               | 6,24549                                  | 6,83066   | 8,26478        | 325,392                        | 1,6677                   | 1,9931                                  |
| 3850                               | 6,20516                                  | 6,79492   | 8,24313        | 325,191                        | 1,6661                   | 2,0016                                  |
| 3900                               | 6,16503                                  | 6,75932   | 8,22151        | 324,990                        | 1,6645                   | 2,0102                                  |
| 3950                               | 6,12512                                  | 6,72386   | 8,19991        | 324,790                        | 1,6628                   | 2,0188                                  |

Продолжение табл. 2

| Геопотенци-<br>альная высо-<br>та $H, м$ | Величины в функции геопотенциальной высоты |               |            |                               |                         |                            |                                              |
|------------------------------------------|--------------------------------------------|---------------|------------|-------------------------------|-------------------------|----------------------------|----------------------------------------------|
|                                          | $p/p_c$                                    | $\rho/\rho_c$ | $V/\rho_c$ | скорость<br>звука<br>$a, м/с$ | вязкость                |                            | теплопро-<br>водность<br>$\lambda, Вт/(м·К)$ |
|                                          |                                            |               |            |                               | динамич.<br>$\mu, Па·с$ | кинематич.<br>$\nu, м^2/с$ |                                              |
| 2000                                     | 7,84557—1                                  | 8,21624—1     | 9,06435—1  | 332,529                       | 1,7260—5                | 1,7148—5                   | 2,4314—2                                     |
| 2050                                     | 7,79698                                    | 8,17502       | 9,04158    | 332,333                       | 1,7244                  | 1,7219                     | 2,4288                                       |
| 2100                                     | 7,74864                                    | 8,13396       | 9,01885    | 332,136                       | 1,7228                  | 1,7290                     | 2,4262                                       |
| 2150                                     | 7,70055                                    | 8,09305       | 8,99614    | 331,939                       | 1,7211                  | 1,7381                     | 2,4236                                       |
| 2200                                     | 7,65269                                    | 8,05230       | 8,97346    | 331,743                       | 1,7195                  | 1,7432                     | 2,4210                                       |
| 2250                                     | 7,60508                                    | 8,01171       | 8,95082    | 331,546                       | 1,7179                  | 1,7504                     | 2,4184                                       |
| 2300                                     | 7,55770                                    | 7,97127       | 8,92820    | 331,349                       | 1,7163                  | 1,7577                     | 2,4158                                       |
| 2350                                     | 7,51057                                    | 7,93100       | 8,90561    | 331,152                       | 1,7147                  | 1,7649                     | 2,4132                                       |
| 2400                                     | 7,46367                                    | 7,89087       | 8,88306    | 330,954                       | 1,7131                  | 1,7722                     | 2,4106                                       |
| 2450                                     | 7,41701                                    | 7,85090       | 8,86053    | 330,757                       | 1,7115                  | 1,7796                     | 2,4080                                       |
| 2500                                     | 7,37059—1                                  | 7,81109—1     | 8,83804—1  | 330,559                       | 1,7099—5                | 1,7870—5                   | 2,4054—2                                     |
| 2550                                     | 7,32441                                    | 7,77143       | 8,81557    | 330,362                       | 1,7083                  | 1,7944                     | 2,4028                                       |
| 2600                                     | 7,27845                                    | 7,73193       | 8,79314    | 330,164                       | 1,7067                  | 1,8019                     | 2,4002                                       |
| 2650                                     | 7,23273                                    | 7,69258       | 8,77074    | 329,966                       | 1,7050                  | 1,8094                     | 2,3976                                       |
| 2700                                     | 7,18725                                    | 7,65338       | 8,74836    | 329,768                       | 1,7034                  | 1,8169                     | 2,3950                                       |
| 2750                                     | 7,14200                                    | 7,61434       | 8,72602    | 329,570                       | 1,7018                  | 1,8245                     | 2,3924                                       |
| 2800                                     | 7,09697                                    | 7,57545       | 8,70371    | 329,372                       | 1,7002                  | 1,8321                     | 2,3898                                       |
| 2850                                     | 7,05218                                    | 7,53671       | 8,68142    | 329,174                       | 1,6986                  | 1,8398                     | 2,3872                                       |
| 2900                                     | 7,00762                                    | 7,49812       | 8,65917    | 328,975                       | 1,6970                  | 1,8475                     | 2,3846                                       |
| 2950                                     | 6,96328                                    | 7,45969       | 8,63695    | 328,777                       | 1,6953                  | 1,8552                     | 2,3820                                       |
| 3000                                     | 6,91917—1                                  | 7,42140—1     | 8,61476—1  | 328,578                       | 1,6937—5                | 1,8630—5                   | 2,3794—2                                     |
| 3050                                     | 6,87529                                    | 7,38327       | 8,59259    | 328,379                       | 1,6921                  | 1,8709                     | 2,3768                                       |
| 3100                                     | 6,83164                                    | 7,34528       | 8,57046    | 328,180                       | 1,6905                  | 1,8787                     | 2,3742                                       |
| 3150                                     | 6,78821                                    | 7,30745       | 8,54836    | 327,981                       | 1,6889                  | 1,8866                     | 2,3716                                       |
| 3200                                     | 6,74500                                    | 7,26976       | 8,52629    | 327,782                       | 1,6872                  | 1,8946                     | 2,3690                                       |
| 3250                                     | 6,70202                                    | 7,23223       | 8,50425    | 327,583                       | 1,6856                  | 1,9026                     | 2,3664                                       |
| 3300                                     | 6,65925                                    | 7,19484       | 8,48224    | 327,383                       | 1,6840                  | 1,9106                     | 2,3638                                       |
| 3350                                     | 6,61671                                    | 7,15760       | 8,46026    | 327,184                       | 1,6823                  | 1,9187                     | 2,3611                                       |
| 3400                                     | 6,57439                                    | 7,12051       | 8,43831    | 326,984                       | 1,6807                  | 1,9269                     | 2,3585                                       |
| 3450                                     | 6,53229                                    | 7,08356       | 8,41639    | 326,784                       | 1,6791                  | 1,9350                     | 2,3559                                       |
| 3500                                     | 6,49041—1                                  | 7,04676—1     | 8,39450—1  | 326,584                       | 1,6775—5                | 1,9432—5                   | 2,3533—2                                     |
| 3550                                     | 6,44874                                    | 7,01011       | 8,37264    | 326,384                       | 1,6758                  | 1,9515                     | 2,3507                                       |
| 3600                                     | 6,40730                                    | 6,97361       | 8,35081    | 326,184                       | 1,6742                  | 1,9598                     | 2,3481                                       |
| 3650                                     | 6,36606                                    | 6,93725       | 8,32901    | 325,984                       | 1,6726                  | 1,9682                     | 2,3455                                       |
| 3700                                     | 6,32505                                    | 6,90103       | 8,30724    | 325,784                       | 1,6709                  | 1,9766                     | 2,3428                                       |
| 3750                                     | 6,28425                                    | 6,86496       | 8,28551    | 325,583                       | 1,6693                  | 1,9850                     | 2,3402                                       |
| 3800                                     | 6,24366                                    | 6,82904       | 8,26380    | 325,382                       | 1,6677                  | 1,9935                     | 2,3376                                       |
| 3850                                     | 6,20328                                    | 6,79325       | 8,24212    | 325,182                       | 1,6660                  | 2,0020                     | 2,3350                                       |
| 3900                                     | 6,16311                                    | 6,75762       | 8,22047    | 324,981                       | 1,6644                  | 2,0106                     | 2,3324                                       |
| 3950                                     | 6,12316                                    | 6,72212       | 8,19885    | 324,780                       | 1,6627                  | 2,0192                     | 2,3297                                       |



От 4000 до 5950 м

| Геометричес-<br>кая высота<br>h, м | Величины в функции геометрической высоты |               |                      |                             |                          |                                                  |
|------------------------------------|------------------------------------------|---------------|----------------------|-----------------------------|--------------------------|--------------------------------------------------|
|                                    | $p/p_c$                                  | $\rho/\rho_c$ | $\sqrt{\rho/\rho_c}$ | скорость<br>звука<br>a, м/с | вязкость                 |                                                  |
|                                    |                                          |               |                      |                             | динамич.<br>$\mu$ , Па·с | теплопро-<br>водность<br>$\lambda$ ,<br>Вт/(м·К) |
| 4000                               | 6,08541-1                                | 6,68854-1     | 8,17835-1            | 324,589                     | 1,6612-5                 | 2,0275-5                                         |
| 4050                               | 6,04592                                  | 6,65337       | 8,15682              | 324,388                     | 1,6596                   | 2,0362                                           |
| 4100                               | 6,00663                                  | 6,61834       | 8,13532              | 324,187                     | 1,6579                   | 2,0449                                           |
| 4150                               | 5,96755                                  | 6,58345       | 8,11385              | 323,985                     | 1,6563                   | 2,0537                                           |
| 4200                               | 5,92868                                  | 6,54871       | 8,09241              | 323,784                     | 1,6546                   | 2,0626                                           |
| 4250                               | 5,89001                                  | 6,51410       | 8,07100              | 323,583                     | 1,6530                   | 2,0715                                           |
| 4300                               | 5,85155                                  | 6,47963       | 8,04962              | 323,381                     | 1,6513                   | 2,0804                                           |
| 4350                               | 5,81329                                  | 6,44531       | 8,02827              | 323,179                     | 1,6497                   | 2,0894                                           |
| 4400                               | 5,77524                                  | 6,41112       | 8,00695              | 322,977                     | 1,6481                   | 2,0985                                           |
| 4450                               | 5,73738                                  | 6,37708       | 7,98566              | 322,775                     | 1,6464                   | 2,1076                                           |
| 4500                               | 5,69973-1                                | 6,34317-1     | 7,96440-1            | 322,573                     | 1,6448-5                 | 2,1167-5                                         |
| 4550                               | 5,66229                                  | 6,30940       | 7,94317              | 322,371                     | 1,6431                   | 2,1259                                           |
| 4600                               | 5,62504                                  | 6,27577       | 7,92198              | 322,169                     | 1,6415                   | 2,1352                                           |
| 4650                               | 5,58779                                  | 6,24228       | 7,90081              | 321,966                     | 1,6398                   | 2,1445                                           |
| 4700                               | 5,55114                                  | 6,20893       | 7,87967              | 321,764                     | 1,6382                   | 2,1538                                           |
| 4750                               | 5,51448                                  | 6,17571       | 7,85857              | 321,561                     | 1,6365                   | 2,1632                                           |
| 4800                               | 5,47802                                  | 6,14263       | 7,83749              | 321,358                     | 1,6349                   | 2,1727                                           |
| 4850                               | 5,44176                                  | 6,10968       | 7,81645              | 321,155                     | 1,6332                   | 2,1822                                           |
| 4900                               | 5,40570                                  | 6,07687       | 7,79543              | 320,952                     | 1,6316                   | 2,1917                                           |
| 4950                               | 5,36983                                  | 6,04420       | 7,77445              | 320,749                     | 1,6299                   | 2,2013                                           |
| 5000                               | 5,33415-1                                | 6,01166-1     | 7,75349-1            | 320,545                     | 1,6282-5                 | 2,2110-5                                         |
| 5050                               | 5,29866                                  | 5,97926       | 7,73257              | 320,342                     | 1,6266                   | 2,2207                                           |
| 5100                               | 5,26337                                  | 5,94699       | 7,71167              | 320,138                     | 1,6249                   | 2,2305                                           |
| 5150                               | 5,22827                                  | 5,91485       | 7,69081              | 319,935                     | 1,6233                   | 2,2403                                           |
| 5200                               | 5,19336                                  | 5,88285       | 7,66997              | 319,731                     | 1,6216                   | 2,2502                                           |
| 5250                               | 5,15863                                  | 5,85098       | 7,64917              | 319,527                     | 1,6200                   | 2,2602                                           |
| 5300                               | 5,12410                                  | 5,81925       | 7,62840              | 319,323                     | 1,6183                   | 2,2701                                           |
| 5350                               | 5,08976                                  | 5,78764       | 7,60766              | 319,118                     | 1,6166                   | 2,2802                                           |
| 5400                               | 5,05560                                  | 5,75617       | 7,58694              | 318,914                     | 1,6150                   | 2,2903                                           |
| 5450                               | 5,02163                                  | 5,72483       | 7,56626              | 318,710                     | 1,6133                   | 2,3005                                           |
| 5500                               | 4,98784-1                                | 5,69362-1     | 7,54561-1            | 318,505                     | 1,6116-5                 | 2,3107-5                                         |
| 5550                               | 4,95424                                  | 5,66254       | 7,52499              | 318,300                     | 1,6100                   | 2,3210                                           |
| 5600                               | 4,92082                                  | 5,63160       | 7,50440              | 318,095                     | 1,6083                   | 2,3313                                           |
| 5650                               | 4,88759                                  | 5,60078       | 7,48383              | 317,890                     | 1,6066                   | 2,3417                                           |
| 5700                               | 4,85454                                  | 5,57009       | 7,46330              | 317,685                     | 1,6050                   | 2,3522                                           |
| 5750                               | 4,82167                                  | 5,53953       | 7,44280              | 317,480                     | 1,6033                   | 2,3627                                           |
| 5800                               | 4,78898                                  | 5,50910       | 7,42233              | 317,275                     | 1,6016                   | 2,3732                                           |
| 5850                               | 4,75647                                  | 5,47880       | 7,40189              | 317,069                     | 1,6000                   | 2,3839                                           |
| 5900                               | 4,72414                                  | 5,44863       | 7,38148              | 316,863                     | 1,5983                   | 2,3946                                           |
| 5950                               | 4,69199                                  | 5,41858       | 7,36110              | 316,658                     | 1,5966                   | 2,4053                                           |

Продолжение табл. 2

| Геодези-<br>ческая<br>высо-<br>та $H, м$ | Величины в функции геопотенциальной высоты |               |                   |                               |                               |                            |                                                    |
|------------------------------------------|--------------------------------------------|---------------|-------------------|-------------------------------|-------------------------------|----------------------------|----------------------------------------------------|
|                                          | $\rho/\rho_c$                              | $\rho/\rho_c$ | $\sqrt{g/\rho_c}$ | скорость<br>звука<br>$a, м/с$ | вязкость                      |                            | теплопро-<br>водность<br>$\lambda, Вт/(м \cdot К)$ |
|                                          |                                            |               |                   |                               | динамич.<br>$\mu, Па \cdot с$ | кинематич.<br>$\nu, м^2/с$ |                                                    |
| 4000                                     | 6,08342-1                                  | 6,68677-1     | 8,17727-1         | 324,579                       | 1,6611-5                      | 2,0279-5                   | 2,3271-2                                           |
| 4050                                     | 6,04388                                    | 6,65156       | 8,15571           | 324,377                       | 1,6595                        | 2,0366                     | 2,3245                                             |
| 4100                                     | 6,00455                                    | 6,61649       | 8,13418           | 324,176                       | 1,6578                        | 2,0454                     | 2,3219                                             |
| 4150                                     | 5,96544                                    | 6,58157       | 8,11268           | 323,974                       | 1,6562                        | 2,0542                     | 2,3193                                             |
| 4200                                     | 5,92652                                    | 6,54678       | 8,09122           | 323,773                       | 1,6545                        | 2,0631                     | 2,3166                                             |
| 4250                                     | 5,88782                                    | 6,51214       | 8,06978           | 323,571                       | 1,6529                        | 2,0720                     | 2,3140                                             |
| 4300                                     | 5,84931                                    | 6,47763       | 8,04837           | 323,369                       | 1,6513                        | 2,0809                     | 2,3114                                             |
| 4350                                     | 5,81102                                    | 6,44327       | 8,02700           | 323,167                       | 1,6496                        | 2,0900                     | 2,3087                                             |
| 4400                                     | 5,77292                                    | 6,40904       | 8,00565           | 322,965                       | 1,6480                        | 2,0990                     | 2,3061                                             |
| 4450                                     | 5,73503                                    | 6,37496       | 7,98433           | 322,763                       | 1,6463                        | 2,1081                     | 2,3035                                             |
| 4500                                     | 5,69734-1                                  | 6,34101-1     | 7,96305-1         | 322,560                       | 1,6447-5                      | 2,1173-5                   | 2,3009-2                                           |
| 4550                                     | 5,65985                                    | 6,30721       | 7,94179           | 322,358                       | 1,6430                        | 2,1265                     | 2,2982                                             |
| 4600                                     | 5,62256                                    | 6,27354       | 7,92057           | 322,155                       | 1,6414                        | 2,1358                     | 2,2956                                             |
| 4650                                     | 5,58547                                    | 6,24001       | 7,89937           | 321,952                       | 1,6397                        | 2,1451                     | 2,2930                                             |
| 4700                                     | 5,54858                                    | 6,20661       | 7,87821           | 321,750                       | 1,6381                        | 2,1545                     | 2,2903                                             |
| 4750                                     | 5,51189                                    | 6,17335       | 7,85707           | 321,546                       | 1,6364                        | 2,1639                     | 2,2877                                             |
| 4800                                     | 5,47539                                    | 6,14023       | 7,83596           | 321,343                       | 1,6347                        | 2,1733                     | 2,2851                                             |
| 4850                                     | 5,43909                                    | 6,10725       | 7,81489           | 321,140                       | 1,6331                        | 2,1829                     | 2,2824                                             |
| 4900                                     | 5,40298                                    | 6,07440       | 7,79384           | 320,937                       | 1,6314                        | 2,1925                     | 2,2798                                             |
| 4950                                     | 5,36707                                    | 6,04169       | 7,77283           | 320,733                       | 1,6298                        | 2,2021                     | 2,2771                                             |
| 5000                                     | 5,33135-1                                  | 6,00911-1     | 7,75184-1         | 320,529                       | 1,6281-5                      | 2,2118-5                   | 2,2745-2                                           |
| 5050                                     | 5,29582                                    | 5,97666       | 7,73089           | 320,326                       | 1,6265                        | 2,2215                     | 2,2719                                             |
| 5100                                     | 5,26049                                    | 5,94435       | 7,70996           | 320,122                       | 1,6248                        | 2,2313                     | 2,2692                                             |
| 5150                                     | 5,22535                                    | 5,91218       | 7,68907           | 319,918                       | 1,6231                        | 2,2412                     | 2,2666                                             |
| 5200                                     | 5,19039                                    | 5,88013       | 7,66820           | 319,713                       | 1,6215                        | 2,2511                     | 2,2639                                             |
| 5250                                     | 5,15563                                    | 5,84822       | 7,64737           | 319,509                       | 1,6198                        | 2,2610                     | 2,2613                                             |
| 5300                                     | 5,12106                                    | 5,81645       | 7,62656           | 319,305                       | 1,6181                        | 2,2710                     | 2,2587                                             |
| 5350                                     | 5,08667                                    | 5,78480       | 7,60509           | 319,100                       | 1,6165                        | 2,2811                     | 2,2560                                             |
| 5400                                     | 5,05247                                    | 5,75329       | 7,58504           | 318,895                       | 1,6148                        | 2,2912                     | 2,2534                                             |
| 5450                                     | 5,01846                                    | 5,72191       | 7,56433           | 318,690                       | 1,6131                        | 2,3014                     | 2,2507                                             |
| 5500                                     | 4,98463-1                                  | 5,69066-1     | 7,54364-1         | 318,485                       | 1,6115-5                      | 2,3117-5                   | 2,2481-2                                           |
| 5550                                     | 4,95099                                    | 5,65954       | 7,52299           | 318,280                       | 1,6098                        | 2,3220                     | 2,2454                                             |
| 5600                                     | 4,91753                                    | 5,62855       | 7,50236           | 318,075                       | 1,6081                        | 2,3323                     | 2,2428                                             |
| 5650                                     | 4,88426                                    | 5,59769       | 7,48177           | 317,870                       | 1,6065                        | 2,3428                     | 2,2401                                             |
| 5700                                     | 4,85117                                    | 5,56696       | 7,46121           | 317,664                       | 1,6048                        | 2,3532                     | 2,2375                                             |
| 5750                                     | 4,81825                                    | 5,53636       | 7,44067           | 317,459                       | 1,6031                        | 2,3638                     | 2,2348                                             |
| 5800                                     | 4,78553                                    | 5,50589       | 7,42017           | 317,253                       | 1,6014                        | 2,3744                     | 2,2322                                             |
| 5850                                     | 4,75298                                    | 5,47554       | 7,39969           | 317,047                       | 1,5998                        | 2,3850                     | 2,2295                                             |
| 5900                                     | 4,72061                                    | 5,44533       | 7,37925           | 316,841                       | 1,5981                        | 2,3958                     | 2,2269                                             |
| 5950                                     | 4,68842                                    | 5,41524       | 7,35883           | 316,635                       | 1,5964                        | 2,4065                     | 2,2242                                             |

От 6000 до 7950 м

| Геометри-<br>ческая вы-<br>сота $h$ , м | Величины в функции геометрической высоты |               |                      |                                |                          |                                         |                                                  |
|-----------------------------------------|------------------------------------------|---------------|----------------------|--------------------------------|--------------------------|-----------------------------------------|--------------------------------------------------|
|                                         | $\rho/\rho_c$                            | $\rho/\rho_c$ | $\sqrt{\rho/\rho_c}$ | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                         | теплопро-<br>водность<br>$\lambda$ ,<br>Вт/(м·К) |
|                                         |                                          |               |                      |                                | динамич.<br>$\mu$ , Па·с | кинематич.<br>$\nu$ , м <sup>2</sup> /с |                                                  |
| 6000                                    | 4,66002—1                                | 5,38886—1     | 7,34075—1            | 316,452                        | 1,5949—5                 | 2,4162—5                                | 2,2218—2                                         |
| 6050                                    | 4,62822                                  | 5,35887       | 7,32043              | 316,246                        | 1,5933                   | 2,4270                                  | 2,2192                                           |
| 6100                                    | 4,59660                                  | 5,32921       | 7,30014              | 316,040                        | 1,5916                   | 2,4380                                  | 2,2165                                           |
| 6150                                    | 4,56516                                  | 5,29967       | 7,27988              | 315,833                        | 1,5899                   | 2,4490                                  | 2,2139                                           |
| 6200                                    | 4,53389                                  | 5,27026       | 7,25965              | 315,627                        | 1,5882                   | 2,4600                                  | 2,2112                                           |
| 6250                                    | 4,50280                                  | 5,24097       | 7,23946              | 315,420                        | 1,5865                   | 2,4712                                  | 2,2086                                           |
| 6300                                    | 4,47187                                  | 5,21181       | 7,21929              | 315,213                        | 1,5849                   | 2,4824                                  | 2,2059                                           |
| 6350                                    | 4,44113                                  | 5,18277       | 7,19915              | 315,007                        | 1,5832                   | 2,4936                                  | 2,2033                                           |
| 6400                                    | 4,41055                                  | 5,15385       | 7,17904              | 314,800                        | 1,5815                   | 2,5049                                  | 2,2006                                           |
| 6450                                    | 4,38014                                  | 5,12507       | 7,15896              | 314,593                        | 1,5798                   | 2,5163                                  | 2,1980                                           |
| 6500                                    | 4,34991—1                                | 5,09641—1     | 7,13891—1            | 314,385                        | 1,5781—5                 | 2,5278—5                                | 2,1953—2                                         |
| 6550                                    | 4,31984                                  | 5,06787       | 7,11889              | 314,178                        | 1,5764                   | 2,5393                                  | 2,1926                                           |
| 6600                                    | 4,28995                                  | 5,03915       | 7,09891              | 313,971                        | 1,5748                   | 2,5509                                  | 2,1900                                           |
| 6650                                    | 4,26022                                  | 5,01115       | 7,07895              | 313,763                        | 1,5731                   | 2,5626                                  | 2,1873                                           |
| 6700                                    | 4,23066                                  | 4,98298       | 7,05902              | 313,555                        | 1,5714                   | 2,5743                                  | 2,1847                                           |
| 6750                                    | 4,20127                                  | 4,95492       | 7,03912              | 313,347                        | 1,5697                   | 2,5861                                  | 2,1820                                           |
| 6800                                    | 4,17204                                  | 4,92699       | 7,01925              | 313,139                        | 1,5680                   | 2,5979                                  | 2,1793                                           |
| 6850                                    | 4,14298                                  | 4,89918       | 6,99942              | 312,931                        | 1,5663                   | 2,6099                                  | 2,1767                                           |
| 6900                                    | 4,11408                                  | 4,87149       | 6,97961              | 312,723                        | 1,5646                   | 2,6218                                  | 2,1740                                           |
| 6950                                    | 4,08534                                  | 4,84393       | 6,95983              | 312,514                        | 1,5629                   | 2,6339                                  | 2,1713                                           |
| 7000                                    | 4,05677—1                                | 4,81648—1     | 6,94008—1            | 312,306                        | 1,5612—5                 | 2,6461—5                                | 2,1687—2                                         |
| 7050                                    | 4,02836                                  | 4,78915       | 6,92037              | 312,097                        | 1,5595                   | 2,6583                                  | 2,1660                                           |
| 7100                                    | 4,00012                                  | 4,76194       | 6,90068              | 311,888                        | 1,5578                   | 2,6705                                  | 2,1633                                           |
| 7150                                    | 3,97203                                  | 4,73485       | 6,88102              | 311,679                        | 1,5561                   | 2,6829                                  | 2,1607                                           |
| 7200                                    | 3,94411                                  | 4,70787       | 6,86139              | 311,470                        | 1,5544                   | 2,6953                                  | 2,1580                                           |
| 7250                                    | 3,91634                                  | 4,68102       | 6,84180              | 311,261                        | 1,5527                   | 2,7078                                  | 2,1553                                           |
| 7300                                    | 3,88874                                  | 4,65428       | 6,82223              | 311,051                        | 1,5510                   | 2,7204                                  | 2,1527                                           |
| 7350                                    | 3,86129                                  | 4,62766       | 6,80269              | 310,842                        | 1,5493                   | 2,7330                                  | 2,1500                                           |
| 7400                                    | 3,83400                                  | 4,60116       | 6,78319              | 310,632                        | 1,5476                   | 2,7458                                  | 2,1473                                           |
| 7450                                    | 3,80686                                  | 4,57477       | 6,76371              | 310,422                        | 1,5459                   | 2,7586                                  | 2,1446                                           |
| 7500                                    | 3,77988—1                                | 4,54850—1     | 6,74426—1            | 310,212                        | 1,5442—5                 | 2,7714—5                                | 2,1420—2                                         |
| 7550                                    | 3,75306                                  | 4,52235       | 6,72484              | 310,002                        | 1,5425                   | 2,7844                                  | 2,1393                                           |
| 7600                                    | 3,72639                                  | 4,49631       | 6,70546              | 309,792                        | 1,5408                   | 2,7974                                  | 2,1366                                           |
| 7650                                    | 3,69988                                  | 4,47039       | 6,68610              | 309,582                        | 1,5391                   | 2,8105                                  | 2,1339                                           |
| 7700                                    | 3,67352                                  | 4,44458       | 6,66677              | 309,371                        | 1,5374                   | 2,8237                                  | 2,1313                                           |
| 7750                                    | 3,64731                                  | 4,41889       | 6,64747              | 309,161                        | 1,5357                   | 2,8369                                  | 2,1286                                           |
| 7800                                    | 3,62126                                  | 4,39331       | 6,62821              | 308,950                        | 1,5340                   | 2,8503                                  | 2,1259                                           |
| 7850                                    | 3,59535                                  | 4,36785       | 6,60897              | 308,739                        | 1,5323                   | 2,8637                                  | 2,1232                                           |
| 7900                                    | 3,56960                                  | 4,34250       | 6,58976              | 308,528                        | 1,5305                   | 2,8772                                  | 2,1205                                           |
| 7950                                    | 3,54399                                  | 4,31726       | 6,57058              | 308,317                        | 1,5288                   | 2,8908                                  | 2,1179                                           |

Продолжение табл. 2

| Геопотенци-<br>альная высо-<br>та $H$ , м | Величины и функции геопотенциальной высоты |               |                |                                |                          |                                         | теплопро-<br>водность<br>$\lambda$<br>Вт/(м·К) |
|-------------------------------------------|--------------------------------------------|---------------|----------------|--------------------------------|--------------------------|-----------------------------------------|------------------------------------------------|
|                                           | $p/p_c$                                    | $\rho/\rho_c$ | $\sqrt{g/H_c}$ | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                         |                                                |
|                                           |                                            |               |                |                                | динамич.<br>$\mu$ , Па·с | кинематич.<br>$\nu$ , м <sup>2</sup> /с |                                                |
| 6000                                      | 4,65640-1                                  | 5,38528-1     | 7,33845-1      | 316,428                        | 1,5947-5                 | 2,4174-5                                | 2,2215-2                                       |
| 6050                                      | 4,62457                                    | 5,35545       | 7,31809        | 316,222                        | 1,5931                   | 2,4283                                  | 2,2189                                         |
| 6100                                      | 4,59291                                    | 5,32574       | 7,29777        | 316,015                        | 1,5914                   | 2,4393                                  | 2,2162                                         |
| 6150                                      | 4,56143                                    | 5,29616       | 7,27747        | 315,809                        | 1,5897                   | 2,4503                                  | 2,2136                                         |
| 6200                                      | 4,53012                                    | 5,26671       | 7,25721        | 315,602                        | 1,5880                   | 2,4614                                  | 2,2109                                         |
| 6250                                      | 4,49898                                    | 5,23738       | 7,23697        | 315,395                        | 1,5863                   | 2,4725                                  | 2,2083                                         |
| 6300                                      | 4,46802                                    | 5,20817       | 7,21677        | 315,188                        | 1,5846                   | 2,4838                                  | 2,2056                                         |
| 6350                                      | 4,43723                                    | 5,17909       | 7,19659        | 314,980                        | 1,5830                   | 2,4951                                  | 2,2029                                         |
| 6400                                      | 4,40662                                    | 5,15014       | 7,17645        | 314,773                        | 1,5813                   | 2,5064                                  | 2,2003                                         |
| 6450                                      | 4,37617                                    | 5,12131       | 7,15633        | 314,565                        | 1,5796                   | 2,5178                                  | 2,1976                                         |
| 6500                                      | 4,34590-1                                  | 5,09260-1     | 7,13625-1      | 314,358                        | 1,5779-5                 | 2,5293-5                                | 2,1949-2                                       |
| 6550                                      | 4,31579                                    | 5,06402       | 7,11619        | 314,150                        | 1,5762                   | 2,5409                                  | 2,1923                                         |
| 6600                                      | 4,28586                                    | 5,03556       | 7,09617        | 313,942                        | 1,5745                   | 2,5525                                  | 2,1896                                         |
| 6650                                      | 4,25609                                    | 5,00722       | 7,07617        | 313,734                        | 1,5728                   | 2,5642                                  | 2,1869                                         |
| 6700                                      | 4,22649                                    | 4,97900       | 7,05620        | 313,526                        | 1,5711                   | 2,5759                                  | 2,1843                                         |
| 6750                                      | 4,19706                                    | 4,95091       | 7,03627        | 313,317                        | 1,5694                   | 2,5878                                  | 2,1816                                         |
| 6800                                      | 4,16780                                    | 4,92294       | 7,01636        | 313,109                        | 1,5677                   | 2,5997                                  | 2,1789                                         |
| 6850                                      | 4,13869                                    | 4,89508       | 6,99649        | 312,900                        | 1,5661                   | 2,6116                                  | 2,1763                                         |
| 6900                                      | 4,10976                                    | 4,86735       | 6,97664        | 312,691                        | 1,5644                   | 2,6237                                  | 2,1736                                         |
| 6950                                      | 4,08099                                    | 4,83974       | 6,95683        | 312,483                        | 1,5627                   | 2,6358                                  | 2,1709                                         |
| 7000                                      | 4,05238-1                                  | 4,81225-1     | 6,93704-1      | 312,274                        | 1,5610-5                 | 2,6479-5                                | 2,1683-2                                       |
| 7050                                      | 4,02393                                    | 4,78488       | 6,91728        | 312,064                        | 1,5593                   | 2,6602                                  | 2,1656                                         |
| 7100                                      | 3,99565                                    | 4,75763       | 6,89756        | 311,855                        | 1,5576                   | 2,6725                                  | 2,1629                                         |
| 7150                                      | 3,96753                                    | 4,73049       | 6,87786        | 311,645                        | 1,5559                   | 2,6849                                  | 2,1602                                         |
| 7200                                      | 3,93956                                    | 4,70348       | 6,85819        | 311,436                        | 1,5542                   | 2,6974                                  | 2,1576                                         |
| 7250                                      | 3,91176                                    | 4,67658       | 6,83856        | 311,226                        | 1,5525                   | 2,7099                                  | 2,1549                                         |
| 7300                                      | 3,88412                                    | 4,64981       | 6,81895        | 311,016                        | 1,5507                   | 2,7225                                  | 2,1522                                         |
| 7350                                      | 3,85663                                    | 4,62314       | 6,79937        | 310,806                        | 1,5490                   | 2,7352                                  | 2,1495                                         |
| 7400                                      | 3,82930                                    | 4,59660       | 6,77982        | 310,596                        | 1,5473                   | 2,7480                                  | 2,1469                                         |
| 7450                                      | 3,80213                                    | 4,57017       | 6,76031        | 310,386                        | 1,5456                   | 2,7608                                  | 2,1442                                         |
| 7500                                      | 3,77512-1                                  | 4,54386-1     | 6,74082-1      | 310,175                        | 1,5439-5                 | 2,7737-5                                | 2,1415-2                                       |
| 7550                                      | 3,74826                                    | 4,51767       | 6,72136        | 309,965                        | 1,5422                   | 2,7867                                  | 2,1388                                         |
| 7600                                      | 3,72156                                    | 4,49159       | 6,70193        | 309,754                        | 1,5405                   | 2,7998                                  | 2,1361                                         |
| 7650                                      | 3,69501                                    | 4,46563       | 6,68253        | 309,543                        | 1,5388                   | 2,8129                                  | 2,1334                                         |
| 7700                                      | 3,66861                                    | 4,43978       | 6,66316        | 309,332                        | 1,5371                   | 2,8262                                  | 2,1308                                         |
| 7750                                      | 3,64237                                    | 4,41404       | 6,64383        | 309,121                        | 1,5354                   | 2,8395                                  | 2,1281                                         |
| 7800                                      | 3,61628                                    | 4,38842       | 6,62452        | 308,909                        | 1,5336                   | 2,8529                                  | 2,1254                                         |
| 7850                                      | 3,59034                                    | 4,36292       | 6,60524        | 308,698                        | 1,5319                   | 2,8663                                  | 2,1227                                         |
| 7900                                      | 3,56455                                    | 4,33752       | 6,58599        | 308,486                        | 1,5302                   | 2,8799                                  | 2,1200                                         |
| 7950                                      | 3,53891                                    | 4,31224       | 6,56677        | 308,274                        | 1,5285                   | 2,8935                                  | 2,1173                                         |

От 8000 до 9950 м

| Геометри-<br>ческая вы-<br>сота $H$ , м | Величины в функции геометрической высоты |           |                |                                |                          |                                         |                                                  |
|-----------------------------------------|------------------------------------------|-----------|----------------|--------------------------------|--------------------------|-----------------------------------------|--------------------------------------------------|
|                                         | $P/P_c$                                  | $P/P_c$   | $\sqrt{P/P_c}$ | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                         | теплопро-<br>водность<br>$\lambda$ ,<br>Вт/(м·К) |
|                                         |                                          |           |                |                                | динамич.<br>$\mu$ , Па·с | кинематич.<br>$\nu$ , м <sup>2</sup> /с |                                                  |
| 8000                                    | 3,51854-1                                | 4,29213-1 | 6,55144-1      | 308,105                        | 1,5271-5                 | 2,9044-5                                | 2,1152-2                                         |
| 8050                                    | 3,49323                                  | 4,26712   | 6,53232        | 307,894                        | 1,5254                   | 2,9182                                  | 2,1125                                           |
| 8100                                    | 3,46808                                  | 4,24222   | 6,51323        | 307,682                        | 1,5237                   | 2,9320                                  | 2,1098                                           |
| 8150                                    | 3,44307                                  | 4,21743   | 6,49417        | 307,470                        | 1,5220                   | 2,9459                                  | 2,1071                                           |
| 8200                                    | 3,41820                                  | 4,19275   | 6,47514        | 307,258                        | 1,5202                   | 2,9599                                  | 2,1044                                           |
| 8250                                    | 3,39348                                  | 4,16818   | 6,45615        | 307,046                        | 1,5185                   | 2,9740                                  | 2,1018                                           |
| 8300                                    | 3,36891                                  | 4,14372   | 6,43718        | 306,834                        | 1,5168                   | 2,9882                                  | 2,0991                                           |
| 8350                                    | 3,34448                                  | 4,11938   | 6,41824        | 306,622                        | 1,5151                   | 3,0024                                  | 2,0964                                           |
| 8400                                    | 3,32020                                  | 4,09514   | 6,39933        | 306,409                        | 1,5134                   | 3,0167                                  | 2,0937                                           |
| 8450                                    | 3,29606                                  | 4,07102   | 6,38045        | 306,197                        | 1,5116                   | 3,0312                                  | 2,0910                                           |
| 8500                                    | 3,27206-1                                | 4,04700-1 | 6,36160-1      | 305,984                        | 1,5099-5                 | 3,0457-5                                | 2,0883-2                                         |
| 8550                                    | 3,24821                                  | 4,02309   | 6,34278        | 305,771                        | 1,5082                   | 3,0603                                  | 2,0856                                           |
| 8600                                    | 3,22449                                  | 3,99929   | 6,32399        | 305,558                        | 1,5065                   | 3,0749                                  | 2,0829                                           |
| 8650                                    | 3,20092                                  | 3,97560   | 6,30523        | 305,345                        | 1,5047                   | 3,0897                                  | 2,0802                                           |
| 8700                                    | 3,17748                                  | 3,95201   | 6,28651        | 305,131                        | 1,5030                   | 3,1046                                  | 2,0775                                           |
| 8750                                    | 3,15419                                  | 3,92854   | 6,26781        | 304,918                        | 1,5013                   | 3,1196                                  | 2,0748                                           |
| 8800                                    | 3,13103                                  | 3,90517   | 6,24914        | 304,704                        | 1,4995                   | 3,1346                                  | 2,0722                                           |
| 8850                                    | 3,10802                                  | 3,88191   | 6,23050        | 304,490                        | 1,4978                   | 3,1497                                  | 2,0695                                           |
| 8900                                    | 3,08514                                  | 3,85875   | 6,21189        | 304,276                        | 1,4961                   | 3,1650                                  | 2,0668                                           |
| 8950                                    | 3,06240                                  | 3,83570   | 6,19330        | 304,062                        | 1,4943                   | 3,1803                                  | 2,0641                                           |
| 9000                                    | 3,03979-1                                | 3,81276-1 | 6,17475-1      | 303,848                        | 1,4926-5                 | 3,1957-5                                | 2,0614-2                                         |
| 9050                                    | 3,01732                                  | 3,78992   | 6,15623        | 303,634                        | 1,4909                   | 3,2112                                  | 2,0587                                           |
| 9100                                    | 2,99498                                  | 3,76719   | 6,13774        | 303,419                        | 1,4891                   | 3,2268                                  | 2,0560                                           |
| 9150                                    | 2,97278                                  | 3,74456   | 6,11928        | 303,204                        | 1,4874                   | 3,2426                                  | 2,0533                                           |
| 9200                                    | 2,95072                                  | 3,72204   | 6,10085        | 302,990                        | 1,4856                   | 3,2584                                  | 2,0506                                           |
| 9250                                    | 2,92878                                  | 3,69962   | 6,08245        | 302,775                        | 1,4839                   | 3,2743                                  | 2,0479                                           |
| 9300                                    | 2,90698                                  | 3,67730   | 6,06408        | 302,559                        | 1,4822                   | 3,2903                                  | 2,0452                                           |
| 9350                                    | 2,88531                                  | 3,65509   | 6,04573        | 302,344                        | 1,4804                   | 3,3064                                  | 2,0425                                           |
| 9400                                    | 2,86377                                  | 3,63298   | 6,02742        | 302,129                        | 1,4787                   | 3,3226                                  | 2,0398                                           |
| 9450                                    | 2,84236                                  | 3,61097   | 6,00914        | 301,913                        | 1,4769                   | 3,3389                                  | 2,0371                                           |
| 9500                                    | 2,82109-1                                | 3,58907-1 | 5,99088-1      | 301,697                        | 1,4752-5                 | 3,3553-5                                | 2,0343-2                                         |
| 9550                                    | 2,79994                                  | 3,56727   | 5,97266        | 301,482                        | 1,4734                   | 3,3718                                  | 2,0316                                           |
| 9600                                    | 2,77892                                  | 3,54557   | 5,95447        | 301,265                        | 1,4717                   | 3,3884                                  | 2,0289                                           |
| 9650                                    | 2,75803                                  | 3,52397   | 5,93630        | 301,049                        | 1,4699                   | 3,4051                                  | 2,0262                                           |
| 9700                                    | 2,73727                                  | 3,50247   | 5,91817        | 300,833                        | 1,4682                   | 3,4219                                  | 2,0235                                           |
| 9750                                    | 2,71663                                  | 3,48108   | 5,90006        | 300,616                        | 1,4664                   | 3,4389                                  | 2,0208                                           |
| 9800                                    | 2,69612                                  | 3,45978   | 5,88199        | 300,400                        | 1,4647                   | 3,4559                                  | 2,0181                                           |
| 9850                                    | 2,67574                                  | 3,43858   | 5,86394        | 300,183                        | 1,4629                   | 3,4730                                  | 2,0154                                           |
| 9900                                    | 2,65548                                  | 3,41749   | 5,84593        | 299,966                        | 1,4612                   | 3,4903                                  | 2,0127                                           |
| 9950                                    | 2,63534                                  | 3,39649   | 5,82794        | 299,749                        | 1,4594                   | 3,5076                                  | 2,0100                                           |

Продолжение табл. 2

| Геоотте-<br>пительная<br>высота $H$ , м | Величины в функции геопотенциальной высоты |                 |                      |                                     |                          |                                         |
|-----------------------------------------|--------------------------------------------|-----------------|----------------------|-------------------------------------|--------------------------|-----------------------------------------|
|                                         | $\rho/\rho_c$                              | $\sigma/\rho_c$ | $\sqrt{\rho/\rho_c}$ | скорость<br>звука<br>$\sigma$ , м/с | вязкость                 |                                         |
|                                         |                                            |                 |                      |                                     | динамич.<br>$\mu$ , Па·с | кинематич.<br>$\nu$ , м <sup>2</sup> /с |
| 8000                                    | 3,51343—1                                  | 4,28708—1       | 6,54758—1            | 308,063                             | 1,5268—5                 | 2,9072—5                                |
| 8050                                    | 3,49809                                    | 4,26202         | 6,52842              | 307,851                             | 1,5250                   | 2,9210                                  |
| 8100                                    | 3,48290                                    | 4,23708         | 6,50929              | 307,638                             | 1,5233                   | 2,9349                                  |
| 8150                                    | 3,46785                                    | 4,21225         | 6,49019              | 307,426                             | 1,5216                   | 2,9488                                  |
| 8200                                    | 3,45295                                    | 4,18754         | 6,47112              | 307,213                             | 1,5199                   | 2,9629                                  |
| 8250                                    | 3,43820                                    | 4,16293         | 6,45208              | 307,001                             | 1,5182                   | 2,9770                                  |
| 8300                                    | 3,42360                                    | 4,13843         | 6,43306              | 306,788                             | 1,5164                   | 2,9912                                  |
| 8350                                    | 3,40914                                    | 4,11405         | 6,41408              | 306,575                             | 1,5147                   | 3,0055                                  |
| 8400                                    | 3,39482                                    | 4,08977         | 6,39513              | 306,362                             | 1,5130                   | 3,0199                                  |
| 8450                                    | 3,38055                                    | 4,06560         | 6,37621              | 306,149                             | 1,5112                   | 3,0344                                  |
| 8500                                    | 3,26662—1                                  | 4,04155—1       | 6,35732—1            | 305,935                             | 1,5095—5                 | 3,0490—5                                |
| 8550                                    | 3,24273                                    | 4,01760         | 6,33815              | 305,722                             | 1,5078                   | 3,0636                                  |
| 8600                                    | 3,21899                                    | 3,99376         | 6,31962              | 305,503                             | 1,5061                   | 3,0784                                  |
| 8650                                    | 3,19538                                    | 3,97003         | 6,30082              | 305,294                             | 1,5043                   | 3,0932                                  |
| 8700                                    | 3,17192                                    | 3,94641         | 6,28204              | 305,080                             | 1,5026                   | 3,1081                                  |
| 8750                                    | 3,14859                                    | 3,92289         | 6,26330              | 304,866                             | 1,5008                   | 3,1232                                  |
| 8800                                    | 3,12541                                    | 3,89948         | 6,24459              | 304,652                             | 1,4991                   | 3,1383                                  |
| 8850                                    | 3,10236                                    | 3,87618         | 6,22590              | 304,438                             | 1,4974                   | 3,1535                                  |
| 8900                                    | 3,07945                                    | 3,85299         | 6,20725              | 304,223                             | 1,4956                   | 3,1688                                  |
| 8950                                    | 3,05668                                    | 3,82990         | 6,18862              | 304,008                             | 1,4939                   | 3,1842                                  |
| 9000                                    | 3,03404—1                                  | 3,80692—1       | 6,17002—1            | 303,793                             | 1,4922—5                 | 3,1997—5                                |
| 9050                                    | 3,01154                                    | 3,78404         | 6,15146              | 303,578                             | 1,4904                   | 3,2153                                  |
| 9100                                    | 2,98918                                    | 3,76127         | 6,13292              | 303,363                             | 1,4887                   | 3,2309                                  |
| 9150                                    | 2,96695                                    | 3,73861         | 6,11442              | 303,148                             | 1,4869                   | 3,2467                                  |
| 9200                                    | 2,94485                                    | 3,71605         | 6,09594              | 302,932                             | 1,4852                   | 3,2626                                  |
| 9250                                    | 2,92289                                    | 3,69359         | 6,07749              | 302,717                             | 1,4834                   | 3,2786                                  |
| 9300                                    | 2,90106                                    | 3,67124         | 6,05907              | 302,501                             | 1,4817                   | 3,2946                                  |
| 9350                                    | 2,87936                                    | 3,64899         | 6,04069              | 302,285                             | 1,4799                   | 3,3108                                  |
| 9400                                    | 2,85780                                    | 3,62684         | 6,02233              | 302,069                             | 1,4782                   | 3,3271                                  |
| 9450                                    | 2,83636                                    | 3,60480         | 6,00400              | 301,852                             | 1,4764                   | 3,3435                                  |
| 9500                                    | 2,81506—1                                  | 3,58286—1       | 5,98570—1            | 301,636                             | 1,4747—5                 | 3,3600—5                                |
| 9550                                    | 2,79389                                    | 3,56102         | 5,96743              | 301,419                             | 1,4729                   | 3,3765                                  |
| 9600                                    | 2,77284                                    | 3,53928         | 5,94919              | 301,203                             | 1,4712                   | 3,3932                                  |
| 9650                                    | 2,75192                                    | 3,51765         | 5,93098              | 300,986                             | 1,4694                   | 3,4100                                  |
| 9700                                    | 2,73113                                    | 3,49612         | 5,91280              | 300,769                             | 1,4677                   | 3,4269                                  |
| 9750                                    | 2,71047                                    | 3,47469         | 5,89465              | 300,552                             | 1,4659                   | 3,4439                                  |
| 9800                                    | 2,68994                                    | 3,45336         | 5,87653              | 300,334                             | 1,4642                   | 3,4611                                  |
| 9850                                    | 2,66953                                    | 3,43212         | 5,85843              | 300,117                             | 1,4624                   | 3,4783                                  |
| 9900                                    | 2,64925                                    | 3,41090         | 5,84037              | 299,899                             | 1,4606                   | 3,4956                                  |
| 9950                                    | 2,62909                                    | 3,38996         | 5,82234              | 299,681                             | 1,4589                   | 3,5131                                  |

От 10000 до 11950 м

| Геометри-<br>ческая высо-<br>та $h$ , м | Величины в функции геометрической высоты |               |           |                                |                          |                                         |                                                  |
|-----------------------------------------|------------------------------------------|---------------|-----------|--------------------------------|--------------------------|-----------------------------------------|--------------------------------------------------|
|                                         | $P/P_c$                                  | $\rho/\rho_c$ | $V/P_c$   | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                         | теплопро-<br>водность<br>$\lambda$ ,<br>Вт/(м·К) |
|                                         |                                          |               |           |                                | динамич.<br>$\mu$ , Па·с | кинематич.<br>$\nu$ , м <sup>2</sup> /с |                                                  |
| 10000                                   | 2,61533-1                                | 3,37559-1     | 5,80999-1 | 299,532                        | 1,4577-5                 | 3,5251-5                                | 2,0072-2                                         |
| 10050                                   | 2,59545                                  | 3,35480       | 5,79206   | 299,314                        | 1,4559                   | 3,5427                                  | 2,0045                                           |
| 10100                                   | 2,57569                                  | 3,33410       | 5,77416   | 299,097                        | 1,4541                   | 3,5604                                  | 2,0018                                           |
| 10150                                   | 2,55604                                  | 3,31349       | 5,75630   | 298,879                        | 1,4524                   | 3,5782                                  | 1,9991                                           |
| 10200                                   | 2,53653                                  | 3,29299       | 5,73846   | 298,661                        | 1,4506                   | 3,5961                                  | 1,9964                                           |
| 10250                                   | 2,51713                                  | 3,27258       | 5,72065   | 298,443                        | 1,4489                   | 3,6141                                  | 1,9937                                           |
| 10300                                   | 2,49785                                  | 3,25227       | 5,70287   | 298,225                        | 1,4471                   | 3,6322                                  | 1,9909                                           |
| 10350                                   | 2,47869                                  | 3,23206       | 5,68512   | 298,007                        | 1,4453                   | 3,6505                                  | 1,9882                                           |
| 10400                                   | 2,45965                                  | 3,21195       | 5,66740   | 297,788                        | 1,4436                   | 3,6689                                  | 1,9855                                           |
| 10450                                   | 2,44074                                  | 3,19193       | 5,64971   | 297,569                        | 1,4418                   | 3,6874                                  | 1,9828                                           |
| 10500                                   | 2,42193-1                                | 3,17200-1     | 5,63205-1 | 297,351                        | 1,4400-5                 | 3,7060-5                                | 1,9801-2                                         |
| 10550                                   | 2,40325                                  | 3,15218       | 5,61442   | 297,132                        | 1,4383                   | 3,7247                                  | 1,9773                                           |
| 10600                                   | 2,38469                                  | 3,13244       | 5,59682   | 296,912                        | 1,4365                   | 3,7436                                  | 1,9746                                           |
| 10650                                   | 2,36624                                  | 2,11280       | 5,57925   | 296,693                        | 1,4347                   | 3,7625                                  | 1,9719                                           |
| 10700                                   | 2,34790                                  | 3,09326       | 5,56171   | 296,474                        | 1,4329                   | 3,7816                                  | 1,9692                                           |
| 10750                                   | 2,32968                                  | 3,07381       | 5,54420   | 296,254                        | 1,4312                   | 3,8008                                  | 1,9664                                           |
| 10800                                   | 2,31158                                  | 3,05446       | 5,52671   | 296,034                        | 1,4294                   | 3,8202                                  | 1,9637                                           |
| 10850                                   | 2,29359                                  | 3,03520       | 5,50926   | 295,814                        | 1,4276                   | 3,8396                                  | 1,9610                                           |
| 10900                                   | 2,27572                                  | 3,01603       | 5,49184   | 295,594                        | 1,4258                   | 3,8592                                  | 1,9583                                           |
| 10950                                   | 2,25796                                  | 2,99695       | 5,47444   | 295,374                        | 1,4241                   | 3,8790                                  | 1,9555                                           |
| 11000                                   | 2,24031-1                                | 2,97797-1     | 5,45708-1 | 295,154                        | 1,4223-5                 | 3,8988-5                                | 1,9528-2                                         |
| 11050                                   | 2,22277                                  | 2,95835       | 5,43973   | 295,069                        | 1,4216                   | 3,9255                                  | 1,9518                                           |
| 11100                                   | 2,20538                                  | 2,93921       | 5,42151   | 295,069                        | 1,4216                   | 3,9564                                  | 1,9518                                           |
| 11150                                   | 2,18812                                  | 2,92025       | 5,39468   | 295,069                        | 1,4216                   | 3,9876                                  | 1,9518                                           |
| 11200                                   | 2,17099                                  | 2,89748       | 5,37353   | 295,069                        | 1,4216                   | 4,0191                                  | 1,9518                                           |
| 11250                                   | 2,15400                                  | 2,86488       | 5,35246   | 295,069                        | 1,4216                   | 4,0508                                  | 1,9518                                           |
| 11300                                   | 2,13715                                  | 2,84246       | 5,33147   | 295,069                        | 1,4216                   | 4,0827                                  | 1,9518                                           |
| 11350                                   | 2,12042                                  | 2,82022       | 5,31057   | 295,069                        | 1,4216                   | 4,1149                                  | 1,9518                                           |
| 11400                                   | 2,10383                                  | 2,79815       | 5,28975   | 295,069                        | 1,4216                   | 4,1474                                  | 1,9518                                           |
| 11450                                   | 2,08737                                  | 2,77625       | 5,26901   | 295,069                        | 1,4216                   | 4,1801                                  | 1,9518                                           |
| 11500                                   | 2,07103-1                                | 2,75453-1     | 5,24836-1 | 295,069                        | 1,4216-5                 | 4,2131-5                                | 1,9518-2                                         |
| 11550                                   | 2,05483                                  | 2,73297       | 5,22776   | 295,069                        | 1,4216                   | 4,2463                                  | 1,9518                                           |
| 11600                                   | 2,03875                                  | 2,71159       | 5,20729   | 295,069                        | 1,4216                   | 4,2798                                  | 1,9518                                           |
| 11650                                   | 2,02279                                  | 2,69037       | 5,18688   | 295,069                        | 1,4216                   | 4,3135                                  | 1,9518                                           |
| 11700                                   | 2,00697                                  | 2,66932       | 5,16654   | 295,069                        | 1,4216                   | 4,3476                                  | 1,9518                                           |
| 11750                                   | 1,99126                                  | 2,64843       | 5,14629   | 295,069                        | 1,4216                   | 4,3818                                  | 1,9518                                           |
| 11800                                   | 1,97568                                  | 2,62771       | 5,12612   | 295,069                        | 1,4216                   | 4,4164                                  | 1,9518                                           |
| 11850                                   | 1,96022                                  | 2,60715       | 5,10602   | 295,069                        | 1,4216                   | 4,4512                                  | 1,9518                                           |
| 11900                                   | 1,94489                                  | 2,58675       | 5,08601   | 295,069                        | 1,4216                   | 4,4863                                  | 1,9518                                           |
| 11950                                   | 1,92967                                  | 2,56651       | 5,06607   | 295,069                        | 1,4216                   | 4,5217                                  | 1,9518                                           |

Продолжение табл. 2

| Геопотенциальная высота Н, м | Величины в функции геопотенциальной высоты |               |                      |                          |                       |                                       |
|------------------------------|--------------------------------------------|---------------|----------------------|--------------------------|-----------------------|---------------------------------------|
|                              | $p/p_c$                                    | $\rho/\rho_c$ | $\sqrt{\rho/\rho_c}$ | скорость звука $a$ , м/с | вязкость              |                                       |
|                              |                                            |               |                      |                          | динамич. $\mu$ , Па·с | теплопроводность $\lambda$ , Вт/(м·К) |
| 10000                        | 2,60905—1                                  | 3,36903—1     | 5,80433—1            | 299,463                  | 1,4571—5              | 2,0064—2                              |
| 10050                        | 2,58914                                    | 3,34820       | 5,78636              | 299,245                  | 1,4553                | 2,0037                                |
| 10100                        | 2,56936                                    | 3,32746       | 5,76842              | 299,027                  | 1,4536                | 2,0009                                |
| 10150                        | 2,54969                                    | 3,30683       | 5,75050              | 298,808                  | 1,4518                | 1,9982                                |
| 10200                        | 2,53015                                    | 3,28629       | 5,73262              | 298,590                  | 1,4500                | 1,9955                                |
| 10250                        | 2,51073                                    | 3,26585       | 5,71476              | 298,371                  | 1,4483                | 1,9928                                |
| 10300                        | 2,49143                                    | 3,24551       | 5,69693              | 298,152                  | 1,4465                | 1,9900                                |
| 10350                        | 2,47225                                    | 3,22526       | 5,67914              | 297,933                  | 1,4447                | 1,9873                                |
| 10400                        | 2,45319                                    | 3,20511       | 5,66137              | 297,713                  | 1,4430                | 1,9846                                |
| 10450                        | 2,43425                                    | 3,18506       | 5,64363              | 297,494                  | 1,4412                | 1,9819                                |
| 10500                        | 2,41543—1                                  | 3,16510—1     | 5,62592—1            | 297,274                  | 1,4394—5              | 1,9791—2                              |
| 10550                        | 2,39673                                    | 3,14524       | 5,60925              | 297,055                  | 1,4376                | 1,9764                                |
| 10600                        | 2,37814                                    | 3,12548       | 5,59260              | 296,835                  | 1,4359                | 1,9737                                |
| 10650                        | 2,35967                                    | 3,10581       | 5,57298              | 296,615                  | 1,4341                | 1,9709                                |
| 10700                        | 2,34132                                    | 3,08623       | 5,55339              | 296,394                  | 1,4323                | 1,9682                                |
| 10750                        | 2,32308                                    | 3,06675       | 5,53383              | 296,174                  | 1,4305                | 1,9655                                |
| 10800                        | 2,30496                                    | 3,04737       | 5,51430              | 295,953                  | 1,4287                | 1,9627                                |
| 10850                        | 2,28695                                    | 3,02807       | 5,49479              | 295,733                  | 1,4270                | 1,9600                                |
| 10900                        | 2,26906                                    | 3,00887       | 5,47532              | 295,512                  | 1,4252                | 1,9572                                |
| 10950                        | 2,25128                                    | 2,98977       | 5,45588              | 295,291                  | 1,4234                | 1,9545                                |
| 11000                        | 2,23361—1                                  | 2,97076—1     | 5,43646—1            | 295,069                  | 1,4216—5              | 1,9518—2                              |
| 11050                        | 2,21606                                    | 2,95172       | 5,41701              | 294,846                  | 1,4216                | 1,9518                                |
| 11100                        | 2,19866                                    | 2,93247       | 5,39765              | 294,623                  | 1,4216                | 1,9518                                |
| 11150                        | 2,18139                                    | 2,91331       | 5,37838              | 294,400                  | 1,4216                | 1,9518                                |
| 11200                        | 2,16426                                    | 2,89422       | 5,35919              | 294,177                  | 1,4216                | 1,9518                                |
| 11250                        | 2,14726                                    | 2,87522       | 5,34008              | 293,953                  | 1,4216                | 1,9518                                |
| 11300                        | 2,13040                                    | 2,85634       | 5,32105              | 293,729                  | 1,4216                | 1,9518                                |
| 11350                        | 2,11367                                    | 2,83757       | 5,30211              | 293,505                  | 1,4216                | 1,9518                                |
| 11400                        | 2,09707                                    | 2,81891       | 5,28325              | 293,281                  | 1,4216                | 1,9518                                |
| 11450                        | 2,08060                                    | 2,79975       | 5,26447              | 293,057                  | 1,4216                | 1,9518                                |
| 11500                        | 2,06426—1                                  | 2,78062—1     | 5,24577—1            | 292,832                  | 1,4216—5              | 1,9518—2                              |
| 11550                        | 2,04805                                    | 2,76159       | 5,22715              | 292,608                  | 1,4216                | 1,9518                                |
| 11600                        | 2,03197                                    | 2,74267       | 5,20862              | 292,383                  | 1,4216                | 1,9518                                |
| 11650                        | 2,01601                                    | 2,72384       | 5,19017              | 292,158                  | 1,4216                | 1,9518                                |
| 11700                        | 2,00017                                    | 2,70511       | 5,17179              | 291,933                  | 1,4216                | 1,9518                                |
| 11750                        | 1,98447                                    | 2,68647       | 5,15347              | 291,708                  | 1,4216                | 1,9518                                |
| 11800                        | 1,96888                                    | 2,66792       | 5,13521              | 291,482                  | 1,4216                | 1,9518                                |
| 11850                        | 1,95342                                    | 2,64946       | 5,11701              | 291,257                  | 1,4216                | 1,9518                                |
| 11900                        | 1,93808                                    | 2,63109       | 5,09886              | 291,031                  | 1,4216                | 1,9518                                |
| 11950                        | 1,92286                                    | 2,61280       | 5,08076              | 290,806                  | 1,4216                | 1,9518                                |



От 12000 до 13950 м

| Геометри-<br>ческая высо-<br>та $H$ , м | Величины в функции геометрической высоты |                   |                      |                                |                          |                                                  |
|-----------------------------------------|------------------------------------------|-------------------|----------------------|--------------------------------|--------------------------|--------------------------------------------------|
|                                         | $\rho/\rho_c$                            | $\sigma/\sigma_c$ | $\sqrt{\sigma/\rho}$ | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                                  |
|                                         |                                          |                   |                      |                                | динамич.<br>$\mu$ , Па·с | теплопро-<br>водность<br>$\lambda$ ,<br>Вт/(м·К) |
| 12000                                   | 1,91457-1                                | 2,54643-1         | 5,04621-1            | 295,069                        | 1,4216-5                 | 4,5574-5                                         |
| 12050                                   | 1,89959                                  | 2,52650           | 5,02644              | 295,069                        | 1,4216                   | 4,5933                                           |
| 12100                                   | 1,88473                                  | 2,50674           | 5,00673              | 295,069                        | 1,4216                   | 4,6295                                           |
| 12150                                   | 1,86998                                  | 2,48713           | 4,98711              | 295,069                        | 1,4216                   | 4,6660                                           |
| 12200                                   | 1,85535                                  | 2,46767           | 4,96756              | 295,069                        | 1,4216                   | 4,7028                                           |
| 12250                                   | 1,84084                                  | 2,44836           | 4,94809              | 295,069                        | 1,4216                   | 4,7399                                           |
| 12300                                   | 1,82644                                  | 2,42921           | 4,92870              | 295,069                        | 1,4216                   | 4,7773                                           |
| 12350                                   | 1,81215                                  | 2,41020           | 4,90938              | 295,069                        | 1,4216                   | 4,8149                                           |
| 12400                                   | 1,79797                                  | 2,39135           | 4,89014              | 295,069                        | 1,4216                   | 4,8529                                           |
| 12450                                   | 1,78391                                  | 2,37264           | 4,87098              | 295,069                        | 1,4216                   | 4,8912                                           |
| 12500                                   | 1,76995-1                                | 2,35408-1         | 4,85189-1            | 295,069                        | 1,4216-5                 | 4,9297-5                                         |
| 12550                                   | 1,75611                                  | 2,33566           | 4,83287              | 295,069                        | 1,4216                   | 4,9686                                           |
| 12600                                   | 1,74237                                  | 2,31739           | 4,81393              | 295,069                        | 1,4216                   | 5,0078                                           |
| 12650                                   | 1,72874                                  | 2,29927           | 4,79507              | 295,069                        | 1,4216                   | 5,0473                                           |
| 12700                                   | 1,71522                                  | 2,28128           | 4,77628              | 295,069                        | 1,4216                   | 5,0871                                           |
| 12750                                   | 1,70180                                  | 2,26344           | 4,75756              | 295,069                        | 1,4216                   | 5,1272                                           |
| 12800                                   | 1,68849                                  | 2,24573           | 4,73892              | 295,069                        | 1,4216                   | 5,1676                                           |
| 12850                                   | 1,67528                                  | 2,22817           | 4,72035              | 295,069                        | 1,4216                   | 5,2083                                           |
| 12900                                   | 1,66218                                  | 2,21074           | 4,70185              | 295,069                        | 1,4216                   | 5,2494                                           |
| 12950                                   | 1,64918                                  | 2,19345           | 4,68342              | 295,069                        | 1,4216                   | 5,2908                                           |
| 13000                                   | 1,63628-1                                | 2,17629-1         | 4,66507-1            | 295,069                        | 1,4216-5                 | 5,3325-5                                         |
| 13050                                   | 1,62348                                  | 2,15927           | 4,64679              | 295,069                        | 1,4216                   | 5,3745                                           |
| 13100                                   | 1,61078                                  | 2,14238           | 4,62858              | 295,069                        | 1,4216                   | 5,4169                                           |
| 13150                                   | 1,59818                                  | 2,12562           | 4,61045              | 295,069                        | 1,4216                   | 5,4596                                           |
| 13200                                   | 1,58568                                  | 2,10900           | 4,59238              | 295,069                        | 1,4216                   | 5,5026                                           |
| 13250                                   | 1,57328                                  | 2,09250           | 4,57439              | 295,069                        | 1,4216                   | 5,5460                                           |
| 13300                                   | 1,56098                                  | 2,07614           | 4,55647              | 295,069                        | 1,4216                   | 5,5897                                           |
| 13350                                   | 1,54877                                  | 2,05990           | 4,53861              | 295,069                        | 1,4216                   | 5,6338                                           |
| 13400                                   | 1,53666                                  | 2,04379           | 4,52083              | 295,069                        | 1,4216                   | 5,6782                                           |
| 13450                                   | 1,52464                                  | 2,02781           | 4,50312              | 295,069                        | 1,4216                   | 5,7229                                           |
| 13500                                   | 1,51272-1                                | 2,01195-1         | 4,48548-1            | 295,069                        | 1,4216-5                 | 5,7680-5                                         |
| 13550                                   | 1,50089                                  | 1,99622           | 4,46790              | 295,069                        | 1,4216                   | 5,8135                                           |
| 13600                                   | 1,48915                                  | 1,98061           | 4,45040              | 295,069                        | 1,4216                   | 5,8593                                           |
| 13650                                   | 1,47750                                  | 1,96512           | 4,43297              | 295,069                        | 1,4216                   | 5,9055                                           |
| 13700                                   | 1,46595                                  | 1,94975           | 4,41560              | 295,069                        | 1,4216                   | 5,9520                                           |
| 13750                                   | 1,45449                                  | 1,93450           | 4,39830              | 295,069                        | 1,4216                   | 5,9990                                           |
| 13800                                   | 1,44311                                  | 1,91938           | 4,38107              | 295,069                        | 1,4216                   | 6,0462                                           |
| 13850                                   | 1,43183                                  | 1,90437           | 4,36391              | 295,069                        | 1,4216                   | 6,0939                                           |
| 13900                                   | 1,42063                                  | 1,88948           | 4,34681              | 295,069                        | 1,4216                   | 6,1419                                           |
| 13950                                   | 1,40952                                  | 1,87470           | 4,32978              | 295,069                        | 1,4216                   | 6,1903                                           |

Продолжение табл. 2

| Геоботани-<br>ческая вы-<br>сота $H, \text{ м}$ | Величины в функции геоботанической высоты |           |           |                                       |                                            |                                           |                                                                 |
|-------------------------------------------------|-------------------------------------------|-----------|-----------|---------------------------------------|--------------------------------------------|-------------------------------------------|-----------------------------------------------------------------|
|                                                 | $p/p_c$                                   | $r/r_c$   | $V/r_c$   | скорость<br>звука<br>$a, \text{ м/с}$ | вязкость                                   |                                           | теплопро-<br>водность<br>$\lambda, \text{ Вт/(м}\cdot\text{К)}$ |
|                                                 |                                           |           |           |                                       | динамич.<br>$\mu, \text{ Па}\cdot\text{с}$ | кинематич.<br>$\nu, \text{ м}^2/\text{с}$ |                                                                 |
| 12000                                           | 1,90776-1                                 | 2,53737-1 | 5,03723-1 | 295,069                               | 1,4216-5                                   | 4,5736-5                                  | 1,9518-2                                                        |
| 12050                                           | 1,89277                                   | 2,51744   | 5,01741   | 295,069                               | 1,4216                                     | 4,6098                                    | 1,9518                                                          |
| 12100                                           | 1,87791                                   | 2,49767   | 4,99767   | 295,069                               | 1,4216                                     | 4,6463                                    | 1,9518                                                          |
| 12150                                           | 1,86316                                   | 2,47805   | 4,97800   | 295,069                               | 1,4216                                     | 4,6831                                    | 1,9518                                                          |
| 12200                                           | 1,84853                                   | 2,45859   | 4,95842   | 295,069                               | 1,4216                                     | 4,7202                                    | 1,9518                                                          |
| 12250                                           | 1,83401                                   | 2,43928   | 4,93891   | 295,069                               | 1,4216                                     | 4,7575                                    | 1,9518                                                          |
| 12300                                           | 1,81961                                   | 2,42013   | 4,91948   | 295,069                               | 1,4216                                     | 4,7952                                    | 1,9518                                                          |
| 12350                                           | 1,80532                                   | 2,40112   | 4,90012   | 295,069                               | 1,4216                                     | 4,8332                                    | 1,9518                                                          |
| 12400                                           | 1,79114                                   | 2,38226   | 4,88084   | 295,069                               | 1,4216                                     | 4,8714                                    | 1,9518                                                          |
| 12450                                           | 1,77707                                   | 2,36355   | 4,86164   | 295,069                               | 1,4216                                     | 4,9100                                    | 1,9518                                                          |
| 12500                                           | 1,76312-1                                 | 2,34499-1 | 4,84251-1 | 295,069                               | 1,4216-5                                   | 4,9488-5                                  | 1,9518-2                                                        |
| 12550                                           | 1,74927                                   | 2,32658   | 4,82346   | 295,069                               | 1,4216                                     | 4,9880                                    | 1,9518                                                          |
| 12600                                           | 1,73553                                   | 2,30830   | 4,80448   | 295,069                               | 1,4216                                     | 5,0275                                    | 1,9518                                                          |
| 12650                                           | 1,72190                                   | 2,29018   | 4,78558   | 295,069                               | 1,4216                                     | 5,0673                                    | 1,9518                                                          |
| 12700                                           | 1,70838                                   | 2,27219   | 4,76675   | 295,069                               | 1,4216                                     | 5,1074                                    | 1,9518                                                          |
| 12750                                           | 1,69496                                   | 2,25434   | 4,74800   | 295,069                               | 1,4216                                     | 5,1478                                    | 1,9518                                                          |
| 12800                                           | 1,68165                                   | 2,23664   | 4,72931   | 295,069                               | 1,4216                                     | 5,1886                                    | 1,9518                                                          |
| 12850                                           | 1,66845                                   | 2,21908   | 4,71071   | 295,069                               | 1,4216                                     | 5,2297                                    | 1,9518                                                          |
| 12900                                           | 1,65534                                   | 2,20165   | 4,69217   | 295,069                               | 1,4216                                     | 5,2711                                    | 1,9518                                                          |
| 12950                                           | 1,64234                                   | 2,18436   | 4,67371   | 295,069                               | 1,4216                                     | 5,3128                                    | 1,9518                                                          |
| 13000                                           | 1,62945-1                                 | 2,16720-1 | 4,65532-1 | 295,069                               | 1,4216-5                                   | 5,3548-5                                  | 1,9518-2                                                        |
| 13050                                           | 1,61665                                   | 2,15018   | 4,63701   | 295,069                               | 1,4216                                     | 5,3972                                    | 1,9518                                                          |
| 13100                                           | 1,60395                                   | 2,13330   | 4,61876   | 295,069                               | 1,4216                                     | 5,4399                                    | 1,9518                                                          |
| 13150                                           | 1,59136                                   | 2,11654   | 4,60059   | 295,069                               | 1,4216                                     | 5,4830                                    | 1,9518                                                          |
| 13200                                           | 1,57886                                   | 2,09992   | 4,58249   | 295,069                               | 1,4216                                     | 5,5264                                    | 1,9518                                                          |
| 13250                                           | 1,56646                                   | 2,08343   | 4,56446   | 295,069                               | 1,4216                                     | 5,5701                                    | 1,9518                                                          |
| 13300                                           | 1,55416                                   | 2,06707   | 4,54650   | 295,069                               | 1,4216                                     | 5,6142                                    | 1,9518                                                          |
| 13350                                           | 1,54195                                   | 2,05083   | 4,52861   | 295,069                               | 1,4216                                     | 5,6587                                    | 1,9518                                                          |
| 13400                                           | 1,52984                                   | 2,03473   | 4,51080   | 295,069                               | 1,4216                                     | 5,7035                                    | 1,9518                                                          |
| 13450                                           | 1,51783                                   | 2,01875   | 4,49305   | 295,069                               | 1,4216                                     | 5,7486                                    | 1,9518                                                          |
| 13500                                           | 1,50591-1                                 | 2,00289-1 | 4,47537-1 | 295,069                               | 1,4216-5                                   | 5,7941-5                                  | 1,9518-2                                                        |
| 13550                                           | 1,49408                                   | 1,98717   | 4,45776   | 295,069                               | 1,4216                                     | 5,8400                                    | 1,9518                                                          |
| 13600                                           | 1,48235                                   | 1,97156   | 4,44022   | 295,069                               | 1,4216                                     | 5,8862                                    | 1,9518                                                          |
| 13650                                           | 1,47071                                   | 1,95608   | 4,42275   | 295,069                               | 1,4216                                     | 5,9328                                    | 1,9518                                                          |
| 13700                                           | 1,45916                                   | 1,94071   | 4,40535   | 295,069                               | 1,4216                                     | 5,9798                                    | 1,9518                                                          |
| 13750                                           | 1,44770                                   | 1,92547   | 4,38802   | 295,069                               | 1,4216                                     | 6,0271                                    | 1,9518                                                          |
| 13800                                           | 1,43633                                   | 1,91035   | 4,37076   | 295,069                               | 1,4216                                     | 6,0748                                    | 1,9518                                                          |
| 13850                                           | 1,42505                                   | 1,89535   | 4,35356   | 295,069                               | 1,4216                                     | 6,1229                                    | 1,9518                                                          |
| 13900                                           | 1,41385                                   | 1,88046   | 4,33643   | 295,069                               | 1,4216                                     | 6,1714                                    | 1,9518                                                          |
| 13950                                           | 1,40275                                   | 1,86569   | 4,31937   | 295,069                               | 1,4216                                     | 6,2202                                    | 1,9518                                                          |

От 14000 до 15950 м

| Геометри-<br>ческая вы-<br>сота $h$ , м | Величины в функции геометрической высоты |                   |                   |                                |                          |                                         |
|-----------------------------------------|------------------------------------------|-------------------|-------------------|--------------------------------|--------------------------|-----------------------------------------|
|                                         | $\rho/\rho_c$                            | $\sigma/\sigma_c$ | $\sqrt{g/\rho_c}$ | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                         |
|                                         |                                          |                   |                   |                                | динамич.<br>$\mu$ , Па·с | кинематич.<br>$\nu$ , м <sup>2</sup> /с |
| 14000                                   | 1,39850                                  | 1,86004           | 4,31282           | 295,069                        | 1,4216                   | 5,62391                                 |
| 14050                                   | 1,38757                                  | 1,84550           | 4,29593           | 295,069                        | 1,4216                   | 5,2883                                  |
| 14100                                   | 1,37672                                  | 1,83107           | 4,27910           | 295,069                        | 1,4216                   | 6,3378                                  |
| 14150                                   | 1,36595                                  | 1,81675           | 4,26234           | 295,069                        | 1,4216                   | 6,3878                                  |
| 14200                                   | 1,35528                                  | 1,80255           | 4,24564           | 295,069                        | 1,4216                   | 6,4381                                  |
| 14250                                   | 1,34468                                  | 1,78846           | 4,22902           | 295,069                        | 1,4216                   | 6,4888                                  |
| 14300                                   | 1,33417                                  | 1,77447           | 4,21245           | 295,069                        | 1,4216                   | 6,5400                                  |
| 14350                                   | 1,32373                                  | 1,76060           | 4,19595           | 295,069                        | 1,4216                   | 6,5915                                  |
| 14400                                   | 1,31339                                  | 1,74684           | 4,17952           | 295,069                        | 1,4216                   | 6,6434                                  |
| 14450                                   | 1,30312                                  | 1,73318           | 4,16315           | 295,069                        | 1,4216                   | 6,6958                                  |
| 14500                                   | 1,29293                                  | 1,71963           | 4,14681           | 295,069                        | 1,4216                   | 6,7486                                  |
| 14550                                   | 1,28282                                  | 1,70619           | 4,13060           | 295,069                        | 1,4216                   | 6,8017                                  |
| 14600                                   | 1,27279                                  | 1,69285           | 4,11442           | 295,069                        | 1,4216                   | 6,8553                                  |
| 14650                                   | 1,26284                                  | 1,67961           | 4,09831           | 295,069                        | 1,4216                   | 6,9093                                  |
| 14700                                   | 1,25297                                  | 1,66648           | 4,08226           | 295,069                        | 1,4216                   | 6,9638                                  |
| 14750                                   | 1,24318                                  | 1,65346           | 4,06627           | 295,069                        | 1,4216                   | 7,0186                                  |
| 14800                                   | 1,23346                                  | 1,64053           | 4,05035           | 295,069                        | 1,4216                   | 7,0739                                  |
| 14850                                   | 1,22381                                  | 1,62771           | 4,03448           | 295,069                        | 1,4216                   | 7,1297                                  |
| 14900                                   | 1,21425                                  | 1,61498           | 4,01868           | 295,069                        | 1,4216                   | 7,1858                                  |
| 14950                                   | 1,20476                                  | 1,60236           | 4,00295           | 295,069                        | 1,4216                   | 7,2425                                  |
| 15000                                   | 1,19534                                  | 1,58983           | 3,98727           | 295,069                        | 1,4216                   | 7,2995                                  |
| 15050                                   | 1,18600                                  | 1,57741           | 3,97166           | 295,069                        | 1,4216                   | 7,3570                                  |
| 15100                                   | 1,17673                                  | 1,56508           | 3,95610           | 295,069                        | 1,4216                   | 7,4150                                  |
| 15150                                   | 1,16753                                  | 1,55284           | 3,94061           | 295,069                        | 1,4216                   | 7,4734                                  |
| 15200                                   | 1,15840                                  | 1,54070           | 3,92518           | 295,069                        | 1,4216                   | 7,5323                                  |
| 15250                                   | 1,14935                                  | 1,52866           | 3,90981           | 295,069                        | 1,4216                   | 7,5916                                  |
| 15300                                   | 1,14036                                  | 1,51672           | 3,89450           | 295,069                        | 1,4216                   | 7,6514                                  |
| 15350                                   | 1,13145                                  | 1,50486           | 3,87925           | 295,069                        | 1,4216                   | 7,7117                                  |
| 15400                                   | 1,12261                                  | 1,49310           | 3,86406           | 295,069                        | 1,4216                   | 7,7724                                  |
| 15450                                   | 1,11384                                  | 1,48143           | 3,84894           | 295,069                        | 1,4216                   | 7,8336                                  |
| 15500                                   | 1,10513                                  | 1,46985           | 3,83386           | 295,069                        | 1,4216                   | 7,8954                                  |
| 15550                                   | 1,09649                                  | 1,45836           | 3,81885           | 295,069                        | 1,4216                   | 7,9575                                  |
| 15600                                   | 1,08792                                  | 1,44697           | 3,80390           | 295,069                        | 1,4216                   | 8,0202                                  |
| 15650                                   | 1,07942                                  | 1,43566           | 3,78901           | 295,069                        | 1,4216                   | 8,0834                                  |
| 15700                                   | 1,07099                                  | 1,42444           | 3,77417           | 295,069                        | 1,4216                   | 8,1471                                  |
| 15750                                   | 1,06262                                  | 1,41331           | 3,75940           | 295,069                        | 1,4216                   | 8,2112                                  |
| 15800                                   | 1,05431                                  | 1,40226           | 3,74468           | 295,069                        | 1,4216                   | 8,2759                                  |
| 15850                                   | 1,04607                                  | 1,39130           | 3,73002           | 295,069                        | 1,4216                   | 8,3411                                  |
| 15900                                   | 1,03790                                  | 1,38043           | 3,71542           | 295,069                        | 1,4216                   | 8,4068                                  |
| 15950                                   | 1,02979                                  | 1,36965           | 3,70087           | 295,069                        | 1,4216                   | 8,4730                                  |

Продолжение табл. 2

| Геопотенциал<br>абсолютная<br>высота<br>$H$ , м | Величины в функции геопотенциальной высоты |               |                   |                                |                          |                                         |                                                  |
|-------------------------------------------------|--------------------------------------------|---------------|-------------------|--------------------------------|--------------------------|-----------------------------------------|--------------------------------------------------|
|                                                 | $p/p_c$                                    | $\rho/\rho_c$ | $\gamma/\gamma_c$ | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                         | теплопро-<br>водность<br>$\lambda$ ,<br>Вт/(м·К) |
|                                                 |                                            |               |                   |                                | динамич.<br>$\mu$ , Па·с | кинематич.<br>$\nu$ , м <sup>2</sup> /с |                                                  |
| 14000                                           | 1,39173                                    | 1,85104       | 4,30237           | 295,069                        | 1,4216                   | 6,2694                                  | 1,9518                                           |
| 14050                                           | 1,38081                                    | 1,83651       | 4,28545           | 295,069                        | 1,4216                   | 6,3191                                  | 1,9518                                           |
| 14100                                           | 1,36996                                    | 1,82208       | 4,26853           | 295,069                        | 1,4216                   | 6,3691                                  | 1,9518                                           |
| 14150                                           | 1,35920                                    | 1,80777       | 4,25179           | 295,069                        | 1,4216                   | 6,4195                                  | 1,9518                                           |
| 14200                                           | 1,34853                                    | 1,79358       | 4,23506           | 295,069                        | 1,4216                   | 6,4703                                  | 1,9518                                           |
| 14250                                           | 1,33794                                    | 1,77949       | 4,21840           | 295,069                        | 1,4216                   | 6,5215                                  | 1,9518                                           |
| 14300                                           | 1,32743                                    | 1,76552       | 4,20180           | 295,069                        | 1,4216                   | 6,5732                                  | 1,9518                                           |
| 14350                                           | 1,31701                                    | 1,75165       | 4,18527           | 295,069                        | 1,4216                   | 6,6252                                  | 1,9518                                           |
| 14400                                           | 1,30666                                    | 1,73789       | 4,16881           | 295,069                        | 1,4216                   | 6,6776                                  | 1,9518                                           |
| 14450                                           | 1,29640                                    | 1,72425       | 4,15240           | 295,069                        | 1,4216                   | 6,7305                                  | 1,9518                                           |
| 14500                                           | 1,28622                                    | 1,71070       | 4,13607           | 295,069                        | 1,4216                   | 6,7838                                  | 1,9518                                           |
| 14550                                           | 1,27612                                    | 1,69727       | 4,11979           | 295,069                        | 1,4216                   | 6,8375                                  | 1,9518                                           |
| 14600                                           | 1,26610                                    | 1,68394       | 4,10358           | 295,069                        | 1,4216                   | 6,8916                                  | 1,9518                                           |
| 14650                                           | 1,25615                                    | 1,67071       | 4,08744           | 295,069                        | 1,4216                   | 6,9461                                  | 1,9518                                           |
| 14700                                           | 1,24629                                    | 1,65759       | 4,07136           | 295,069                        | 1,4216                   | 7,0011                                  | 1,9518                                           |
| 14750                                           | 1,23650                                    | 1,64458       | 4,05534           | 295,069                        | 1,4216                   | 7,0565                                  | 1,9518                                           |
| 14800                                           | 1,22679                                    | 1,63166       | 4,03938           | 295,069                        | 1,4216                   | 7,1124                                  | 1,9518                                           |
| 14850                                           | 1,21715                                    | 1,61885       | 4,02349           | 295,069                        | 1,4216                   | 7,1687                                  | 1,9518                                           |
| 14900                                           | 1,20760                                    | 1,60613       | 4,00766           | 295,069                        | 1,4216                   | 7,2254                                  | 1,9518                                           |
| 14950                                           | 1,19811                                    | 1,59352       | 3,99189           | 295,069                        | 1,4216                   | 7,2826                                  | 1,9518                                           |
| 15000                                           | 1,18870                                    | 1,58100       | 3,97619           | 295,069                        | 1,4216                   | 7,3403                                  | 1,9518                                           |
| 15050                                           | 1,17937                                    | 1,56859       | 3,96054           | 295,069                        | 1,4216                   | 7,3984                                  | 1,9518                                           |
| 15100                                           | 1,17011                                    | 1,55627       | 3,94496           | 295,069                        | 1,4216                   | 7,4569                                  | 1,9518                                           |
| 15150                                           | 1,16092                                    | 1,54405       | 3,92944           | 295,069                        | 1,4216                   | 7,5160                                  | 1,9518                                           |
| 15200                                           | 1,15180                                    | 1,53192       | 3,91398           | 295,069                        | 1,4216                   | 7,5755                                  | 1,9518                                           |
| 15250                                           | 1,14275                                    | 1,51989       | 3,89858           | 295,069                        | 1,4216                   | 7,6354                                  | 1,9518                                           |
| 15300                                           | 1,13378                                    | 1,50795       | 3,88324           | 295,069                        | 1,4216                   | 7,6959                                  | 1,9518                                           |
| 15350                                           | 1,12487                                    | 1,49611       | 3,86796           | 295,069                        | 1,4216                   | 7,7568                                  | 1,9518                                           |
| 15400                                           | 1,11604                                    | 1,48436       | 3,85274           | 295,069                        | 1,4216                   | 7,8182                                  | 1,9518                                           |
| 15450                                           | 1,10728                                    | 1,47271       | 3,83758           | 295,069                        | 1,4216                   | 7,8801                                  | 1,9518                                           |
| 15500                                           | 1,09858                                    | 1,46114       | 3,82248           | 295,069                        | 1,4216                   | 7,9421                                  | 1,9518                                           |
| 15550                                           | 1,08995                                    | 1,44966       | 3,80745           | 295,069                        | 1,4216                   | 8,0053                                  | 1,9518                                           |
| 15600                                           | 1,08139                                    | 1,43828       | 3,79247           | 295,069                        | 1,4216                   | 8,0687                                  | 1,9518                                           |
| 15650                                           | 1,07290                                    | 1,42698       | 3,77754           | 295,069                        | 1,4216                   | 8,1325                                  | 1,9518                                           |
| 15700                                           | 1,06447                                    | 1,41578       | 3,76268           | 295,069                        | 1,4216                   | 8,1969                                  | 1,9518                                           |
| 15750                                           | 1,05611                                    | 1,40466       | 3,74788           | 295,069                        | 1,4216                   | 8,2618                                  | 1,9518                                           |
| 15800                                           | 1,04782                                    | 1,39363       | 3,73313           | 295,069                        | 1,4216                   | 8,3272                                  | 1,9518                                           |
| 15850                                           | 1,03959                                    | 1,38268       | 3,71844           | 295,069                        | 1,4216                   | 8,3931                                  | 1,9518                                           |
| 15900                                           | 1,03143                                    | 1,37182       | 3,70381           | 295,069                        | 1,4216                   | 8,4595                                  | 1,9518                                           |
| 15950                                           | 1,02333                                    | 1,36105       | 3,68924           | 295,069                        | 1,4216                   | 8,5265                                  | 1,9518                                           |

От 16000 до 17950 м

| Геометрич.<br>высота, м | Величины в функции геометрической высоты |           |           |                                |                          |                                                  |
|-------------------------|------------------------------------------|-----------|-----------|--------------------------------|--------------------------|--------------------------------------------------|
|                         | $\rho/\rho_c$                            | $t/t_c$   | $V/v_c$   | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                                  |
|                         |                                          |           |           |                                | динамич.<br>$\mu$ , Па·с | теплопро-<br>водность<br>$\lambda$ ,<br>Вт/(м·К) |
| 16000                   | 1,02174-1                                | 1,35894-1 | 3,68638-1 | 295,069                        | 1,4216-5                 | 8,5397-5                                         |
| 16050                   | 1,01376                                  | 1,34832   | 3,67195   | 295,069                        | 1,4216                   | 8,6070                                           |
| 16100                   | 1,00584                                  | 1,33779   | 3,65758   | 295,069                        | 1,4216                   | 8,6748                                           |
| 16150                   | 9,97977-2                                | 1,32733   | 3,64326   | 295,069                        | 1,4216                   | 8,7431                                           |
| 16200                   | 9,90179                                  | 1,31695   | 3,62900   | 295,069                        | 1,4216                   | 8,8119                                           |
| 16250                   | 9,82442                                  | 1,30667   | 3,61479   | 295,069                        | 1,4216                   | 8,8813                                           |
| 16300                   | 9,74766                                  | 1,29646   | 3,60064   | 295,069                        | 1,4216                   | 8,9513                                           |
| 16350                   | 9,67149                                  | 1,28633   | 3,58655   | 295,069                        | 1,4216                   | 9,0218                                           |
| 16400                   | 9,59593                                  | 1,27628   | 3,57251   | 295,069                        | 1,4216                   | 9,0928                                           |
| 16450                   | 9,52095                                  | 1,26631   | 3,55853   | 295,069                        | 1,4216                   | 9,1644                                           |
| 16500                   | 9,44657-2                                | 1,25642-1 | 3,54460-1 | 295,069                        | 1,4216-5                 | 9,2366-5                                         |
| 16550                   | 9,37276                                  | 1,24660   | 3,53072   | 295,069                        | 1,4216                   | 9,3093                                           |
| 16600                   | 9,29953                                  | 1,23686   | 3,51690   | 295,069                        | 1,4216                   | 9,3826                                           |
| 16650                   | 9,22688                                  | 1,22720   | 3,50314   | 295,069                        | 1,4216                   | 9,4565                                           |
| 16700                   | 9,15479                                  | 1,21761   | 3,48943   | 295,069                        | 1,4216                   | 9,5310                                           |
| 16750                   | 9,08327                                  | 1,20810   | 3,47577   | 295,069                        | 1,4216                   | 9,6060                                           |
| 16800                   | 9,01231                                  | 1,19866   | 3,46217   | 295,069                        | 1,4216                   | 9,6816                                           |
| 16850                   | 8,94191                                  | 1,18930   | 3,44862   | 295,069                        | 1,4216                   | 9,7579                                           |
| 16900                   | 8,87205                                  | 1,18001   | 3,43512   | 295,069                        | 1,4216                   | 9,8347                                           |
| 16950                   | 8,80274                                  | 1,17079   | 3,42168   | 295,069                        | 1,4216                   | 9,9121                                           |
| 17000                   | 8,73398-2                                | 1,16164-1 | 3,40829-1 | 295,069                        | 1,4216-5                 | 9,9902-5                                         |
| 17050                   | 8,66575                                  | 1,15257   | 3,39495   | 295,069                        | 1,4216                   | 1,0069-4                                         |
| 17100                   | 8,59803                                  | 1,14356   | 3,38166   | 295,069                        | 1,4216                   | 1,0148                                           |
| 17150                   | 8,53089                                  | 1,13463   | 3,36843   | 295,069                        | 1,4216                   | 1,0228                                           |
| 17200                   | 8,46426                                  | 1,12577   | 3,35525   | 295,069                        | 1,4216                   | 1,0309                                           |
| 17250                   | 8,39814                                  | 1,11697   | 3,34212   | 295,069                        | 1,4216                   | 1,0390                                           |
| 17300                   | 8,33254                                  | 1,10825   | 3,32904   | 295,069                        | 1,4216                   | 1,0471                                           |
| 17350                   | 8,26746                                  | 1,09959   | 3,31601   | 295,069                        | 1,4216                   | 1,0554                                           |
| 17400                   | 8,20288                                  | 1,09100   | 3,30303   | 295,069                        | 1,4216                   | 1,0637                                           |
| 17450                   | 8,13881                                  | 1,08248   | 3,29011   | 295,069                        | 1,4216                   | 1,0721                                           |
| 17500                   | 8,07524-2                                | 1,07403-1 | 3,27724-1 | 295,069                        | 1,4216-5                 | 1,0805-4                                         |
| 17550                   | 8,01217                                  | 1,06564   | 3,26441   | 295,069                        | 1,4216                   | 1,0890                                           |
| 17600                   | 7,94959                                  | 1,05731   | 3,25164   | 295,069                        | 1,4216                   | 1,0976                                           |
| 17650                   | 7,88750                                  | 1,04906   | 3,23892   | 295,069                        | 1,4216                   | 1,1062                                           |
| 17700                   | 7,82590                                  | 1,04086   | 3,22624   | 295,069                        | 1,4216                   | 1,1149                                           |
| 17750                   | 7,76478                                  | 1,03273   | 3,21362   | 295,069                        | 1,4216                   | 1,1237                                           |
| 17800                   | 7,70414                                  | 1,02467   | 3,20105   | 295,069                        | 1,4216                   | 1,1326                                           |
| 17850                   | 7,64397                                  | 1,01667   | 3,18852   | 295,069                        | 1,4216                   | 1,1415                                           |
| 17900                   | 7,58428                                  | 1,00873   | 3,17605   | 295,069                        | 1,4216                   | 1,1505                                           |
| 17950                   | 7,52509                                  | 1,00085   | 3,16362   | 295,069                        | 1,4216                   | 1,1595                                           |

Продолжение табл. 2

| Геотермическая вы-<br>сота $H$ , м | Величины в функции геотермической высоты |               |                      |                                |                         |                                         |
|------------------------------------|------------------------------------------|---------------|----------------------|--------------------------------|-------------------------|-----------------------------------------|
|                                    | $\rho/\rho_c$                            | $\rho/\rho_c$ | $\sqrt{\rho/\rho_c}$ | скорость<br>звука<br>$a$ , м/с | вязкость                |                                         |
|                                    |                                          |               |                      |                                | динамич.<br>$\mu$ , П-с | кинематич.<br>$\nu$ , м <sup>2</sup> /с |
| 16000                              | 1,01529-1                                | 1,35063-1     | 3,67473-1            | 295,069                        | 1,4216-5                | 8,5940-5                                |
| 16050                              | 1,00732                                  | 1,33976       | 3,66027              | 295,069                        | 1,4216                  | 8,6620                                  |
| 16100                              | 9,99406-2                                | 1,32923       | 3,64587              | 295,069                        | 1,4216                  | 8,7306                                  |
| 16150                              | 9,91557                                  | 1,31880       | 3,63152              | 295,069                        | 1,4216                  | 8,7997                                  |
| 16200                              | 9,83770                                  | 1,30844       | 3,61723              | 295,069                        | 1,4216                  | 8,8694                                  |
| 16250                              | 9,76044                                  | 1,29816       | 3,60300              | 295,069                        | 1,4216                  | 8,9396                                  |
| 16300                              | 9,68378                                  | 1,28797       | 3,58883              | 295,069                        | 1,4216                  | 9,0103                                  |
| 16350                              | 9,60773                                  | 1,27785       | 3,57471              | 295,069                        | 1,4216                  | 9,0816                                  |
| 16400                              | 9,53228                                  | 1,26782       | 3,56064              | 295,069                        | 1,4216                  | 9,1535                                  |
| 16450                              | 9,45742                                  | 1,25786       | 3,54663              | 295,069                        | 1,4216                  | 9,2260                                  |
| 16500                              | 9,38315-2                                | 1,24798-1     | 3,53268-1            | 295,069                        | 1,4216-5                | 9,2990-5                                |
| 16550                              | 9,30946                                  | 1,23818       | 3,51878              | 295,069                        | 1,4216                  | 9,3726                                  |
| 16600                              | 9,22635                                  | 1,22846       | 3,50493              | 295,069                        | 1,4216                  | 9,4468                                  |
| 16650                              | 9,14381                                  | 1,21881       | 3,49115              | 295,069                        | 1,4216                  | 9,5216                                  |
| 16700                              | 9,06184                                  | 1,20924       | 3,47741              | 295,069                        | 1,4216                  | 9,5970                                  |
| 16750                              | 8,98044                                  | 1,19974       | 3,46373              | 295,069                        | 1,4216                  | 9,6729                                  |
| 16800                              | 8,94960                                  | 1,19032       | 3,45010              | 295,069                        | 1,4216                  | 9,7495                                  |
| 16850                              | 8,87931                                  | 1,18097       | 3,43652              | 295,069                        | 1,4216                  | 9,8267                                  |
| 16900                              | 8,80958                                  | 1,17170       | 3,42300              | 295,069                        | 1,4216                  | 9,9044                                  |
| 16950                              | 8,74039                                  | 1,16249       | 3,40954              | 295,069                        | 1,4216                  | 9,9828                                  |
| 17000                              | 8,67175-2                                | 1,15336-1     | 3,39612-1            | 295,069                        | 1,4216-5                | 1,0062-4                                |
| 17050                              | 8,60365                                  | 1,14431       | 3,38276              | 295,069                        | 1,4216                  | 1,0142                                  |
| 17100                              | 8,53608                                  | 1,13532       | 3,36945              | 295,069                        | 1,4216                  | 1,0222                                  |
| 17150                              | 8,46904                                  | 1,12640       | 3,35619              | 295,069                        | 1,4216                  | 1,0303                                  |
| 17200                              | 8,40253                                  | 1,11756       | 3,34299              | 295,069                        | 1,4216                  | 1,0384                                  |
| 17250                              | 8,33654                                  | 1,10878       | 3,32984              | 295,069                        | 1,4216                  | 1,0466                                  |
| 17300                              | 8,27107                                  | 1,10007       | 3,31674              | 295,069                        | 1,4216                  | 1,0549                                  |
| 17350                              | 8,20612                                  | 1,09143       | 3,30369              | 295,069                        | 1,4216                  | 1,0633                                  |
| 17400                              | 8,14167                                  | 1,08286       | 3,29069              | 295,069                        | 1,4216                  | 1,0717                                  |
| 17450                              | 8,07773                                  | 1,07436       | 3,27774              | 295,069                        | 1,4216                  | 1,0802                                  |
| 17500                              | 8,01429-2                                | 1,06592-1     | 3,26484-1            | 295,069                        | 1,4216-5                | 1,0887-4                                |
| 17550                              | 7,95135                                  | 1,05755       | 3,25200              | 295,069                        | 1,4216                  | 1,0973                                  |
| 17600                              | 7,88891                                  | 1,04924       | 3,23920              | 295,069                        | 1,4216                  | 1,1060                                  |
| 17650                              | 7,82695                                  | 1,04100       | 3,22646              | 295,069                        | 1,4216                  | 1,1148                                  |
| 17700                              | 7,76548                                  | 1,03283       | 3,21377              | 295,069                        | 1,4216                  | 1,1236                                  |
| 17750                              | 7,70450                                  | 1,02472       | 3,20112              | 295,069                        | 1,4216                  | 1,1325                                  |
| 17800                              | 7,64399                                  | 1,01667       | 3,18853              | 295,069                        | 1,4216                  | 1,1415                                  |
| 17850                              | 7,58396                                  | 1,00869       | 3,17598              | 295,069                        | 1,4216                  | 1,1505                                  |
| 17900                              | 7,52440                                  | 1,00076       | 3,16349              | 295,069                        | 1,4216                  | 1,1596                                  |
| 17950                              | 7,46531                                  | 9,92905-2     | 3,15104              | 295,069                        | 1,4216                  | 1,1688                                  |

От 18000 до 19950 м

| Геометри-<br>ческая вы-<br>сота $H$ , м | Величины и функции геометрической высоты |               |                      |                                |                                      |                                                  |
|-----------------------------------------|------------------------------------------|---------------|----------------------|--------------------------------|--------------------------------------|--------------------------------------------------|
|                                         | $\rho/\rho_c$                            | $\rho/\rho_c$ | $\sqrt{\rho/\rho_c}$ | скорость<br>звука<br>$a$ , м/с | вязкость<br>динамич.<br>$\mu$ , Па·с | теплопро-<br>водность<br>$\lambda$ ,<br>Вт/(м·К) |
| 18000                                   | 7,46628—2                                | 9,93034—2     | 3,15124—1            | 295,069                        | 1,4216—5                             | 1,1686—4                                         |
| 18050                                   | 7,40797                                  | 9,85279       | 3,13892              | 295,069                        | 1,4216                               | 1,1778                                           |
| 18100                                   | 7,35012                                  | 9,77585       | 3,12664              | 295,069                        | 1,4216                               | 1,1871                                           |
| 18150                                   | 7,29273                                  | 9,69951       | 3,11440              | 295,069                        | 1,4216                               | 1,1965                                           |
| 18200                                   | 7,23578                                  | 9,62377       | 3,10222              | 295,069                        | 1,4216                               | 1,2059                                           |
| 18250                                   | 7,17928                                  | 9,54862       | 3,09008              | 295,069                        | 1,4216                               | 1,2154                                           |
| 18300                                   | 7,12322                                  | 9,47406       | 3,07800              | 295,069                        | 1,4216                               | 1,2249                                           |
| 18350                                   | 7,06759                                  | 9,40008       | 3,06596              | 295,069                        | 1,4216                               | 1,2346                                           |
| 18400                                   | 7,01241                                  | 9,32668       | 3,05396              | 295,069                        | 1,4216                               | 1,2443                                           |
| 18450                                   | 6,95765                                  | 9,25385       | 3,04201              | 295,069                        | 1,4216                               | 1,2541                                           |
| 18500                                   | 6,90333—2                                | 9,18160—2     | 3,03012—1            | 295,069                        | 1,4216—5                             | 1,2639—4                                         |
| 18550                                   | 6,84943                                  | 9,10991       | 3,01826              | 295,069                        | 1,4216                               | 1,2739                                           |
| 18600                                   | 6,79595                                  | 9,03878       | 3,00646              | 295,069                        | 1,4216                               | 1,2839                                           |
| 18650                                   | 6,74289                                  | 8,96821       | 2,99470              | 295,069                        | 1,4216                               | 1,2940                                           |
| 18700                                   | 6,69024                                  | 8,89819       | 2,98298              | 295,069                        | 1,4216                               | 1,3042                                           |
| 18750                                   | 6,63800                                  | 8,82871       | 2,97132              | 295,069                        | 1,4216                               | 1,3145                                           |
| 18800                                   | 6,58618                                  | 8,75978       | 2,95969              | 295,069                        | 1,4216                               | 1,3248                                           |
| 18850                                   | 6,53476                                  | 8,69139       | 2,94812              | 295,069                        | 1,4216                               | 1,3352                                           |
| 18900                                   | 6,48374                                  | 8,62354       | 2,93659              | 295,069                        | 1,4216                               | 1,3457                                           |
| 18950                                   | 6,43312                                  | 8,55621       | 2,92510              | 295,069                        | 1,4216                               | 1,3563                                           |
| 19000                                   | 6,38290—2                                | 8,48942—2     | 2,91366—1            | 295,069                        | 1,4216—5                             | 1,3670—4                                         |
| 19050                                   | 6,33307                                  | 8,42314       | 2,90226              | 295,069                        | 1,4216                               | 1,3778                                           |
| 19100                                   | 6,28363                                  | 8,35738       | 2,89091              | 295,069                        | 1,4216                               | 1,3886                                           |
| 19150                                   | 6,23457                                  | 8,29214       | 2,87961              | 295,069                        | 1,4216                               | 1,3995                                           |
| 19200                                   | 6,18590                                  | 8,22741       | 2,86835              | 295,069                        | 1,4216                               | 1,4105                                           |
| 19250                                   | 6,13762                                  | 8,16318       | 2,85713              | 295,069                        | 1,4216                               | 1,4216                                           |
| 19300                                   | 6,08970                                  | 8,09946       | 2,84596              | 295,069                        | 1,4216                               | 1,4328                                           |
| 19350                                   | 6,04217                                  | 8,03624       | 2,83483              | 295,069                        | 1,4216                               | 1,4441                                           |
| 19400                                   | 5,99500                                  | 7,97350       | 2,82374              | 295,069                        | 1,4216                               | 1,4554                                           |
| 19450                                   | 5,94821                                  | 7,91127       | 2,81270              | 295,069                        | 1,4216                               | 1,4669                                           |
| 19500                                   | 5,90178—2                                | 7,84951—2     | 2,80170—1            | 295,069                        | 1,4216—5                             | 1,4784—4                                         |
| 19550                                   | 5,85571                                  | 7,78824       | 2,79074              | 295,069                        | 1,4216                               | 1,4901                                           |
| 19600                                   | 5,81000                                  | 7,72745       | 2,77983              | 295,069                        | 1,4216                               | 1,5018                                           |
| 19650                                   | 5,76465                                  | 7,66714       | 2,76896              | 295,069                        | 1,4216                               | 1,5136                                           |
| 19700                                   | 5,71966                                  | 7,60729       | 2,75813              | 295,069                        | 1,4216                               | 1,5255                                           |
| 19750                                   | 5,67502                                  | 7,54792       | 2,74735              | 295,069                        | 1,4216                               | 1,5375                                           |
| 19800                                   | 5,63072                                  | 7,48901       | 2,73660              | 295,069                        | 1,4216                               | 1,5496                                           |
| 19850                                   | 5,58678                                  | 7,43055       | 2,72590              | 295,069                        | 1,4216                               | 1,5618                                           |
| 19900                                   | 5,54317                                  | 7,37256       | 2,71525              | 295,069                        | 1,4216                               | 1,5741                                           |
| 19950                                   | 5,49991                                  | 7,31502       | 2,70463              | 295,069                        | 1,4216                               | 1,5865                                           |

Продолжение табл. 2

| Геотермическая<br>глубина вы-<br>сота $H$ , м | Величины в функции геотермической высоты |               |                   |                                |                         |                                         |
|-----------------------------------------------|------------------------------------------|---------------|-------------------|--------------------------------|-------------------------|-----------------------------------------|
|                                               | $\rho/\rho_c$                            | $\rho/\rho_c$ | $\gamma/\gamma_c$ | скорость<br>звука<br>$a$ , м/с | вязкость                |                                         |
|                                               |                                          |               |                   |                                | динамич.<br>$\mu$ , П·с | кинематич.<br>$\nu$ , м <sup>2</sup> /с |
| 18000                                         | 7,40668-2                                | 9,85107-2     | 3,13864-1         | 295,069                        | 1,4216-5                | 1,1780-4                                |
| 18050                                         | 7,34851                                  | 9,77371       | 3,12629           | 295,069                        | 1,4216                  | 1,1874                                  |
| 18100                                         | 7,29080                                  | 9,69695       | 3,11399           | 295,069                        | 1,4216                  | 1,1968                                  |
| 18150                                         | 7,23354                                  | 9,62080       | 3,10174           | 295,069                        | 1,4216                  | 1,2062                                  |
| 18200                                         | 7,17673                                  | 9,54524       | 3,08954           | 295,069                        | 1,4216                  | 1,2158                                  |
| 18250                                         | 7,12037                                  | 9,47028       | 3,07738           | 295,069                        | 1,4216                  | 1,2254                                  |
| 18300                                         | 7,06445                                  | 9,39590       | 3,06527           | 295,069                        | 1,4216                  | 1,2351                                  |
| 18350                                         | 7,00897                                  | 9,32211       | 3,05321           | 295,069                        | 1,4216                  | 1,2449                                  |
| 18400                                         | 6,95393                                  | 9,24890       | 3,04120           | 295,069                        | 1,4216                  | 1,2547                                  |
| 18450                                         | 6,89932                                  | 9,17627       | 3,02924           | 295,069                        | 1,4216                  | 1,2647                                  |
| 18500                                         | 6,84513-2                                | 9,10420-2     | 3,01732-1         | 295,069                        | 1,4216-5                | 1,2747-4                                |
| 18550                                         | 6,79138                                  | 9,03270       | 3,00545           | 295,069                        | 1,4216                  | 1,2848                                  |
| 18600                                         | 6,73804                                  | 8,96176       | 2,99362           | 295,069                        | 1,4216                  | 1,2949                                  |
| 18650                                         | 6,68512                                  | 8,89138       | 2,98184           | 295,069                        | 1,4216                  | 1,3052                                  |
| 18700                                         | 6,63262                                  | 8,82156       | 2,97011           | 295,069                        | 1,4216                  | 1,3155                                  |
| 18750                                         | 6,58053                                  | 8,75228       | 2,95842           | 295,069                        | 1,4216                  | 1,3259                                  |
| 18800                                         | 6,52885                                  | 8,68354       | 2,94678           | 295,069                        | 1,4216                  | 1,3364                                  |
| 18850                                         | 6,47758                                  | 8,61535       | 2,93519           | 295,069                        | 1,4216                  | 1,3470                                  |
| 18900                                         | 6,42671                                  | 8,54769       | 2,92364           | 295,069                        | 1,4216                  | 1,3577                                  |
| 18950                                         | 6,37624                                  | 8,48056       | 2,91214           | 295,069                        | 1,4216                  | 1,3684                                  |
| 19000                                         | 6,32616-2                                | 8,41396-2     | 2,90068-1         | 295,069                        | 1,4216-5                | 1,3793-4                                |
| 19050                                         | 6,27648                                  | 8,34788       | 2,88927           | 295,069                        | 1,4216                  | 1,3902                                  |
| 19100                                         | 6,22719                                  | 8,28232       | 2,87790           | 295,069                        | 1,4216                  | 1,4012                                  |
| 19150                                         | 6,17828                                  | 8,21727       | 2,86658           | 295,069                        | 1,4216                  | 1,4123                                  |
| 19200                                         | 6,12976                                  | 8,15274       | 2,85530           | 295,069                        | 1,4216                  | 1,4234                                  |
| 19250                                         | 6,08162                                  | 8,08871       | 2,84407           | 295,069                        | 1,4216                  | 1,4347                                  |
| 19300                                         | 6,03386                                  | 8,02519       | 2,83288           | 295,069                        | 1,4216                  | 1,4461                                  |
| 19350                                         | 5,98648                                  | 7,96216       | 2,82173           | 295,069                        | 1,4216                  | 1,4575                                  |
| 19400                                         | 5,93946                                  | 7,89963       | 2,81063           | 295,069                        | 1,4216                  | 1,4691                                  |
| 19450                                         | 5,89281                                  | 7,83759       | 2,79957           | 295,069                        | 1,4216                  | 1,4807                                  |
| 19500                                         | 5,84654-2                                | 7,77604-2     | 2,78856-1         | 295,069                        | 1,4216-5                | 1,4924-4                                |
| 19550                                         | 5,80062                                  | 7,71497       | 2,77758           | 295,069                        | 1,4216                  | 1,5042                                  |
| 19600                                         | 5,75507                                  | 7,65438       | 2,76666           | 295,069                        | 1,4216                  | 1,5161                                  |
| 19650                                         | 5,70987                                  | 7,59427       | 2,75577           | 295,069                        | 1,4216                  | 1,5281                                  |
| 19700                                         | 5,66503                                  | 7,53463       | 2,74493           | 295,069                        | 1,4216                  | 1,5402                                  |
| 19750                                         | 5,62054                                  | 7,47546       | 2,73413           | 295,069                        | 1,4216                  | 1,5524                                  |
| 19800                                         | 5,57640                                  | 7,41675       | 2,72337           | 295,069                        | 1,4216                  | 1,5647                                  |
| 19850                                         | 5,53260                                  | 7,35850       | 2,71266           | 295,069                        | 1,4216                  | 1,5771                                  |
| 19900                                         | 5,48915                                  | 7,30071       | 2,70198           | 295,069                        | 1,4216                  | 1,5896                                  |
| 19950                                         | 5,44605                                  | 7,24338       | 2,69135           | 295,069                        | 1,4216                  | 1,6022                                  |



От 20000 до 21950 м

| Геометри-<br>ческая вы-<br>сота $h$ , м | Величины в функции геометрической высоты |               |                      |                                |                          |                                         |                                                  |
|-----------------------------------------|------------------------------------------|---------------|----------------------|--------------------------------|--------------------------|-----------------------------------------|--------------------------------------------------|
|                                         | $p/p_c$                                  | $\rho/\rho_c$ | $\sqrt{\rho/\rho_c}$ | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                         | теплопро-<br>водность<br>$\lambda$ ,<br>Вт/(м·К) |
|                                         |                                          |               |                      |                                | динамич.<br>$\mu$ , Па·с | кинематич.<br>$\nu$ , м <sup>2</sup> /с |                                                  |
| 20000                                   | 5,45899                                  | 2,725793      | 2,69405              | 295,069                        | 1,4216                   | 1,5989                                  | 1,9518                                           |
| 20050                                   | 5,41440                                  | 2,720129      | 2,68352              | 295,069                        | 1,4216                   | 1,6115                                  | 1,9518                                           |
| 20100                                   | 5,37215                                  | 2,714388      | 2,67280              | 295,094                        | 1,4218                   | 1,6247                                  | 1,9521                                           |
| 20150                                   | 5,33023                                  | 2,708652      | 2,66205              | 295,128                        | 1,4221                   | 1,6382                                  | 1,9525                                           |
| 20200                                   | 5,28865                                  | 2,702963      | 2,65135              | 295,162                        | 1,4224                   | 1,6517                                  | 1,9529                                           |
| 20250                                   | 5,24741                                  | 2,697322      | 2,64069              | 295,196                        | 1,4226                   | 1,6654                                  | 1,9533                                           |
| 20300                                   | 5,20650                                  | 2,691727      | 2,63007              | 295,230                        | 1,4229                   | 1,6792                                  | 1,9538                                           |
| 20350                                   | 5,16592                                  | 2,686178      | 2,61950              | 295,264                        | 1,4232                   | 1,6931                                  | 1,9542                                           |
| 20400                                   | 5,12567                                  | 2,680675      | 2,60897              | 295,297                        | 1,4235                   | 1,7071                                  | 1,9546                                           |
| 20450                                   | 5,08574                                  | 2,675218      | 2,59850              | 295,331                        | 1,4237                   | 1,7213                                  | 1,9550                                           |
| 20500                                   | 5,04612                                  | 2,669805      | 2,58806              | 295,365                        | 1,4240                   | 1,7355                                  | 1,9554                                           |
| 20550                                   | 5,00683                                  | 2,664438      | 2,57767              | 295,399                        | 1,4243                   | 1,7499                                  | 1,9558                                           |
| 20600                                   | 4,96786                                  | 2,659114      | 2,56732              | 295,433                        | 1,4245                   | 1,7643                                  | 1,9563                                           |
| 20650                                   | 4,92919                                  | 2,653835      | 2,55702              | 295,466                        | 1,4248                   | 1,7789                                  | 1,9567                                           |
| 20700                                   | 4,89083                                  | 2,648599      | 2,54676              | 295,500                        | 1,4251                   | 1,7936                                  | 1,9571                                           |
| 20750                                   | 4,85279                                  | 2,643406      | 2,53655              | 295,534                        | 1,4254                   | 1,8084                                  | 1,9575                                           |
| 20800                                   | 4,81505                                  | 2,638257      | 2,52637              | 295,568                        | 1,4256                   | 1,8234                                  | 1,9579                                           |
| 20850                                   | 4,77761                                  | 2,633149      | 2,51625              | 295,601                        | 1,4259                   | 1,8384                                  | 1,9583                                           |
| 20900                                   | 4,74046                                  | 2,628084      | 2,50616              | 295,635                        | 1,4262                   | 1,8536                                  | 1,9588                                           |
| 20950                                   | 4,70363                                  | 2,623061      | 2,49612              | 295,669                        | 1,4265                   | 1,8689                                  | 1,9592                                           |
| 21000                                   | 4,66708                                  | 2,618078      | 2,48612              | 295,703                        | 1,4267                   | 1,8843                                  | 1,9596                                           |
| 21050                                   | 4,63083                                  | 2,613137      | 2,47616              | 295,736                        | 1,4270                   | 1,8999                                  | 1,9600                                           |
| 21100                                   | 4,59487                                  | 2,608237      | 2,46625              | 295,770                        | 1,4273                   | 1,9156                                  | 1,9604                                           |
| 21150                                   | 4,55919                                  | 2,603377      | 2,45637              | 295,804                        | 1,4275                   | 1,9314                                  | 1,9609                                           |
| 21200                                   | 4,52381                                  | 2,598557      | 2,44654              | 295,838                        | 1,4278                   | 1,9473                                  | 1,9613                                           |
| 21250                                   | 4,48870                                  | 2,593777      | 2,43675              | 295,871                        | 1,4281                   | 1,9633                                  | 1,9617                                           |
| 21300                                   | 4,45387                                  | 2,589035      | 2,42700              | 295,905                        | 1,4284                   | 1,9795                                  | 1,9621                                           |
| 21350                                   | 4,41933                                  | 2,584333      | 2,41730              | 295,939                        | 1,4286                   | 1,9958                                  | 1,9625                                           |
| 21400                                   | 4,38505                                  | 2,579670      | 2,40763              | 295,973                        | 1,4289                   | 2,0123                                  | 1,9630                                           |
| 21450                                   | 4,35106                                  | 2,575045      | 2,39801              | 296,006                        | 1,4292                   | 2,0288                                  | 1,9634                                           |
| 21500                                   | 4,31734                                  | 2,570458      | 2,38843              | 296,040                        | 1,4294                   | 2,0455                                  | 1,9638                                           |
| 21550                                   | 4,28388                                  | 2,565909      | 2,37888              | 296,074                        | 1,4297                   | 2,0624                                  | 1,9642                                           |
| 21600                                   | 4,25069                                  | 2,561397      | 2,36938              | 296,107                        | 1,4300                   | 2,0793                                  | 1,9646                                           |
| 21650                                   | 4,21777                                  | 2,556922      | 2,35992              | 296,141                        | 1,4303                   | 2,0965                                  | 1,9650                                           |
| 21700                                   | 4,18511                                  | 2,552483      | 2,35050              | 296,175                        | 1,4305                   | 2,1137                                  | 1,9655                                           |
| 21750                                   | 4,15271                                  | 2,548082      | 2,34111              | 296,209                        | 1,4308                   | 2,1311                                  | 1,9659                                           |
| 21800                                   | 4,12057                                  | 2,543716      | 2,33177              | 296,242                        | 1,4311                   | 2,1486                                  | 1,9663                                           |
| 21850                                   | 4,08869                                  | 2,539386      | 2,32247              | 296,276                        | 1,4314                   | 2,1663                                  | 1,9667                                           |
| 21900                                   | 4,05706                                  | 2,535092      | 2,31321              | 296,310                        | 1,4316                   | 2,1841                                  | 1,9671                                           |
| 21950                                   | 4,02568                                  | 2,530833      | 2,30398              | 296,343                        | 1,4319                   | 2,2020                                  | 1,9676                                           |

| Геопотенци-<br>альная высо-<br>та $H$ , м | Величины в функции геопотенциальной высоты |               |                   |                                |                          |                                         |                                                  |
|-------------------------------------------|--------------------------------------------|---------------|-------------------|--------------------------------|--------------------------|-----------------------------------------|--------------------------------------------------|
|                                           | $p/p_c$                                    | $\rho/\rho_c$ | $\sqrt{p/\rho_c}$ | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                         | теплопро-<br>водность<br>$\lambda$ ,<br>Вт/(м·К) |
|                                           |                                            |               |                   |                                | динамич.<br>$\mu$ , Па·с | кинематич.<br>$\nu$ , м <sup>2</sup> /с |                                                  |
| 20000                                     | 5,40328—2                                  | 7,18649—2     | 2,68076—1         | 295,069                        | 1,4216—5                 | 1,6148—4                                | 1,9518—2                                         |
| 20050                                     | 5,36384                                    | 7,12841       | 2,66991           | 295,104                        | 1,4219                   | 1,6283                                  | 1,9522                                           |
| 20100                                     | 5,31876                                    | 7,07082       | 2,65910           | 295,138                        | 1,4222                   | 1,6419                                  | 1,9526                                           |
| 20150                                     | 5,27701                                    | 7,01370       | 2,64834           | 295,172                        | 1,4224                   | 1,6556                                  | 1,9530                                           |
| 20200                                     | 5,23560                                    | 6,95706       | 2,63762           | 295,206                        | 1,4227                   | 1,6694                                  | 1,9535                                           |
| 20250                                     | 5,19453                                    | 6,90089       | 2,62695           | 295,240                        | 1,4230                   | 1,6833                                  | 1,9539                                           |
| 20300                                     | 5,15378                                    | 6,84518       | 2,61633           | 295,274                        | 1,4233                   | 1,6973                                  | 1,9543                                           |
| 20350                                     | 5,11337                                    | 6,78994       | 2,60575           | 295,308                        | 1,4235                   | 1,7115                                  | 1,9547                                           |
| 20400                                     | 5,07328                                    | 6,73516       | 2,59522           | 295,342                        | 1,4238                   | 1,7257                                  | 1,9551                                           |
| 20450                                     | 5,03352                                    | 6,68083       | 2,58473           | 295,376                        | 1,4241                   | 1,7401                                  | 1,9556                                           |
| 20500                                     | 4,99407—2                                  | 6,62695—2     | 2,57429—1         | 295,410                        | 1,4244—5                 | 1,7546—4                                | 1,9560—2                                         |
| 20550                                     | 4,95495                                    | 6,57352       | 2,56389           | 295,444                        | 1,4246                   | 1,7692                                  | 1,9564                                           |
| 20600                                     | 4,91613                                    | 6,52053       | 2,55353           | 295,478                        | 1,4249                   | 1,7839                                  | 1,9568                                           |
| 20650                                     | 4,87764                                    | 6,46797       | 2,54322           | 295,512                        | 1,4252                   | 1,7987                                  | 1,9572                                           |
| 20700                                     | 4,83945                                    | 6,41586       | 2,53295           | 295,546                        | 1,4255                   | 1,8137                                  | 1,9577                                           |
| 20750                                     | 4,80157                                    | 6,36418       | 2,52273           | 295,580                        | 1,4257                   | 1,8288                                  | 1,9581                                           |
| 20800                                     | 4,76400                                    | 6,31292       | 2,51255           | 295,614                        | 1,4260                   | 1,8440                                  | 1,9585                                           |
| 20850                                     | 4,72672                                    | 6,26209       | 2,50242           | 295,648                        | 1,4263                   | 1,8593                                  | 1,9589                                           |
| 20900                                     | 4,68975                                    | 6,21168       | 2,49232           | 295,682                        | 1,4266                   | 1,8747                                  | 1,9594                                           |
| 20950                                     | 4,65307                                    | 6,16169       | 2,48227           | 295,716                        | 1,4268                   | 1,8903                                  | 1,9598                                           |
| 21000                                     | 4,61670—2                                  | 6,11211—2     | 2,47227—1         | 295,750                        | 1,4271—5                 | 1,9060—4                                | 1,9602—2                                         |
| 21050                                     | 4,58061                                    | 6,06294       | 2,46230           | 295,784                        | 1,4274                   | 1,9219                                  | 1,9606                                           |
| 21100                                     | 4,54481                                    | 6,01418       | 2,45238           | 295,818                        | 1,4277                   | 1,9378                                  | 1,9610                                           |
| 21150                                     | 4,50930                                    | 5,96582       | 2,44250           | 295,852                        | 1,4279                   | 1,9539                                  | 1,9615                                           |
| 21200                                     | 4,47408                                    | 5,91786       | 2,43266           | 295,886                        | 1,4282                   | 1,9701                                  | 1,9619                                           |
| 21250                                     | 4,43914                                    | 5,87030       | 2,42287           | 295,920                        | 1,4285                   | 1,9864                                  | 1,9623                                           |
| 21300                                     | 4,40448                                    | 5,82313       | 2,41312           | 295,953                        | 1,4287                   | 2,0029                                  | 1,9627                                           |
| 21350                                     | 4,37010                                    | 5,77635       | 2,40340           | 295,987                        | 1,4290                   | 2,0195                                  | 1,9631                                           |
| 21400                                     | 4,33600                                    | 5,72996       | 2,39373           | 296,021                        | 1,4293                   | 2,0363                                  | 1,9636                                           |
| 21450                                     | 4,30217                                    | 5,68395       | 2,38410           | 296,055                        | 1,4296                   | 2,0531                                  | 1,9640                                           |
| 21500                                     | 4,26861—2                                  | 5,63832—2     | 2,37451—1         | 296,089                        | 1,4298—5                 | 2,0702—4                                | 1,9644—2                                         |
| 21550                                     | 4,23532                                    | 5,59306       | 2,36497           | 296,123                        | 1,4301                   | 2,0873                                  | 1,9648                                           |
| 21600                                     | 4,20229                                    | 5,54818       | 2,35546           | 296,157                        | 1,4304                   | 2,1046                                  | 1,9652                                           |
| 21650                                     | 4,16954                                    | 5,50367       | 2,34599           | 296,191                        | 1,4307                   | 2,1220                                  | 1,9657                                           |
| 21700                                     | 4,13704                                    | 5,45953       | 2,33656           | 296,225                        | 1,4309                   | 2,1396                                  | 1,9661                                           |
| 21750                                     | 4,10481                                    | 5,41575       | 2,32718           | 296,259                        | 1,4312                   | 2,1573                                  | 1,9665                                           |
| 21800                                     | 4,07283                                    | 5,37233       | 2,31783           | 296,293                        | 1,4315                   | 2,1751                                  | 1,9669                                           |
| 21850                                     | 4,04111                                    | 5,32927       | 2,30852           | 296,327                        | 1,4318                   | 2,1931                                  | 1,9673                                           |
| 21900                                     | 4,00965                                    | 5,28657       | 2,29925           | 296,361                        | 1,4320                   | 2,2113                                  | 1,9678                                           |
| 21950                                     | 3,97843                                    | 5,24421       | 2,29003           | 296,394                        | 1,4323                   | 2,2296                                  | 1,9682                                           |

От 22000 до 23950 м

| Геометри-<br>ческая вы-<br>сота $h$ , м | Величины в функции геометрической высоты |                   |                |                                |                          |                                                  |
|-----------------------------------------|------------------------------------------|-------------------|----------------|--------------------------------|--------------------------|--------------------------------------------------|
|                                         | $\rho/\rho_c$                            | $\sigma/\sigma_c$ | $\sqrt{g/h_c}$ | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                                  |
|                                         |                                          |                   |                |                                | динамич.<br>$\mu$ , Па·с | теплопро-<br>водность<br>$\lambda$ ,<br>Вт/(м·К) |
| 22000                                   | 3,99456-2                                | 5,26609-2         | 2,29480-1      | 296,377                        | 1,4322-5                 | 2,2201-4                                         |
| 22050                                   | 3,96368                                  | 5,22420           | 2,28565        | 296,411                        | 1,4324                   | 2,2383                                           |
| 22100                                   | 3,93304                                  | 5,18264           | 2,27654        | 296,444                        | 1,4327                   | 2,2567                                           |
| 22150                                   | 3,90266                                  | 5,14143           | 2,26747        | 296,478                        | 1,4330                   | 2,2752                                           |
| 22200                                   | 3,87251                                  | 5,10056           | 2,25844        | 296,512                        | 1,4333                   | 2,2939                                           |
| 22250                                   | 3,84200                                  | 5,06002           | 2,24945        | 296,545                        | 1,4335                   | 2,3127                                           |
| 22300                                   | 3,81293                                  | 5,01981           | 2,24049        | 296,579                        | 1,4338                   | 2,3317                                           |
| 22350                                   | 3,78350                                  | 4,97994           | 2,23158        | 296,612                        | 1,4341                   | 2,3508                                           |
| 22400                                   | 3,75430                                  | 4,94038           | 2,22270        | 296,646                        | 1,4343                   | 2,3700                                           |
| 22450                                   | 3,72534                                  | 4,90116           | 2,21386        | 296,680                        | 1,4346                   | 2,3895                                           |
| 22500                                   | 3,69660-2                                | 4,86225-2         | 2,20505-1      | 296,713                        | 1,4349-5                 | 2,4090-4                                         |
| 22550                                   | 3,66810                                  | 4,82366           | 2,19628        | 296,747                        | 1,4352                   | 2,4288                                           |
| 22600                                   | 3,63982                                  | 4,78539           | 2,18755        | 296,781                        | 1,4354                   | 2,4487                                           |
| 22650                                   | 3,61176                                  | 4,74743           | 2,17886        | 296,814                        | 1,4357                   | 2,4687                                           |
| 22700                                   | 3,58393                                  | 4,70978           | 2,17020        | 296,848                        | 1,4360                   | 2,4889                                           |
| 22750                                   | 3,55632                                  | 4,67243           | 2,16158        | 296,881                        | 1,4362                   | 2,5091                                           |
| 22800                                   | 3,52893                                  | 4,63540           | 2,15300        | 296,915                        | 1,4365                   | 2,5298                                           |
| 22850                                   | 3,50175                                  | 4,59866           | 2,14445        | 296,949                        | 1,4368                   | 2,5505                                           |
| 22900                                   | 3,47479                                  | 4,56222           | 2,13594        | 296,982                        | 1,4371                   | 2,5713                                           |
| 22950                                   | 3,44805                                  | 4,52609           | 2,12746        | 297,016                        | 1,4373                   | 2,5924                                           |
| 23000                                   | 3,42152-2                                | 4,49025-2         | 2,11902-1      | 297,049                        | 1,4376-5                 | 2,6136-4                                         |
| 23050                                   | 3,39520                                  | 4,45470           | 2,11061        | 297,083                        | 1,4379                   | 2,6349                                           |
| 23100                                   | 3,36908                                  | 4,41943           | 2,10225        | 297,116                        | 1,4381                   | 2,6564                                           |
| 23150                                   | 3,34318                                  | 4,38446           | 2,09391        | 297,150                        | 1,4384                   | 2,6781                                           |
| 23200                                   | 3,31748                                  | 4,34977           | 2,08561        | 297,184                        | 1,4387                   | 2,7000                                           |
| 23250                                   | 3,29198                                  | 4,31537           | 2,07735        | 297,217                        | 1,4390                   | 2,7220                                           |
| 23300                                   | 3,26668                                  | 4,28124           | 2,06912        | 297,251                        | 1,4392                   | 2,7442                                           |
| 23350                                   | 3,24159                                  | 4,24740           | 2,06092        | 297,284                        | 1,4395                   | 2,7666                                           |
| 23400                                   | 3,21670                                  | 4,21383           | 2,05276        | 297,318                        | 1,4398                   | 2,7892                                           |
| 23450                                   | 3,19200                                  | 4,18053           | 2,04463        | 297,351                        | 1,4400                   | 2,8119                                           |
| 23500                                   | 3,16749-2                                | 4,14750-2         | 2,03654-1      | 297,385                        | 1,4403-5                 | 2,8349-4                                         |
| 23550                                   | 3,14318                                  | 4,11474           | 2,02846        | 297,418                        | 1,4406                   | 2,8580                                           |
| 23600                                   | 3,11907                                  | 4,08225           | 2,02046        | 297,452                        | 1,4409                   | 2,8813                                           |
| 23650                                   | 3,09514                                  | 4,05002           | 2,01247        | 297,485                        | 1,4411                   | 2,9047                                           |
| 23700                                   | 3,07140                                  | 4,01806           | 2,00451        | 297,519                        | 1,4414                   | 2,9284                                           |
| 23750                                   | 3,04786                                  | 3,98635           | 1,99658        | 297,553                        | 1,4417                   | 2,9522                                           |
| 23800                                   | 3,02449                                  | 3,95491           | 1,98869        | 297,586                        | 1,4419                   | 2,9763                                           |
| 23850                                   | 3,00131                                  | 3,92371           | 1,98084        | 297,620                        | 1,4422                   | 3,0005                                           |
| 23900                                   | 2,97832                                  | 3,89277           | 1,97301        | 297,653                        | 1,4425                   | 3,0249                                           |
| 23950                                   | 2,95551                                  | 3,86209           | 1,96522        | 297,687                        | 1,4427                   | 3,0495                                           |

| Геотермическая<br>глубина вы-<br>сота $H$ , м | Величины и функции геотермической высоты |               |            |                                     |                          |                                         |                                                  |
|-----------------------------------------------|------------------------------------------|---------------|------------|-------------------------------------|--------------------------|-----------------------------------------|--------------------------------------------------|
|                                               | $\rho/\rho_c$                            | $\rho/\rho_c$ | $V/\rho_c$ | скорость<br>звука<br>$\sigma$ , м/с | вязкость                 |                                         | теплопро-<br>водность<br>$\lambda$ ,<br>Вт/(м·К) |
|                                               |                                          |               |            |                                     | динамич.<br>$\mu$ , Па·с | кинематич.<br>$\nu$ , м <sup>2</sup> /с |                                                  |
| 22000                                         | 3,94747-2                                | 5,20221-1     | 2,28084-1  | 296,428                             | 1,4326-5                 | 2,2480-4                                | 1,9686-2                                         |
| 22050                                         | 3,91675                                  | 5,16055       | 2,27168    | 296,462                             | 1,4329                   | 2,2666                                  | 1,9690                                           |
| 22100                                         | 3,88628                                  | 5,11924       | 2,26257    | 296,496                             | 1,4331                   | 2,2853                                  | 1,9695                                           |
| 22150                                         | 3,85606                                  | 5,07826       | 2,25350    | 296,530                             | 1,4334                   | 2,3042                                  | 1,9699                                           |
| 22200                                         | 3,82608                                  | 5,03762       | 2,24447    | 296,564                             | 1,4337                   | 2,3232                                  | 1,9703                                           |
| 22250                                         | 3,79633                                  | 4,99732       | 2,23547    | 296,598                             | 1,4340                   | 2,3424                                  | 1,9707                                           |
| 22300                                         | 3,76683                                  | 4,95735       | 2,22651    | 296,632                             | 1,4342                   | 2,3617                                  | 1,9711                                           |
| 22350                                         | 3,73756                                  | 4,91770       | 2,21759    | 296,665                             | 1,4345                   | 2,3912                                  | 1,9716                                           |
| 22400                                         | 3,70852                                  | 4,87839       | 2,20871    | 296,699                             | 1,4348                   | 2,4009                                  | 1,9720                                           |
| 22450                                         | 3,67972                                  | 4,83939       | 2,19986    | 296,733                             | 1,4350                   | 2,4207                                  | 1,9724                                           |
| 22500                                         | 3,65115-2                                | 4,80072-2     | 2,19105-1  | 296,767                             | 1,4353-5                 | 2,4407-3                                | 1,9728-2                                         |
| 22550                                         | 3,62280                                  | 4,76236       | 2,18228    | 296,801                             | 1,4356                   | 2,4608                                  | 1,9732                                           |
| 22600                                         | 3,59468                                  | 4,72432       | 2,17355    | 296,835                             | 1,4359                   | 2,4811                                  | 1,9737                                           |
| 22650                                         | 3,56679                                  | 4,68659       | 2,16485    | 296,869                             | 1,4361                   | 2,5015                                  | 1,9741                                           |
| 22700                                         | 3,53912                                  | 4,64917       | 2,15619    | 296,902                             | 1,4364                   | 2,5221                                  | 1,9745                                           |
| 22750                                         | 3,51167                                  | 4,61206       | 2,14757    | 296,936                             | 1,4367                   | 2,5429                                  | 1,9749                                           |
| 22800                                         | 3,48443                                  | 4,57525       | 2,13898    | 296,970                             | 1,4370                   | 2,5639                                  | 1,9753                                           |
| 22850                                         | 3,45742                                  | 4,53875       | 2,13043    | 297,004                             | 1,4372                   | 2,5850                                  | 1,9758                                           |
| 22900                                         | 3,43062                                  | 4,50255       | 2,12192    | 297,038                             | 1,4375                   | 2,6062                                  | 1,9762                                           |
| 22950                                         | 3,40404                                  | 4,46664       | 2,11344    | 297,072                             | 1,4378                   | 2,6277                                  | 1,9766                                           |
| 23000                                         | 3,37767-2                                | 4,43102-2     | 2,10500-1  | 297,105                             | 1,4381-5                 | 2,6493-4                                | 1,9770-2                                         |
| 23050                                         | 3,35150                                  | 4,39570       | 2,09659    | 297,139                             | 1,4383                   | 2,6711                                  | 1,9774                                           |
| 23100                                         | 3,32555                                  | 4,36067       | 2,08822    | 297,173                             | 1,4386                   | 2,6931                                  | 1,9779                                           |
| 23150                                         | 3,29980                                  | 4,32592       | 2,07989    | 297,207                             | 1,4389                   | 2,7152                                  | 1,9783                                           |
| 23200                                         | 3,27426                                  | 4,29146       | 2,07158    | 297,241                             | 1,4391                   | 2,7376                                  | 1,9787                                           |
| 23250                                         | 3,24892                                  | 4,25728       | 2,06332    | 297,274                             | 1,4394                   | 2,7601                                  | 1,9791                                           |
| 23300                                         | 3,22379                                  | 4,22338       | 2,05509    | 297,308                             | 1,4397                   | 2,7827                                  | 1,9795                                           |
| 23350                                         | 3,19885                                  | 4,18976       | 2,04689    | 297,342                             | 1,4400                   | 2,8056                                  | 1,9800                                           |
| 23400                                         | 3,17411                                  | 4,15642       | 2,03873    | 297,376                             | 1,4402                   | 2,8286                                  | 1,9804                                           |
| 23450                                         | 3,14957                                  | 4,12334       | 2,03060    | 297,410                             | 1,4405                   | 2,8519                                  | 1,9808                                           |
| 23500                                         | 3,12522-2                                | 4,09054-2     | 2,02251-1  | 297,443                             | 1,4408-5                 | 2,8753-4                                | 1,9812-2                                         |
| 23550                                         | 3,10107                                  | 4,05801       | 2,01445    | 297,477                             | 1,4411                   | 2,8989                                  | 1,9816                                           |
| 23600                                         | 3,07711                                  | 4,02574       | 2,00642    | 297,511                             | 1,4413                   | 2,9227                                  | 1,9821                                           |
| 23650                                         | 3,05334                                  | 3,99374       | 1,99843    | 297,545                             | 1,4416                   | 2,9467                                  | 1,9825                                           |
| 23700                                         | 3,02976                                  | 3,96199       | 1,99048    | 297,578                             | 1,4419                   | 2,9708                                  | 1,9829                                           |
| 23750                                         | 3,00637                                  | 3,93051       | 1,98255    | 297,612                             | 1,4421                   | 2,9952                                  | 1,9833                                           |
| 23800                                         | 2,98316                                  | 3,89928       | 1,97466    | 297,646                             | 1,4424                   | 3,0197                                  | 1,9837                                           |
| 23850                                         | 2,96013                                  | 3,86831       | 1,96680    | 297,680                             | 1,4427                   | 3,0445                                  | 1,9842                                           |
| 23900                                         | 2,93730                                  | 3,83760       | 1,95898    | 297,713                             | 1,4430                   | 3,0694                                  | 1,9846                                           |
| 23950                                         | 2,91464                                  | 3,80713       | 1,95119    | 297,747                             | 1,4432                   | 3,0946                                  | 1,9850                                           |

От 24000 до 25950 м

| Геометри-<br>ческая вы-<br>сота<br>H, м | Величины в функции геометрической высоты |               |                |                                |                          |                                         |                                                  |
|-----------------------------------------|------------------------------------------|---------------|----------------|--------------------------------|--------------------------|-----------------------------------------|--------------------------------------------------|
|                                         | $P/P_c$                                  | $\rho/\rho_c$ | $\sqrt{g/P_c}$ | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                         | теплопро-<br>водность<br>$\lambda$ ,<br>Вт/(м·К) |
|                                         |                                          |               |                |                                | динамич.<br>$\mu$ , Па·с | кинематич.<br>$\nu$ , м <sup>2</sup> /с |                                                  |
| 24000                                   | 2,93287-2                                | 3,83165-2     | 1,95746-1      | 297,720                        | 1,4430-5                 | 3,0743-4                                | 1,9847-2                                         |
| 24050                                   | 2,91042                                  | 3,80146       | 1,94973        | 297,754                        | 1,4433                   | 3,0993                                  | 1,9851                                           |
| 24100                                   | 2,88814                                  | 3,77151       | 1,94204        | 297,787                        | 1,4436                   | 3,1245                                  | 1,9855                                           |
| 24150                                   | 2,86604                                  | 3,74181       | 1,93438        | 297,821                        | 1,4438                   | 3,1499                                  | 1,9859                                           |
| 24200                                   | 2,84411                                  | 3,71235       | 1,92675        | 297,854                        | 1,4441                   | 3,1755                                  | 1,9863                                           |
| 24250                                   | 2,82236                                  | 3,68313       | 1,91915        | 297,887                        | 1,4444                   | 3,2013                                  | 1,9867                                           |
| 24300                                   | 2,80078                                  | 3,65414       | 1,91158        | 297,921                        | 1,4446                   | 3,2273                                  | 1,9872                                           |
| 24350                                   | 2,77937                                  | 3,62539       | 1,90405        | 297,954                        | 1,4449                   | 3,2535                                  | 1,9876                                           |
| 24400                                   | 2,75812                                  | 3,59687       | 1,89654        | 297,988                        | 1,4452                   | 3,2799                                  | 1,9880                                           |
| 24450                                   | 2,73704                                  | 3,56858       | 1,88907        | 298,021                        | 1,4455                   | 3,3065                                  | 1,9884                                           |
| 24500                                   | 2,71614-2                                | 3,54052-2     | 1,88163-1      | 298,055                        | 1,4457-5                 | 3,3334-4                                | 1,9888-2                                         |
| 24550                                   | 2,69539                                  | 3,51270       | 1,87422        | 298,088                        | 1,4460                   | 3,3604                                  | 1,9892                                           |
| 24600                                   | 2,67481                                  | 3,48509       | 1,86684        | 298,122                        | 1,4463                   | 3,3876                                  | 1,9897                                           |
| 24650                                   | 2,65439                                  | 3,45771       | 1,85949        | 298,155                        | 1,4465                   | 3,4151                                  | 1,9901                                           |
| 24700                                   | 2,63413                                  | 3,43055       | 1,85217        | 298,189                        | 1,4468                   | 3,4428                                  | 1,9905                                           |
| 24750                                   | 2,61403                                  | 3,40361       | 1,84489        | 298,222                        | 1,4471                   | 3,4707                                  | 1,9909                                           |
| 24800                                   | 2,59409                                  | 3,37689       | 1,83763        | 298,255                        | 1,4473                   | 3,4988                                  | 1,9913                                           |
| 24850                                   | 2,57430                                  | 3,35038       | 1,83040        | 298,289                        | 1,4476                   | 3,5271                                  | 1,9917                                           |
| 24900                                   | 2,55467                                  | 3,32409       | 1,82321        | 298,322                        | 1,4479                   | 3,5557                                  | 1,9922                                           |
| 24950                                   | 2,53520                                  | 3,29801       | 1,81604        | 298,356                        | 1,4482                   | 3,5845                                  | 1,9926                                           |
| 25000                                   | 2,51588-2                                | 3,27214-2     | 1,80891-1      | 298,389                        | 1,4484-5                 | 3,6135-4                                | 1,9930-2                                         |
| 25050                                   | 2,49671                                  | 3,24648       | 1,80180        | 298,422                        | 1,4487                   | 3,6427                                  | 1,9934                                           |
| 25100                                   | 2,47769                                  | 3,22103       | 1,79472        | 298,456                        | 1,4490                   | 3,6722                                  | 1,9938                                           |
| 25150                                   | 2,45882                                  | 3,19578       | 1,78768        | 298,489                        | 1,4492                   | 3,7019                                  | 1,9942                                           |
| 25200                                   | 2,44009                                  | 3,17074       | 1,78066        | 298,523                        | 1,4495                   | 3,7318                                  | 1,9947                                           |
| 25250                                   | 2,42152                                  | 3,14590       | 1,77367        | 298,556                        | 1,4498                   | 3,7620                                  | 1,9951                                           |
| 25300                                   | 2,40309                                  | 3,12126       | 1,76671        | 298,589                        | 1,4500                   | 3,7924                                  | 1,9955                                           |
| 25350                                   | 2,38481                                  | 3,09682       | 1,75978        | 298,623                        | 1,4503                   | 3,8231                                  | 1,9959                                           |
| 25400                                   | 2,36666                                  | 3,07258       | 1,75288        | 298,656                        | 1,4506                   | 3,8539                                  | 1,9963                                           |
| 25450                                   | 2,34867                                  | 3,04853       | 1,74600        | 298,690                        | 1,4509                   | 3,8851                                  | 1,9967                                           |
| 25500                                   | 2,33081-2                                | 3,02467-2     | 1,73916-1      | 298,723                        | 1,4511-5                 | 3,9164-4                                | 1,9972-2                                         |
| 25550                                   | 2,31309                                  | 3,00101       | 1,73234        | 298,756                        | 1,4514                   | 3,9480                                  | 1,9976                                           |
| 25600                                   | 2,29551                                  | 2,97754       | 1,72555        | 298,790                        | 1,4517                   | 3,9799                                  | 1,9980                                           |
| 25650                                   | 2,27807                                  | 2,95426       | 1,71880        | 298,823                        | 1,4519                   | 4,0120                                  | 1,9984                                           |
| 25700                                   | 2,26077                                  | 2,93116       | 1,71206        | 298,856                        | 1,4522                   | 4,0444                                  | 1,9988                                           |
| 25750                                   | 2,24360                                  | 2,90825       | 1,70536        | 298,890                        | 1,4525                   | 4,0770                                  | 1,9992                                           |
| 25800                                   | 2,22657                                  | 2,88553       | 1,69868        | 298,923                        | 1,4527                   | 4,1099                                  | 1,9996                                           |
| 25850                                   | 2,20967                                  | 2,86299       | 1,69204        | 298,956                        | 1,4530                   | 4,1430                                  | 2,0001                                           |
| 25900                                   | 2,19290                                  | 2,84033       | 1,68542        | 298,990                        | 1,4533                   | 4,1764                                  | 2,0005                                           |
| 25950                                   | 2,17626                                  | 2,81845       | 1,67882        | 299,023                        | 1,4535                   | 4,2100                                  | 2,0009                                           |

Продолжение табл. 2

| Геопотенциальная высота $H$ , м | Величины в функции геопотенциальной высоты |                             |                             |                          |                        |                                       |
|---------------------------------|--------------------------------------------|-----------------------------|-----------------------------|--------------------------|------------------------|---------------------------------------|
|                                 | $\rho/\rho_c$                              | $\varepsilon/\varepsilon_c$ | $\sqrt{\varepsilon/\rho_c}$ | скорость звука $c$ , м/с | вязкость               |                                       |
|                                 |                                            |                             |                             |                          | динамич. $\eta$ , Па·с | теплопроводность $\lambda$ , Вт/(м·К) |
| 24000                           | 2,89216-2                                  | 3,77691-2                   | 1,94343-1                   | 297,781                  | 1,4435-5               | 3,1199-4                              |
| 24050                           | 2,86986                                    | 3,74694                     | 1,93570                     | 297,815                  | 1,4438                 | 3,1455                                |
| 24100                           | 2,84773                                    | 3,71721                     | 1,92801                     | 297,848                  | 1,4441                 | 3,1712                                |
| 24150                           | 2,82579                                    | 3,68773                     | 1,92035                     | 297,882                  | 1,4443                 | 3,1972                                |
| 24200                           | 2,80401                                    | 3,65848                     | 1,91272                     | 297,916                  | 1,4446                 | 3,2234                                |
| 24250                           | 2,78246                                    | 3,62948                     | 1,90512                     | 297,950                  | 1,4449                 | 3,2497                                |
| 24300                           | 2,76098                                    | 3,60071                     | 1,89755                     | 297,983                  | 1,4451                 | 3,2763                                |
| 24350                           | 2,73972                                    | 3,57217                     | 1,89002                     | 298,017                  | 1,4454                 | 3,3031                                |
| 24400                           | 2,71863                                    | 3,54387                     | 1,88252                     | 298,051                  | 1,4457                 | 3,3301                                |
| 24450                           | 2,69770                                    | 3,51580                     | 1,87505                     | 298,084                  | 1,4460                 | 3,3574                                |
| 24500                           | 2,67694-2                                  | 3,48796-2                   | 1,86761-1                   | 298,118                  | 1,4462-5               | 3,3848-4                              |
| 24550                           | 2,65635                                    | 3,46034                     | 1,86020                     | 298,152                  | 1,4465                 | 3,4124                                |
| 24600                           | 2,63591                                    | 3,43295                     | 1,85282                     | 298,186                  | 1,4468                 | 3,4403                                |
| 24650                           | 2,61565                                    | 3,40578                     | 1,84548                     | 298,219                  | 1,4471                 | 3,4684                                |
| 24700                           | 2,59554                                    | 3,37883                     | 1,83816                     | 298,253                  | 1,4473                 | 3,4967                                |
| 24750                           | 2,57559                                    | 3,35210                     | 1,83087                     | 298,287                  | 1,4476                 | 3,5253                                |
| 24800                           | 2,55579                                    | 3,32559                     | 1,82362                     | 298,320                  | 1,4479                 | 3,5541                                |
| 24850                           | 2,53616                                    | 3,29929                     | 1,81640                     | 298,354                  | 1,4481                 | 3,5831                                |
| 24900                           | 2,51668                                    | 3,27321                     | 1,80920                     | 298,388                  | 1,4484                 | 3,6123                                |
| 24950                           | 2,49735                                    | 3,24734                     | 1,80204                     | 298,421                  | 1,4487                 | 3,6417                                |
| 25000                           | 2,47818-2                                  | 3,22168-2                   | 1,79491-1                   | 298,455                  | 1,4490-5               | 3,6714-4                              |
| 25050                           | 2,45915                                    | 3,19623                     | 1,78780                     | 298,489                  | 1,4492                 | 3,7014                                |
| 25100                           | 2,44028                                    | 3,17099                     | 1,78073                     | 298,522                  | 1,4495                 | 3,7315                                |
| 25150                           | 2,42156                                    | 3,14595                     | 1,77368                     | 298,556                  | 1,4498                 | 3,7619                                |
| 25200                           | 2,40298                                    | 3,12111                     | 1,76667                     | 298,590                  | 1,4500                 | 3,7926                                |
| 25250                           | 2,38455                                    | 3,09648                     | 1,75968                     | 298,623                  | 1,4503                 | 3,8235                                |
| 25300                           | 2,36627                                    | 3,07204                     | 1,75273                     | 298,657                  | 1,4506                 | 3,8546                                |
| 25350                           | 2,34813                                    | 3,04781                     | 1,74580                     | 298,691                  | 1,4509                 | 3,8860                                |
| 25400                           | 2,33013                                    | 3,02377                     | 1,73890                     | 298,724                  | 1,4511                 | 3,9176                                |
| 25450                           | 2,31228                                    | 2,99992                     | 1,73203                     | 298,758                  | 1,4514                 | 3,9495                                |
| 25500                           | 2,29457-2                                  | 2,97627-2                   | 1,72519-1                   | 298,791                  | 1,4517-5               | 3,9816-4                              |
| 25550                           | 2,27699                                    | 2,95282                     | 1,71838                     | 298,825                  | 1,4519                 | 4,0140                                |
| 25600                           | 2,25956                                    | 2,92954                     | 1,71159                     | 298,859                  | 1,4522                 | 4,0467                                |
| 25650                           | 2,24226                                    | 2,90646                     | 1,70484                     | 298,892                  | 1,4525                 | 4,0796                                |
| 25700                           | 2,22510                                    | 2,88357                     | 1,69811                     | 298,926                  | 1,4528                 | 4,1127                                |
| 25750                           | 2,20807                                    | 2,86086                     | 1,69141                     | 298,960                  | 1,4530                 | 4,1461                                |
| 25800                           | 2,19118                                    | 2,83834                     | 1,68474                     | 298,993                  | 1,4533                 | 4,1798                                |
| 25850                           | 2,17442                                    | 2,81599                     | 1,67809                     | 299,027                  | 1,4536                 | 4,2138                                |
| 25900                           | 2,15779                                    | 2,79383                     | 1,67148                     | 299,060                  | 1,4539                 | 4,2480                                |
| 25950                           | 2,14130                                    | 2,77185                     | 1,66489                     | 299,094                  | 1,4541                 | 4,2825                                |

От 26000 до 27950 м

| Геометри-<br>ческая вы-<br>сота,<br>м | Величины в функции геометрической высоты |           |                |                                |                          |                                                  |
|---------------------------------------|------------------------------------------|-----------|----------------|--------------------------------|--------------------------|--------------------------------------------------|
|                                       | $p/p_c$                                  | $p/p_c$   | $\sqrt{p/p_c}$ | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                                  |
|                                       |                                          |           |                |                                | динамич.<br>$\mu$ , Па·с | теплопро-<br>водность<br>$\lambda$ ,<br>Вт/(м·К) |
| 26000                                 | 2,15975-2                                | 2,79645-2 | 1,67226-2      | 299,056                        | 1,4538-5                 | 4,2439-4                                         |
| 26050                                 | 2,14337                                  | 2,77462   | 1,66572        | 299,090                        | 1,4541                   | 4,2781                                           |
| 26100                                 | 2,12712                                  | 2,75297   | 1,65921        | 299,123                        | 1,4544                   | 4,3125                                           |
| 26150                                 | 2,11100                                  | 2,73149   | 1,65272        | 299,156                        | 1,4546                   | 4,3473                                           |
| 26200                                 | 2,09500                                  | 2,71019   | 1,64627        | 299,190                        | 1,4549                   | 4,3822                                           |
| 26250                                 | 2,07913                                  | 2,68906   | 1,63984        | 299,223                        | 1,4552                   | 4,4175                                           |
| 26300                                 | 2,06338                                  | 2,66810   | 1,63343        | 299,256                        | 1,4554                   | 4,4530                                           |
| 26350                                 | 2,04776                                  | 2,64731   | 1,62705        | 299,289                        | 1,4557                   | 4,4888                                           |
| 26400                                 | 2,03225                                  | 2,62668   | 1,62070        | 299,323                        | 1,4560                   | 4,5249                                           |
| 26450                                 | 2,01687                                  | 2,60622   | 1,61438        | 299,356                        | 1,4562                   | 4,5613                                           |
| 26500                                 | 2,00161-2                                | 2,58592-2 | 1,60808-1      | 299,389                        | 1,4565-5                 | 4,5979-4                                         |
| 26550                                 | 1,98647                                  | 2,56579   | 1,60181        | 299,423                        | 1,4568                   | 4,6349                                           |
| 26600                                 | 1,97144                                  | 2,54581   | 1,59556        | 299,456                        | 1,4570                   | 4,6721                                           |
| 26650                                 | 1,95653                                  | 2,52600   | 1,58934        | 299,489                        | 1,4573                   | 4,7096                                           |
| 26700                                 | 1,94174                                  | 2,50635   | 1,58315        | 299,522                        | 1,4576                   | 4,7474                                           |
| 26750                                 | 1,92707                                  | 2,48685   | 1,57697        | 299,556                        | 1,4579                   | 4,7855                                           |
| 26800                                 | 1,91250                                  | 2,46751   | 1,57083        | 299,589                        | 1,4581                   | 4,8239                                           |
| 26850                                 | 1,89806                                  | 2,44833   | 1,56471        | 299,622                        | 1,4584                   | 4,8626                                           |
| 26900                                 | 1,88372                                  | 2,42930   | 1,55862        | 299,655                        | 1,4587                   | 4,9016                                           |
| 26950                                 | 1,86950                                  | 2,41042   | 1,55255        | 299,689                        | 1,4589                   | 4,9409                                           |
| 27000                                 | 1,85538-2                                | 2,39169-2 | 1,54651-1      | 299,722                        | 1,4592-5                 | 4,9875-4                                         |
| 27050                                 | 1,84138                                  | 2,37311   | 1,54049        | 299,755                        | 1,4595                   | 5,0204                                           |
| 27100                                 | 1,82749                                  | 2,35468   | 1,53450        | 299,788                        | 1,4597                   | 5,0606                                           |
| 27150                                 | 1,81370                                  | 2,33640   | 1,52853        | 299,822                        | 1,4600                   | 5,1012                                           |
| 27200                                 | 1,80002                                  | 2,31827   | 1,52259        | 299,855                        | 1,4603                   | 5,1420                                           |
| 27250                                 | 1,78645                                  | 2,30028   | 1,51667        | 299,888                        | 1,4605                   | 5,1832                                           |
| 27300                                 | 1,77298                                  | 2,28243   | 1,51077        | 299,921                        | 1,4608                   | 5,2247                                           |
| 27350                                 | 1,75962                                  | 2,26473   | 1,50490        | 299,954                        | 1,4611                   | 5,2665                                           |
| 27400                                 | 1,74636                                  | 2,24716   | 1,49905        | 299,988                        | 1,4613                   | 5,3086                                           |
| 27450                                 | 1,73320                                  | 2,22974   | 1,49323        | 300,021                        | 1,4616                   | 5,3511                                           |
| 27500                                 | 1,72015-2                                | 2,21246-2 | 1,48743-1      | 300,054                        | 1,4619-5                 | 5,3939-4                                         |
| 27550                                 | 1,70720                                  | 2,19531   | 1,48166        | 300,087                        | 1,4622                   | 5,4370                                           |
| 27600                                 | 1,69434                                  | 2,17831   | 1,47591        | 300,120                        | 1,4624                   | 5,4805                                           |
| 27650                                 | 1,68159                                  | 2,16143   | 1,47018        | 300,154                        | 1,4627                   | 5,5243                                           |
| 27700                                 | 1,66894                                  | 2,14470   | 1,46448        | 300,187                        | 1,4630                   | 5,5684                                           |
| 27750                                 | 1,65638                                  | 2,12809   | 1,45880        | 300,220                        | 1,4632                   | 5,6129                                           |
| 27800                                 | 1,64393                                  | 2,11162   | 1,45314        | 300,253                        | 1,4635                   | 5,6577                                           |
| 27850                                 | 1,63157                                  | 2,09528   | 1,44751        | 300,286                        | 1,4638                   | 5,7029                                           |
| 27900                                 | 1,61930                                  | 2,07907   | 1,44190        | 300,320                        | 1,4640                   | 5,7484                                           |
| 27950                                 | 1,60713                                  | 2,06299   | 1,43631        | 300,353                        | 1,4643                   | 5,7943                                           |

| Геопотенци-<br>альная высо-<br>та $H$ , м | Величины в функции геопотенциальной высоты |               |                      |                                |                                      |                                                  |
|-------------------------------------------|--------------------------------------------|---------------|----------------------|--------------------------------|--------------------------------------|--------------------------------------------------|
|                                           | $\rho/\rho_c$                              | $\rho/\rho_c$ | $\sqrt{\rho/\rho_c}$ | скорость<br>звука<br>$a$ , м/с | вязкость<br>динамич.<br>$\mu$ , Па·с | теплопро-<br>водность<br>$\lambda$ ,<br>Вт/(м·К) |
| 26000                                     | 2,12493-2                                  | 2,75005-2     | 1,65833-1            | 299,127                        | 1,4544-5                             | 4,3172-4                                         |
| 26050                                     | 2,10869                                    | 2,72842       | 1,65179              | 299,161                        | 1,4547                               | 4,3523                                           |
| 26100                                     | 2,09258                                    | 2,70697       | 1,64529              | 299,195                        | 1,4549                               | 4,3876                                           |
| 26150                                     | 2,07660                                    | 2,68569       | 1,63881              | 299,228                        | 1,4552                               | 4,4232                                           |
| 26200                                     | 2,06074                                    | 2,66458       | 1,63235              | 299,262                        | 1,4555                               | 4,4590                                           |
| 26250                                     | 2,04500                                    | 2,64364       | 1,62593              | 299,295                        | 1,4558                               | 4,4952                                           |
| 26300                                     | 2,02939                                    | 2,62287       | 1,61953              | 299,329                        | 1,4560                               | 4,5316                                           |
| 26350                                     | 2,01391                                    | 2,60227       | 1,61316              | 299,363                        | 1,4563                               | 4,5684                                           |
| 26400                                     | 1,99854                                    | 2,58184       | 1,60681              | 29,396                         | 1,4566                               | 4,6054                                           |
| 26450                                     | 1,98330                                    | 2,56157       | 1,60049              | 299,430                        | 1,4568                               | 4,6427                                           |
| 26500                                     | 1,96817-2                                  | 2,54147-2     | 1,59420-1            | 299,463                        | 1,4571-5                             | 4,6803-4                                         |
| 26550                                     | 1,95316                                    | 2,52152       | 1,58793              | 299,497                        | 1,4574                               | 4,7182                                           |
| 26600                                     | 1,93828                                    | 2,50174       | 1,58169              | 299,530                        | 1,4577                               | 4,7564                                           |
| 26650                                     | 1,92350                                    | 2,48212       | 1,57547              | 299,564                        | 1,4579                               | 4,7949                                           |
| 26700                                     | 1,90885                                    | 2,46266       | 1,56929              | 299,597                        | 1,4582                               | 4,8337                                           |
| 26750                                     | 1,89431                                    | 2,44335       | 1,56312              | 299,631                        | 1,4585                               | 4,8728                                           |
| 26800                                     | 1,87988                                    | 2,42420       | 1,55698              | 299,664                        | 1,4587                               | 4,9122                                           |
| 26850                                     | 1,86556                                    | 2,40520       | 1,55087              | 299,698                        | 1,4590                               | 4,9519                                           |
| 26900                                     | 1,85136                                    | 2,38636       | 1,54478              | 299,731                        | 1,4593                               | 4,9919                                           |
| 26950                                     | 1,83727                                    | 2,36766       | 1,53872              | 299,765                        | 1,4595                               | 5,0323                                           |
| 27000                                     | 1,82329-2                                  | 2,34912-2     | 1,53268-1            | 299,798                        | 1,4598-5                             | 5,0729-4                                         |
| 27050                                     | 1,80942                                    | 2,33073       | 1,52667              | 299,832                        | 1,4601                               | 5,1139                                           |
| 27100                                     | 1,79566                                    | 2,31248       | 1,52069              | 299,865                        | 1,4604                               | 5,1552                                           |
| 27150                                     | 1,78200                                    | 2,29439       | 1,51472              | 299,899                        | 1,4606                               | 5,1968                                           |
| 27200                                     | 1,76845                                    | 2,27644       | 1,50879              | 299,933                        | 1,4609                               | 5,2388                                           |
| 27250                                     | 1,75501                                    | 2,25863       | 1,50287              | 299,966                        | 1,4612                               | 5,2811                                           |
| 27300                                     | 1,74168                                    | 2,24096       | 1,49698              | 299,999                        | 1,4614                               | 5,3237                                           |
| 27350                                     | 1,72844                                    | 2,22344       | 1,49112              | 300,033                        | 1,4617                               | 5,3666                                           |
| 27400                                     | 1,71531                                    | 2,20606       | 1,48528              | 300,066                        | 1,4620                               | 5,4099                                           |
| 27450                                     | 1,70229                                    | 2,18882       | 1,47947              | 300,100                        | 1,4623                               | 5,4535                                           |
| 27500                                     | 1,68936-2                                  | 2,17171-2     | 1,47367-1            | 300,133                        | 1,4625-5                             | 5,4975-4                                         |
| 27550                                     | 1,67654                                    | 2,15475       | 1,46791              | 300,167                        | 1,4628                               | 5,5418                                           |
| 27600                                     | 1,66382                                    | 2,13792       | 1,46216              | 300,200                        | 1,4631                               | 5,5865                                           |
| 27650                                     | 1,65119                                    | 2,12122       | 1,45644              | 300,234                        | 1,4633                               | 5,6315                                           |
| 27700                                     | 1,63867                                    | 2,10466       | 1,45075              | 300,267                        | 1,4636                               | 5,6768                                           |
| 27750                                     | 1,62624                                    | 2,08824       | 1,44507              | 300,301                        | 1,4639                               | 5,7226                                           |
| 27800                                     | 1,61391                                    | 2,07194       | 1,43942              | 300,334                        | 1,4642                               | 5,7686                                           |
| 27850                                     | 1,60167                                    | 2,05578       | 1,43380              | 300,368                        | 1,4644                               | 5,8151                                           |
| 27900                                     | 1,58953                                    | 2,03974       | 1,42820              | 300,401                        | 1,4647                               | 5,8619                                           |
| 27950                                     | 1,57749                                    | 2,02384       | 1,42262              | 300,435                        | 1,4650                               | 5,9090                                           |



От 28000 до 29950 м

| Геометри-<br>ческая высо-<br>та $H$ , м | Величины в функции геометрической высоты |               |                |                                |                          |                                         |                                                  |
|-----------------------------------------|------------------------------------------|---------------|----------------|--------------------------------|--------------------------|-----------------------------------------|--------------------------------------------------|
|                                         | $p/p_c$                                  | $\rho/\rho_c$ | $\sqrt{T/T_c}$ | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                         | теплопро-<br>водность<br>$\lambda$ ,<br>Вт/(м·К) |
|                                         |                                          |               |                |                                | динамич.<br>$\mu$ , Па·с | кинематич.<br>$\nu$ , м <sup>2</sup> /с |                                                  |
| 28000                                   | 1,59506-2                                | 2,04704-2     | 1,43075-1      | 300,386                        | 1,4646-5                 | 5,8405-4                                | 2,0179-2                                         |
| 28050                                   | 1,58307                                  | 2,03121       | 1,42520        | 300,419                        | 1,4648                   | 5,8871                                  | 2,0183                                           |
| 28100                                   | 1,57118                                  | 2,01551       | 1,41969        | 300,452                        | 1,4651                   | 5,9340                                  | 2,0187                                           |
| 28150                                   | 1,55939                                  | 1,99994       | 1,41419        | 300,485                        | 1,4654                   | 5,9813                                  | 2,0192                                           |
| 28200                                   | 1,54768                                  | 1,98449       | 1,40872        | 300,518                        | 1,4656                   | 6,0290                                  | 2,0196                                           |
| 28250                                   | 1,53607                                  | 1,96916       | 1,40327        | 300,552                        | 1,4659                   | 6,0770                                  | 2,0200                                           |
| 28300                                   | 1,52454                                  | 1,95395       | 1,39784        | 300,585                        | 1,4662                   | 6,1254                                  | 2,0204                                           |
| 28350                                   | 1,51311                                  | 1,93887       | 1,39243        | 300,618                        | 1,4664                   | 6,1742                                  | 2,0208                                           |
| 28400                                   | 1,50176                                  | 1,92390       | 1,38705        | 300,651                        | 1,4667                   | 6,2234                                  | 2,0212                                           |
| 28450                                   | 1,49050                                  | 1,90906       | 1,38169        | 300,684                        | 1,4670                   | 6,2729                                  | 2,0217                                           |
| 28500                                   | 1,47932-2                                | 1,89433-2     | 1,37635-1      | 300,717                        | 1,4673-5                 | 6,3229-4                                | 2,0221-2                                         |
| 28550                                   | 1,46824                                  | 1,87972       | 1,37103        | 300,750                        | 1,4675                   | 6,3732                                  | 2,0225                                           |
| 28600                                   | 1,45724                                  | 1,86522       | 1,36573        | 300,783                        | 1,4678                   | 6,4239                                  | 2,0229                                           |
| 28650                                   | 1,44632                                  | 1,85084       | 1,36046        | 300,816                        | 1,4681                   | 6,4750                                  | 2,0233                                           |
| 28700                                   | 1,43549                                  | 1,83658       | 1,35520        | 300,850                        | 1,4683                   | 6,5264                                  | 2,0237                                           |
| 28750                                   | 1,42474                                  | 1,82243       | 1,34997        | 300,883                        | 1,4686                   | 6,5783                                  | 2,0241                                           |
| 28800                                   | 1,41408                                  | 1,80839       | 1,34476        | 300,916                        | 1,4689                   | 6,6306                                  | 2,0246                                           |
| 28850                                   | 1,40349                                  | 1,79446       | 1,33957        | 300,949                        | 1,4691                   | 6,6833                                  | 2,0250                                           |
| 28900                                   | 1,39299                                  | 1,78064       | 1,33441        | 300,982                        | 1,4694                   | 6,7364                                  | 2,0254                                           |
| 28950                                   | 1,38257                                  | 1,76693       | 1,32926        | 301,015                        | 1,4697                   | 6,7899                                  | 2,0258                                           |
| 29000                                   | 1,37223-2                                | 1,75333-2     | 1,32414-1      | 301,048                        | 1,4699-5                 | 6,8438-4                                | 2,0262-2                                         |
| 29050                                   | 1,36197                                  | 1,73984       | 1,31903        | 301,081                        | 1,4702                   | 6,8981                                  | 2,0266                                           |
| 29100                                   | 1,35179                                  | 1,72646       | 1,31395        | 301,114                        | 1,4705                   | 6,9528                                  | 2,0270                                           |
| 29150                                   | 1,34169                                  | 1,71318       | 1,30889        | 301,147                        | 1,4707                   | 7,0080                                  | 2,0275                                           |
| 29200                                   | 1,33167                                  | 1,70001       | 1,30384        | 301,180                        | 1,4710                   | 7,0636                                  | 2,0279                                           |
| 29250                                   | 1,32172                                  | 1,68694       | 1,29882        | 301,213                        | 1,4713                   | 7,1196                                  | 2,0283                                           |
| 29300                                   | 1,31185                                  | 1,67397       | 1,29382        | 301,246                        | 1,4715                   | 7,1761                                  | 2,0287                                           |
| 29350                                   | 1,30205                                  | 1,66111       | 1,28884        | 301,279                        | 1,4718                   | 7,2329                                  | 2,0291                                           |
| 29400                                   | 1,29233                                  | 1,64835       | 1,28388        | 301,313                        | 1,4721                   | 7,2903                                  | 2,0295                                           |
| 29450                                   | 1,28269                                  | 1,63569       | 1,27894        | 301,346                        | 1,4723                   | 7,3480                                  | 2,0299                                           |
| 29500                                   | 1,27312-2                                | 1,62313-2     | 1,27402-1      | 301,379                        | 1,4726-5                 | 7,4062-4                                | 2,0303-2                                         |
| 29550                                   | 1,26362                                  | 1,61067       | 1,26912        | 301,412                        | 1,4729                   | 7,4649                                  | 2,0308                                           |
| 29600                                   | 1,25420                                  | 1,59831       | 1,26424        | 301,445                        | 1,4731                   | 7,5240                                  | 2,0312                                           |
| 29650                                   | 1,24485                                  | 1,58604       | 1,25938        | 301,478                        | 1,4734                   | 7,5835                                  | 2,0316                                           |
| 29700                                   | 1,23557                                  | 1,57388       | 1,25454        | 301,511                        | 1,4737                   | 7,6435                                  | 2,0320                                           |
| 29750                                   | 1,22636                                  | 1,56180       | 1,24972        | 301,544                        | 1,4739                   | 7,7040                                  | 2,0324                                           |
| 29800                                   | 1,21722                                  | 1,54983       | 1,24492        | 301,577                        | 1,4742                   | 7,7650                                  | 2,0328                                           |
| 29850                                   | 1,20816                                  | 1,53795       | 1,24014        | 301,610                        | 1,4745                   | 7,8264                                  | 2,0332                                           |
| 29900                                   | 1,19916                                  | 1,52616       | 1,23538        | 301,643                        | 1,4747                   | 7,8882                                  | 2,0337                                           |
| 29950                                   | 1,19023                                  | 1,51447       | 1,23064        | 301,676                        | 1,4750                   | 7,9506                                  | 2,0341                                           |

| Географическая<br>широта<br>$\varphi$ , ° | Величины в функции геопотенциальной высоты |               |                 |                                |                               |                                              |
|-------------------------------------------|--------------------------------------------|---------------|-----------------|--------------------------------|-------------------------------|----------------------------------------------|
|                                           | $p/p_c$                                    | $\rho/\rho_c$ | $\sqrt{p/\rho}$ | скорость<br>звука<br>$a$ , м/с | вязкость                      |                                              |
|                                           |                                            |               |                 |                                | динамическая,<br>$\mu$ , Па·с | кинематическая,<br>$\nu$ , м <sup>2</sup> /с |
| 28000                                     | 1,56554-2                                  | 2,00806-2     | 1,41706-1       | 300,468                        | 1,4652-5                      | 5,9566-4                                     |
| 28050                                     | 1,55368                                    | 1,99240       | 1,41153         | 300,501                        | 1,4655                        | 6,0045                                       |
| 28100                                     | 1,54192                                    | 1,97688       | 1,40601         | 300,535                        | 1,4658                        | 6,0527                                       |
| 28150                                     | 1,53024                                    | 1,96147       | 1,40053         | 300,568                        | 1,4660                        | 6,1014                                       |
| 28200                                     | 1,51866                                    | 1,94620       | 1,39506         | 300,602                        | 1,4663                        | 6,1504                                       |
| 28250                                     | 1,50717                                    | 1,93104       | 1,38962         | 300,635                        | 1,4666                        | 6,1998                                       |
| 28300                                     | 1,49577                                    | 1,91600       | 1,38420         | 300,669                        | 1,4669                        | 6,2497                                       |
| 28350                                     | 1,48445                                    | 1,90109       | 1,37880         | 300,702                        | 1,4671                        | 6,2998                                       |
| 28400                                     | 1,47322                                    | 1,88629       | 1,37342         | 300,735                        | 1,4674                        | 6,3504                                       |
| 28450                                     | 1,46209                                    | 1,87162       | 1,36807         | 300,769                        | 1,4677                        | 6,4014                                       |
| 28500                                     | 1,45104-2                                  | 1,85706-2     | 1,36274-1       | 300,802                        | 1,4679-5                      | 6,4528-4                                     |
| 28550                                     | 1,44007                                    | 1,84261       | 1,35743         | 300,836                        | 1,4682                        | 6,5046                                       |
| 28600                                     | 1,42919                                    | 1,82828       | 1,35214         | 300,869                        | 1,4685                        | 6,5567                                       |
| 28650                                     | 1,41839                                    | 1,81407       | 1,34687         | 300,902                        | 1,4688                        | 6,6093                                       |
| 28700                                     | 1,40768                                    | 1,79997       | 1,34163         | 300,936                        | 1,4690                        | 6,6623                                       |
| 28750                                     | 1,39705                                    | 1,78598       | 1,33641         | 300,969                        | 1,4693                        | 6,7157                                       |
| 28800                                     | 1,38651                                    | 1,77211       | 1,33120         | 301,002                        | 1,4696                        | 6,7696                                       |
| 28850                                     | 1,37604                                    | 1,75834       | 1,32603         | 301,036                        | 1,4698                        | 6,8238                                       |
| 28900                                     | 1,36566                                    | 1,74469       | 1,32087         | 301,069                        | 1,4701                        | 6,8785                                       |
| 28950                                     | 1,35536                                    | 1,73114       | 1,31573         | 301,103                        | 1,4704                        | 6,9336                                       |
| 29000                                     | 1,34514-2                                  | 1,71771-2     | 1,31061-1       | 301,136                        | 1,4706-5                      | 6,9891-4                                     |
| 29050                                     | 1,33499                                    | 1,70438       | 1,30552         | 301,169                        | 1,4709                        | 7,0451                                       |
| 29100                                     | 1,32493                                    | 1,69115       | 1,30044         | 301,203                        | 1,4712                        | 7,1014                                       |
| 29150                                     | 1,31494                                    | 1,67803       | 1,29539         | 301,236                        | 1,4715                        | 7,1583                                       |
| 29200                                     | 1,30503                                    | 1,66502       | 1,29036         | 301,269                        | 1,4717                        | 7,2156                                       |
| 29250                                     | 1,29520                                    | 1,65211       | 1,28534         | 301,303                        | 1,4720                        | 7,2733                                       |
| 29300                                     | 1,28544                                    | 1,63931       | 1,28035         | 301,336                        | 1,4723                        | 7,3314                                       |
| 29350                                     | 1,27576                                    | 1,62660       | 1,27538         | 301,369                        | 1,4725                        | 7,3900                                       |
| 29400                                     | 1,26616                                    | 1,61400       | 1,27043         | 301,403                        | 1,4728                        | 7,4491                                       |
| 29450                                     | 1,25663                                    | 1,60149       | 1,26550         | 301,436                        | 1,4731                        | 7,5087                                       |
| 29500                                     | 1,24717-2                                  | 1,58909-2     | 1,26059-1       | 301,469                        | 1,4733-5                      | 7,5686-4                                     |
| 29550                                     | 1,23779                                    | 1,57678       | 1,25570         | 301,503                        | 1,4736                        | 7,6291                                       |
| 29600                                     | 1,22848                                    | 1,56458       | 1,25083         | 301,536                        | 1,4739                        | 7,6900                                       |
| 29650                                     | 1,21924                                    | 1,55247       | 1,24598         | 301,569                        | 1,4741                        | 7,7514                                       |
| 29700                                     | 1,21007                                    | 1,54045       | 1,24115         | 301,603                        | 1,4744                        | 7,8133                                       |
| 29750                                     | 1,20097                                    | 1,52854       | 1,23634         | 301,636                        | 1,4747                        | 7,8757                                       |
| 29800                                     | 1,19195                                    | 1,51671       | 1,23155         | 301,669                        | 1,4750                        | 7,9385                                       |
| 29850                                     | 1,18299                                    | 1,50498       | 1,22678         | 301,703                        | 1,4752                        | 8,0019                                       |
| 29900                                     | 1,17411                                    | 1,49335       | 1,22203         | 301,736                        | 1,4755                        | 8,0657                                       |
| 29950                                     | 1,16529                                    | 1,48181       | 1,21729         | 301,769                        | 1,4758                        | 8,1300                                       |

От 30000 до 31950 м

| Геометри-<br>ческая вы-<br>сота $h$ , м | Величины в функции геометрической высоты |               |                |                                |                          |                                         |
|-----------------------------------------|------------------------------------------|---------------|----------------|--------------------------------|--------------------------|-----------------------------------------|
|                                         | $\rho/\rho_c$                            | $\rho/\rho_c$ | $\sqrt{g/g_c}$ | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                         |
|                                         |                                          |               |                |                                | динамич.<br>$\mu$ , Па·с | кинематич.<br>$\nu$ , м <sup>2</sup> /с |
| 30000                                   | 1,18137-2                                | 1,50286-2     | 1,22591-1      | 301,709                        | 1,4753-5                 | 8,0134-4                                |
| 30050                                   | 1,17258                                  | 1,49136       | 1,22121        | 301,742                        | 1,4755                   | 8,0767                                  |
| 30100                                   | 1,16386                                  | 1,47994       | 1,21652        | 301,775                        | 1,4758                   | 8,1405                                  |
| 30150                                   | 1,15520                                  | 1,46861       | 1,21186        | 301,808                        | 1,4761                   | 8,2048                                  |
| 30200                                   | 1,14661                                  | 1,45737       | 1,20721        | 301,841                        | 1,4763                   | 8,2696                                  |
| 30250                                   | 1,13808                                  | 1,44621       | 1,20259        | 301,874                        | 1,4766                   | 8,3348                                  |
| 30300                                   | 1,12962                                  | 1,43515       | 1,19798        | 301,907                        | 1,4769                   | 8,4006                                  |
| 30350                                   | 1,12123                                  | 1,42417       | 1,19339        | 301,939                        | 1,4771                   | 8,4669                                  |
| 30400                                   | 1,11290                                  | 1,41329       | 1,18882        | 301,972                        | 1,4774                   | 8,5337                                  |
| 30450                                   | 1,10463                                  | 1,40248       | 1,18426        | 302,005                        | 1,4777                   | 8,6010                                  |
| 30500                                   | 1,09643-2                                | 1,39176-2     | 1,17973-1      | 302,038                        | 1,4779-5                 | 8,6688-4                                |
| 30550                                   | 1,08829                                  | 1,38113       | 1,17521        | 302,071                        | 1,4782                   | 8,7371                                  |
| 30600                                   | 1,08021                                  | 1,37058       | 1,17072        | 302,104                        | 1,4785                   | 8,8059                                  |
| 30650                                   | 1,07219                                  | 1,36011       | 1,16624        | 302,137                        | 1,4787                   | 8,8753                                  |
| 30700                                   | 1,06424                                  | 1,34972       | 1,16178        | 302,170                        | 1,4790                   | 8,9452                                  |
| 30750                                   | 1,05635                                  | 1,33942       | 1,15733        | 302,203                        | 1,4793                   | 9,0156                                  |
| 30800                                   | 1,04851                                  | 1,32920       | 1,15291        | 302,236                        | 1,4795                   | 9,0866                                  |
| 30850                                   | 1,04074                                  | 1,31905       | 1,14850        | 302,269                        | 1,4798                   | 9,1581                                  |
| 30900                                   | 1,03302                                  | 1,30899       | 1,14411        | 302,302                        | 1,4801                   | 9,2302                                  |
| 30950                                   | 1,02537                                  | 1,29901       | 1,13974        | 302,335                        | 1,4803                   | 9,3028                                  |
| 31000                                   | 1,01777-2                                | 1,28910-2     | 1,13539-1      | 302,368                        | 1,4806-5                 | 9,3760-4                                |
| 31050                                   | 1,01023                                  | 1,27928       | 1,13105        | 302,401                        | 1,4809                   | 9,4497                                  |
| 31100                                   | 1,00275                                  | 1,26953       | 1,12673        | 302,433                        | 1,4811                   | 9,5240                                  |
| 31150                                   | 9,95327-3                                | 1,25985       | 1,12243        | 302,466                        | 1,4814                   | 9,5988                                  |
| 31200                                   | 9,87959                                  | 1,25026       | 1,11815        | 302,499                        | 1,4817                   | 9,6743                                  |
| 31250                                   | 9,80648                                  | 1,24073       | 1,11388        | 302,532                        | 1,4819                   | 9,7503                                  |
| 31300                                   | 9,73392                                  | 1,23129       | 1,10963        | 302,565                        | 1,4822                   | 9,8268                                  |
| 31350                                   | 9,66192                                  | 1,22191       | 1,10540        | 302,598                        | 1,4825                   | 9,9040                                  |
| 31400                                   | 9,59047                                  | 1,21261       | 1,10119        | 302,631                        | 1,4827                   | 9,9817                                  |
| 31450                                   | 9,51956                                  | 1,20339       | 1,09699        | 302,664                        | 1,4830                   | 1,0060-3                                |
| 31500                                   | 9,44920-3                                | 1,19423-2     | 1,09281-1      | 302,696                        | 1,4833-5                 | 1,0139-3                                |
| 31550                                   | 9,37936                                  | 1,18515       | 1,08865        | 302,729                        | 1,0835                   | 1,0219                                  |
| 31600                                   | 9,31007                                  | 1,17614       | 1,08450        | 302,762                        | 1,0838                   | 1,0299                                  |
| 31650                                   | 9,24129                                  | 1,16720       | 1,08037        | 302,795                        | 1,0841                   | 1,0379                                  |
| 31700                                   | 9,17305                                  | 1,15833       | 1,07626        | 302,828                        | 1,0843                   | 1,0461                                  |
| 31750                                   | 9,10532                                  | 1,14952       | 1,07216        | 302,861                        | 1,0846                   | 1,0543                                  |
| 31800                                   | 9,03811                                  | 1,14079       | 1,06808        | 302,894                        | 1,0849                   | 1,0625                                  |
| 31850                                   | 8,97141                                  | 1,13213       | 1,06401        | 302,926                        | 1,0851                   | 1,0709                                  |
| 31900                                   | 8,90522                                  | 1,12353       | 1,05997        | 302,959                        | 1,0854                   | 1,0793                                  |
| 31950                                   | 8,83953                                  | 1,11500       | 1,05594        | 302,992                        | 1,0857                   | 1,0877                                  |

| Геопотенциальная высота $H$ , м | Величины в функции геопотенциальной высоты |           |                   |                          |                       |                                      | теплопроводность $\lambda$ , Вт/(м·К) |
|---------------------------------|--------------------------------------------|-----------|-------------------|--------------------------|-----------------------|--------------------------------------|---------------------------------------|
|                                 | $\rho/\rho_c$                              | $g/g_c$   | $\sqrt{V/\rho_c}$ | скорость звука $a$ , м/с | вязкость              |                                      |                                       |
|                                 |                                            |           |                   |                          | динамич. $\mu$ , Па·с | кинематич. $\nu$ , м <sup>2</sup> /с |                                       |
| 30000                           | 1,15654—2                                  | 1,47036—2 | 1,21258—1         | 301,803                  | 1,4760—5              | 8,1948—4                             | 2,0357—2                              |
| 30050                           | 1,14785                                    | 1,45899   | 1,20789           | 301,836                  | 1,4763                | 8,2601                               | 2,0361                                |
| 30100                           | 1,13924                                    | 1,44772   | 1,20321           | 301,869                  | 1,4766                | 8,3259                               | 2,0365                                |
| 30150                           | 1,13069                                    | 1,43654   | 1,19856           | 301,902                  | 1,4768                | 8,3923                               | 2,0369                                |
| 30200                           | 1,12221                                    | 1,42545   | 1,19392           | 301,936                  | 1,4771                | 8,4591                               | 2,0373                                |
| 30250                           | 1,11379                                    | 1,41445   | 1,18930           | 301,969                  | 1,4774                | 8,5265                               | 2,0378                                |
| 30300                           | 1,10544                                    | 1,40353   | 1,18471           | 302,002                  | 1,4777                | 8,5944                               | 2,0382                                |
| 30350                           | 1,09715                                    | 1,39270   | 1,18013           | 302,035                  | 1,4779                | 8,6628                               | 2,0386                                |
| 30400                           | 1,08892                                    | 1,38196   | 1,17557           | 302,069                  | 1,4782                | 8,7317                               | 2,0390                                |
| 30450                           | 1,08076                                    | 1,37130   | 1,17102           | 302,102                  | 1,4785                | 8,8012                               | 2,0394                                |
| 30500                           | 1,07267—2                                  | 1,36072—2 | 1,16650—1         | 302,135                  | 1,4787—5              | 8,8712—4                             | 2,0398—2                              |
| 30550                           | 1,06463                                    | 1,35023   | 1,16200           | 302,168                  | 1,4790                | 8,9417                               | 2,0403                                |
| 30600                           | 1,05666                                    | 1,33983   | 1,15751           | 302,202                  | 1,4793                | 9,0128                               | 2,0407                                |
| 30650                           | 1,04875                                    | 1,32950   | 1,15304           | 302,235                  | 1,4795                | 9,0845                               | 2,0411                                |
| 30700                           | 1,04089                                    | 1,31926   | 1,14859           | 302,268                  | 1,4798                | 9,1567                               | 2,0415                                |
| 30750                           | 1,03310                                    | 1,30910   | 1,14416           | 302,301                  | 1,4801                | 9,2294                               | 2,0419                                |
| 30800                           | 1,02537                                    | 1,29902   | 1,13974           | 302,335                  | 1,4803                | 9,3028                               | 2,0423                                |
| 30850                           | 1,01770                                    | 1,28902   | 1,13535           | 302,368                  | 1,4806                | 9,3766                               | 2,0428                                |
| 30900                           | 1,01009                                    | 1,27909   | 1,13097           | 302,401                  | 1,4809                | 9,4511                               | 2,0432                                |
| 30950                           | 1,00254                                    | 1,26925   | 1,12661           | 302,434                  | 1,4812                | 9,5261                               | 2,0436                                |
| 31000                           | 9,95043—3                                  | 1,25948—2 | 1,12227—1         | 302,468                  | 1,4814—5              | 9,6017—4                             | 2,0440—2                              |
| 31050                           | 9,87605                                    | 1,24980   | 1,11794           | 302,501                  | 1,4817                | 9,6779                               | 2,0444                                |
| 31100                           | 9,80225                                    | 1,24018   | 1,11364           | 302,534                  | 1,4820                | 9,7547                               | 2,0448                                |
| 31150                           | 9,72901                                    | 1,23065   | 1,10935           | 302,567                  | 1,4822                | 9,8321                               | 2,0453                                |
| 31200                           | 9,65634                                    | 1,22119   | 1,10507           | 302,600                  | 1,4825                | 9,9100                               | 2,0457                                |
| 31250                           | 9,58422                                    | 1,21180   | 1,10082           | 302,634                  | 1,4828                | 9,9886                               | 2,0461                                |
| 31300                           | 9,51267                                    | 1,20249   | 1,09658           | 302,667                  | 1,4830                | 1,0068—3                             | 2,0465                                |
| 31350                           | 9,44166                                    | 1,19325   | 1,09236           | 302,700                  | 1,4833                | 1,0148                               | 2,0469                                |
| 31400                           | 9,37119                                    | 1,18409   | 1,08816           | 302,733                  | 1,4836                | 1,0228                               | 2,0473                                |
| 31450                           | 9,30127                                    | 1,17499   | 1,08397           | 302,766                  | 1,4838                | 1,0309                               | 2,0478                                |
| 31500                           | 9,23188—3                                  | 1,16597—2 | 1,07980—3         | 302,800                  | 1,4841—5              | 1,0391—3                             | 2,0482—2                              |
| 31550                           | 9,16303                                    | 1,15702   | 1,07565           | 302,833                  | 1,4844                | 1,0473                               | 2,0486                                |
| 31600                           | 9,09470                                    | 1,14814   | 1,07151           | 302,866                  | 1,4846                | 1,0556                               | 2,0490                                |
| 31650                           | 9,02691                                    | 1,13933   | 1,06740           | 302,899                  | 1,4849                | 1,0639                               | 2,0494                                |
| 31700                           | 8,95962                                    | 1,13060   | 1,06329           | 302,932                  | 1,4852                | 1,0723                               | 2,0498                                |
| 31750                           | 8,89286                                    | 1,12192   | 1,05921           | 302,965                  | 1,4855                | 1,0808                               | 2,0503                                |
| 31800                           | 8,82661                                    | 1,11332   | 1,05514           | 302,999                  | 1,4857                | 1,0894                               | 2,0507                                |
| 31850                           | 8,76086                                    | 1,10479   | 1,05109           | 303,032                  | 1,4860                | 1,0980                               | 2,0511                                |
| 31900                           | 8,69562                                    | 1,09632   | 1,04705           | 303,065                  | 1,4863                | 1,1067                               | 2,0515                                |
| 31950                           | 8,63088                                    | 1,08792   | 1,04303           | 303,098                  | 1,4865                | 1,1154                               | 2,0519                                |

От 32000 до 35900 м

| Геометри-<br>ческая вы-<br>сота $h$ , м | Величины в функции геометрической высоты |                   |              |                                |                          |                                                    |
|-----------------------------------------|------------------------------------------|-------------------|--------------|--------------------------------|--------------------------|----------------------------------------------------|
|                                         | $\rho/\rho_c$                            | $\sigma/\sigma_c$ | $V/\sigma_c$ | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                                    |
|                                         |                                          |                   |              |                                | динамич.<br>$\mu$ , Па·с | теплопро-<br>водность<br>$\lambda$ ,<br>$Вт/(м·К)$ |
| 32000                                   | 8,77434-3                                | 1,10654-2         | 1,05192-1    | 303,025                        | 1,4859-5                 | 1,0962-3                                           |
| 32100                                   | 8,64545                                  | 1,08981           | 1,04394      | 303,091                        | 1,4865                   | 1,1134                                             |
| 32200                                   | 8,51851                                  | 1,07303           | 1,03587      | 303,201                        | 1,4874                   | 1,1315                                             |
| 32300                                   | 8,39358                                  | 1,05601           | 1,02762      | 303,385                        | 1,4888                   | 1,1509                                             |
| 32400                                   | 8,27063                                  | 1,03928           | 1,01945      | 303,568                        | 1,4903                   | 1,1706                                             |
| 32500                                   | 8,14962                                  | 1,02284           | 1,01136      | 303,752                        | 1,4918                   | 1,1906                                             |
| 32600                                   | 8,03054                                  | 1,00668           | 1,00333      | 303,935                        | 1,4933                   | 1,2109                                             |
| 32700                                   | 7,91334                                  | 9,90794-3         | 9,95386-2    | 304,118                        | 1,4948                   | 1,2316                                             |
| 32800                                   | 7,79799                                  | 9,75178           | 9,87511      | 304,301                        | 1,4963                   | 1,2525                                             |
| 32900                                   | 7,68446                                  | 9,59826           | 9,79707      | 304,484                        | 1,4978                   | 1,2738                                             |
| 33000                                   | 7,57272-3                                | 9,44734-3         | 9,71974-2    | 304,667                        | 1,4992-5                 | 1,2955-3                                           |
| 33100                                   | 7,46274                                  | 9,29898           | 9,64312      | 304,850                        | 1,5007                   | 1,3174                                             |
| 33200                                   | 7,35449                                  | 9,15313           | 9,56720      | 305,032                        | 1,5022                   | 1,3397                                             |
| 33300                                   | 7,24794                                  | 9,00974           | 9,49196      | 305,215                        | 1,5037                   | 1,3624                                             |
| 33400                                   | 7,14306                                  | 8,86876           | 9,41741      | 305,397                        | 1,5052                   | 1,3854                                             |
| 33500                                   | 7,03983                                  | 8,73016           | 9,34353      | 305,579                        | 1,5066                   | 1,4088                                             |
| 33600                                   | 6,93821                                  | 8,59390           | 9,27033      | 305,762                        | 1,5081                   | 1,4325                                             |
| 33700                                   | 6,83818                                  | 8,45992           | 9,19778      | 305,944                        | 1,5096                   | 1,4566                                             |
| 33800                                   | 6,73971                                  | 8,32819           | 9,12589      | 306,125                        | 1,5111                   | 1,4811                                             |
| 33900                                   | 6,64277                                  | 8,19867           | 9,05465      | 306,307                        | 1,5125                   | 1,5060                                             |
| 34000                                   | 6,54735-3                                | 8,07132-3         | 8,98405-2    | 306,489                        | 1,5140-5                 | 1,5313-3                                           |
| 34100                                   | 6,45341                                  | 7,94609           | 8,91408      | 306,670                        | 1,5155                   | 1,5569                                             |
| 34200                                   | 6,36093                                  | 7,82296           | 8,84475      | 306,852                        | 1,5169                   | 1,5829                                             |
| 34300                                   | 6,26988                                  | 7,70188           | 8,77604      | 307,033                        | 1,5184                   | 1,6094                                             |
| 34400                                   | 6,18025                                  | 7,58282           | 8,70794      | 307,214                        | 1,5199                   | 1,6362                                             |
| 34500                                   | 6,09200                                  | 7,46574           | 8,64045      | 307,396                        | 1,5214                   | 1,6635                                             |
| 34600                                   | 6,00511                                  | 7,35061           | 8,57357      | 307,577                        | 1,5228                   | 1,6912                                             |
| 34700                                   | 5,91957                                  | 7,23738           | 8,50728      | 307,758                        | 1,5243                   | 1,7193                                             |
| 34800                                   | 5,83535                                  | 7,12604           | 8,44150      | 307,938                        | 1,5258                   | 1,7478                                             |
| 34900                                   | 5,75243                                  | 7,01654           | 8,37648      | 308,119                        | 1,5272                   | 1,7768                                             |
| 35000                                   | 5,67078-3                                | 6,90885-3         | 8,31195-2    | 308,299                        | 1,5287-5                 | 1,8063-3                                           |
| 35100                                   | 5,59039                                  | 6,80294           | 8,24799      | 308,480                        | 1,5302                   | 1,8361                                             |
| 35200                                   | 5,51123                                  | 6,69878           | 8,18460      | 308,660                        | 1,5316                   | 1,8665                                             |
| 35300                                   | 5,43328                                  | 6,59633           | 8,12178      | 308,840                        | 1,5331                   | 1,8973                                             |
| 35400                                   | 5,35653                                  | 6,49557           | 8,05951      | 309,021                        | 1,5345                   | 1,9285                                             |
| 35500                                   | 5,28095                                  | 6,39647           | 7,99779      | 309,201                        | 1,5360                   | 1,9603                                             |
| 35600                                   | 5,20653                                  | 6,29839           | 7,93662      | 309,380                        | 1,5375                   | 1,9925                                             |
| 35700                                   | 5,13324                                  | 6,20312           | 7,87599      | 309,560                        | 1,5389                   | 2,0252                                             |
| 35800                                   | 5,06107                                  | 6,10881           | 7,81589      | 309,740                        | 1,5404                   | 2,0584                                             |
| 35900                                   | 4,99000                                  | 6,01605           | 7,75632      | 309,920                        | 1,5418                   | 2,0921                                             |

| Геотермическая мощность $H, \text{ мВт}$ | Величины в функции геотермической высоты |           |                |                                 |                                             |                                            |                                                         |
|------------------------------------------|------------------------------------------|-----------|----------------|---------------------------------|---------------------------------------------|--------------------------------------------|---------------------------------------------------------|
|                                          | $p/p_c$                                  | $n/p_c$   | $\sqrt{p/p_c}$ | скорость звука $a, \text{ м/с}$ | вязкость                                    |                                            | теплопроводность $\lambda, \text{ Вт/(м}\cdot\text{К)}$ |
|                                          |                                          |           |                |                                 | динамическая $\mu, \text{ Па}\cdot\text{с}$ | кинематическая $\nu, \text{ м}^2/\text{с}$ |                                                         |
| 32000                                    | 8,56664-3                                | 1,07939-2 | 1,03903-1      | 303,131                         | 1,4868-5                                    | 1,1242-3                                   | 2,0523-2                                                |
| 32100                                    | 8,43967                                  | 1,06229   | 1,03067        | 303,317                         | 1,4883                                      | 1,1437                                     | 2,0517                                                  |
| 32200                                    | 8,31473                                  | 1,04528   | 1,02239        | 303,502                         | 1,4898                                      | 1,1635                                     | 2,0510                                                  |
| 32300                                    | 8,19180                                  | 1,02857   | 1,01418        | 303,687                         | 1,4913                                      | 1,1836                                     | 2,0503                                                  |
| 32400                                    | 8,07083                                  | 1,01215   | 1,00605        | 303,873                         | 1,4928                                      | 1,2040                                     | 2,0496                                                  |
| 32500                                    | 7,95179                                  | 9,96004-3 | 9,98000-2      | 304,058                         | 1,4943                                      | 1,2247                                     | 2,0489                                                  |
| 32600                                    | 7,83464                                  | 9,80138   | 9,90019        | 304,243                         | 1,4958                                      | 1,2458                                     | 2,0482                                                  |
| 32700                                    | 7,71936                                  | 9,64544   | 9,82112        | 304,428                         | 1,4973                                      | 1,2672                                     | 2,0475                                                  |
| 32800                                    | 7,60592                                  | 9,49216   | 9,74277        | 304,612                         | 1,4988                                      | 1,2890                                     | 2,0468                                                  |
| 32900                                    | 7,49427                                  | 9,34150   | 9,66514        | 304,797                         | 1,5003                                      | 1,3111                                     | 2,0461                                                  |
| 33000                                    | 7,38440-3                                | 9,19341-3 | 9,58823-2      | 304,982                         | 1,5018-5                                    | 1,3335-3                                   | 2,0454-2                                                |
| 33100                                    | 7,27527                                  | 9,04784   | 9,51201        | 305,166                         | 1,5033                                      | 1,3563                                     | 2,0447                                                  |
| 33200                                    | 7,16985                                  | 8,90475   | 9,43650        | 305,350                         | 1,5048                                      | 1,3795                                     | 2,0440                                                  |
| 33300                                    | 7,06511                                  | 8,76409   | 9,36167        | 305,534                         | 1,5063                                      | 1,4030                                     | 2,0433                                                  |
| 33400                                    | 6,96202                                  | 8,62582   | 9,28753        | 305,719                         | 1,5078                                      | 1,4269                                     | 2,0426                                                  |
| 33500                                    | 6,85956                                  | 8,48989   | 9,21406        | 305,903                         | 1,5092                                      | 1,4512                                     | 2,0419                                                  |
| 33600                                    | 6,76070                                  | 8,35626   | 9,14126        | 306,086                         | 1,5107                                      | 1,4758                                     | 2,0412                                                  |
| 33700                                    | 6,66241                                  | 8,22490   | 9,06912        | 306,270                         | 1,5122                                      | 1,5009                                     | 2,0405                                                  |
| 33800                                    | 6,56566                                  | 8,09575   | 8,99764        | 306,454                         | 1,5137                                      | 1,5263                                     | 2,0398                                                  |
| 33900                                    | 6,47043                                  | 7,96878   | 8,92680        | 306,637                         | 1,5152                                      | 1,5522                                     | 2,0391                                                  |
| 34000                                    | 6,37670-3                                | 7,84395-3 | 8,85681-2      | 306,821                         | 1,5167-5                                    | 1,5784-3                                   | 2,0384-2                                                |
| 34100                                    | 6,28443                                  | 7,72122   | 8,78705        | 307,004                         | 1,5182                                      | 1,6051                                     | 2,0377                                                  |
| 34200                                    | 6,19360                                  | 7,60056   | 8,71812        | 307,187                         | 1,5197                                      | 1,6322                                     | 2,0370                                                  |
| 34300                                    | 6,10419                                  | 7,48192   | 8,64981        | 307,370                         | 1,5212                                      | 1,6597                                     | 2,0363                                                  |
| 34400                                    | 6,01618                                  | 7,36527   | 8,58211        | 307,553                         | 1,5226                                      | 1,6876                                     | 2,0356                                                  |
| 34500                                    | 5,92951                                  | 7,25057   | 8,51503        | 307,736                         | 1,5241                                      | 1,7160                                     | 2,0349                                                  |
| 34600                                    | 5,84425                                  | 7,13779   | 8,44855        | 307,919                         | 1,5256                                      | 1,7448                                     | 2,0342                                                  |
| 34700                                    | 5,76028                                  | 7,02690   | 8,38268        | 308,102                         | 1,5271                                      | 1,7740                                     | 2,0335                                                  |
| 34800                                    | 5,67762                                  | 6,91785   | 8,31737        | 308,284                         | 1,5286                                      | 1,8038                                     | 2,0328                                                  |
| 34900                                    | 5,59624                                  | 6,81064   | 8,25266        | 308,467                         | 1,5300                                      | 1,8339                                     | 2,0321                                                  |
| 35000                                    | 5,51612-3                                | 6,70521-3 | 8,18853-2      | 308,649                         | 1,5315-5                                    | 1,8646-3                                   | 2,0314-2                                                |
| 35100                                    | 5,43724                                  | 6,60152   | 8,12498        | 308,831                         | 1,5330                                      | 1,8957                                     | 2,0307                                                  |
| 35200                                    | 5,35957                                  | 6,49956   | 8,06199        | 309,013                         | 1,5345                                      | 1,9273                                     | 2,0300                                                  |
| 35300                                    | 5,28311                                  | 6,39930   | 7,99956        | 309,195                         | 1,5360                                      | 1,9594                                     | 2,0293                                                  |
| 35400                                    | 5,20783                                  | 6,30069   | 7,93769        | 309,377                         | 1,5374                                      | 1,9919                                     | 2,0286                                                  |
| 35500                                    | 5,13370                                  | 6,20372   | 7,87637        | 309,559                         | 1,5389                                      | 2,0250                                     | 2,0279                                                  |
| 35600                                    | 5,06072                                  | 6,10835   | 7,81559        | 309,741                         | 1,5404                                      | 2,0586                                     | 2,0272                                                  |
| 35700                                    | 4,98885                                  | 6,01455   | 7,75535        | 309,922                         | 1,5419                                      | 2,0927                                     | 2,0265                                                  |
| 35800                                    | 4,91809                                  | 5,92231   | 7,69565        | 310,104                         | 1,5433                                      | 2,1273                                     | 2,0258                                                  |
| 35900                                    | 4,84842                                  | 5,83158   | 7,63648        | 310,285                         | 1,5448                                      | 2,1625                                     | 2,0251                                                  |

От 36000 до 39900 м

| Геометри-<br>ческая вы-<br>сота $h$ , м | Величины в функции геометрической высоты |               |                 |                                |                          |                                                  |
|-----------------------------------------|------------------------------------------|---------------|-----------------|--------------------------------|--------------------------|--------------------------------------------------|
|                                         | $p/p_c$                                  | $\rho/\rho_c$ | $\sqrt{p/\rho}$ | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                                  |
|                                         |                                          |               |                 |                                | динамич.<br>$\mu$ , Па·с | теплопро-<br>водность<br>$\lambda$ ,<br>Вт/(м·К) |
| 36000                                   | 4,92001-3                                | 5,92481-3     | 7,69728-2       | 310,099                        | 1,5433-5                 | 2,1264-3                                         |
| 36100                                   | 4,85108                                  | 5,83505       | 7,63875         | 310,278                        | 1,5448                   | 2,1611                                           |
| 36200                                   | 4,78320                                  | 5,74676       | 7,58074         | 310,458                        | 1,5462                   | 2,1964                                           |
| 36300                                   | 4,71635                                  | 5,65991       | 7,52323         | 310,637                        | 1,5477                   | 2,2322                                           |
| 36400                                   | 4,65051                                  | 5,57447       | 7,46623         | 310,816                        | 1,5491                   | 2,2685                                           |
| 36500                                   | 4,58566                                  | 5,49041       | 7,40973         | 310,995                        | 1,5506                   | 2,3054                                           |
| 36600                                   | 4,52180                                  | 5,40773       | 7,35373         | 311,173                        | 1,5520                   | 2,3429                                           |
| 36700                                   | 4,45889                                  | 5,32638       | 7,29821         | 311,352                        | 1,5535                   | 2,3809                                           |
| 36800                                   | 4,39694                                  | 5,24635       | 7,24317         | 311,531                        | 1,5549                   | 2,4194                                           |
| 36900                                   | 4,33592                                  | 5,16762       | 7,18861         | 311,709                        | 1,5564                   | 2,4586                                           |
| 37000                                   | 4,27581-3                                | 5,09015-3     | 7,13453-2       | 311,887                        | 1,5578-5                 | 2,4983-3                                         |
| 37100                                   | 4,21660                                  | 5,01394       | 7,08092         | 312,066                        | 1,5593                   | 2,5387                                           |
| 37200                                   | 4,15829                                  | 4,93896       | 7,02777         | 312,244                        | 1,5607                   | 2,5796                                           |
| 37300                                   | 4,10085                                  | 4,86518       | 6,97509         | 312,422                        | 1,5622                   | 2,6212                                           |
| 37400                                   | 4,04426                                  | 4,79259       | 6,92285         | 312,600                        | 1,5636                   | 2,6633                                           |
| 37500                                   | 3,98852                                  | 4,72117       | 6,87107         | 312,778                        | 1,5651                   | 2,7061                                           |
| 37600                                   | 3,93362                                  | 4,65089       | 6,81974         | 312,955                        | 1,5665                   | 2,7495                                           |
| 37700                                   | 3,87963                                  | 4,58174       | 6,76885         | 313,133                        | 1,5679                   | 2,7936                                           |
| 37800                                   | 3,82625                                  | 4,51369       | 6,71840         | 313,311                        | 1,5694                   | 2,8383                                           |
| 37900                                   | 3,77376                                  | 4,44673       | 6,66838         | 313,488                        | 1,5708                   | 2,8837                                           |
| 38000                                   | 3,72205-3                                | 4,38084-3     | 6,61880-2       | 313,665                        | 1,5723-5                 | 2,9298-3                                         |
| 38100                                   | 3,67111                                  | 4,31601       | 6,56963         | 313,842                        | 1,5737                   | 2,9765                                           |
| 38200                                   | 3,62092                                  | 4,25220       | 6,52089         | 314,020                        | 1,5751                   | 3,0239                                           |
| 38300                                   | 3,57148                                  | 4,18942       | 6,47257         | 314,197                        | 1,5766                   | 3,0721                                           |
| 38400                                   | 3,52276                                  | 4,12763       | 6,42466         | 314,373                        | 1,5780                   | 3,1209                                           |
| 38500                                   | 3,47477                                  | 4,06682       | 6,37716         | 314,550                        | 1,5795                   | 3,1704                                           |
| 38600                                   | 3,42748                                  | 4,00697       | 6,33007         | 314,727                        | 1,5809                   | 3,2207                                           |
| 38700                                   | 3,38089                                  | 3,94808       | 6,28337         | 314,903                        | 1,5823                   | 3,2717                                           |
| 38800                                   | 3,33499                                  | 3,89011       | 6,23708         | 315,080                        | 1,5838                   | 3,3235                                           |
| 38900                                   | 3,28976                                  | 3,83306       | 6,19117         | 315,256                        | 1,5852                   | 3,3760                                           |
| 39000                                   | 3,24520-3                                | 3,77692-3     | 6,14566-2       | 315,432                        | 1,5866-5                 | 3,4293-3                                         |
| 39100                                   | 3,20129                                  | 3,72165       | 6,10054         | 315,609                        | 1,5881                   | 3,4834                                           |
| 39200                                   | 3,15803                                  | 3,66726       | 6,05579         | 315,785                        | 1,5895                   | 3,5382                                           |
| 39300                                   | 3,11539                                  | 3,61373       | 6,01143         | 315,961                        | 1,5909                   | 3,5939                                           |
| 39400                                   | 3,07338                                  | 3,56103       | 5,96744         | 316,136                        | 1,5924                   | 3,6503                                           |
| 39500                                   | 3,03199                                  | 3,50917       | 5,92382         | 316,312                        | 1,5938                   | 3,7076                                           |
| 39600                                   | 2,99119                                  | 3,45811       | 5,88057         | 316,488                        | 1,5952                   | 3,7657                                           |
| 39700                                   | 2,95100                                  | 3,40786       | 5,83769         | 316,663                        | 1,5966                   | 3,8247                                           |
| 39800                                   | 2,91138                                  | 3,35839       | 5,79516         | 316,839                        | 1,5981                   | 3,8845                                           |
| 39900                                   | 2,87235                                  | 3,30970       | 5,75300         | 317,014                        | 1,5995                   | 3,9451                                           |

| Геоцентрическая<br>высота<br>H, м | Величины в функции геоцентрической высоты |                  |                   |                             |                     |                       |                                         |
|-----------------------------------|-------------------------------------------|------------------|-------------------|-----------------------------|---------------------|-----------------------|-----------------------------------------|
|                                   | P/P <sub>c</sub>                          | ρ/ρ <sub>c</sub> | √g/P <sub>c</sub> | скорость<br>звука<br>а, м/с | вязкость            |                       | теплопро-<br>водность<br>λ,<br>Вт/(м·К) |
|                                   |                                           |                  |                   |                             | динамич.<br>η, Па·с | кинематич.<br>ν, м²/с |                                         |
| 36000                             | 4,77981-3                                 | 5,74235-3        | 7,57783-2         | 310,467                     | 1,5463              | 2,1982-3              | 2,1452-2                                |
| 36100                             | 4,71225                                   | 5,65458          | 7,51969           | 310,648                     | 1,5478              | 2,2344                | 2,1475                                  |
| 36200                             | 4,64572                                   | 5,56826          | 7,46207           | 310,829                     | 1,5492              | 2,2712                | 2,1498                                  |
| 36300                             | 4,58021                                   | 5,48335          | 7,40496           | 311,010                     | 1,5507              | 2,3086                | 2,1521                                  |
| 36400                             | 4,51569                                   | 5,39983          | 7,34835           | 311,191                     | 1,5522              | 2,3465                | 2,1544                                  |
| 36500                             | 4,45216                                   | 5,31768          | 7,29224           | 311,371                     | 1,5536              | 2,3850                | 2,1567                                  |
| 36600                             | 4,38959                                   | 5,23687          | 7,23662           | 311,552                     | 1,5551              | 2,4241                | 2,1590                                  |
| 36700                             | 4,32798                                   | 5,15738          | 7,18149           | 311,733                     | 1,5566              | 2,4638                | 2,1613                                  |
| 36800                             | 4,26730                                   | 5,07919          | 7,12685           | 311,913                     | 1,5580              | 2,5041                | 2,1637                                  |
| 36900                             | 4,20753                                   | 5,00227          | 7,07268           | 312,093                     | 1,5595              | 2,5450                | 2,1660                                  |
| 37000                             | 4,14868                                   | 4,92661-3        | 7,01898-2         | 312,274                     | 1,5610              | 2,5865-3              | 2,1683-2                                |
| 37100                             | 4,09071                                   | 4,85217          | 6,96575           | 312,454                     | 1,5624              | 2,6285                | 2,1706                                  |
| 37200                             | 4,03362                                   | 4,77894          | 6,91299           | 312,634                     | 1,5639              | 2,6714                | 2,1729                                  |
| 37300                             | 3,97739                                   | 4,70690          | 6,86069           | 312,814                     | 1,5653              | 2,7148                | 2,1752                                  |
| 37400                             | 3,92200                                   | 4,63603          | 6,80884           | 312,993                     | 1,5668              | 2,7589                | 2,1775                                  |
| 37500                             | 3,86745                                   | 4,56630          | 6,75744           | 313,173                     | 1,5683              | 2,8036                | 2,1798                                  |
| 37600                             | 3,81372                                   | 4,49770          | 6,70649           | 313,353                     | 1,5697              | 2,8490                | 2,1821                                  |
| 37700                             | 3,76080                                   | 4,43021          | 6,65598           | 313,532                     | 1,5712              | 2,8951                | 2,1844                                  |
| 37800                             | 3,70867                                   | 4,36381          | 6,60591           | 313,712                     | 1,5726              | 2,9419                | 2,1867                                  |
| 37900                             | 3,65732                                   | 4,29847          | 6,55627           | 313,891                     | 1,5741              | 2,9894                | 2,1890                                  |
| 38000                             | 3,60674-3                                 | 4,23419-3        | 6,50706-2         | 314,070                     | 1,5756-5            | 3,0376-3              | 2,1913-2                                |
| 38100                             | 3,55691                                   | 4,17094          | 6,45828           | 314,249                     | 1,5770              | 3,0865                | 2,1936                                  |
| 38200                             | 3,50783                                   | 4,10870          | 6,40992           | 314,428                     | 1,5785              | 3,1361                | 2,1958                                  |
| 38300                             | 3,45948                                   | 4,04746          | 6,36197           | 314,607                     | 1,5799              | 3,1865                | 2,1981                                  |
| 38400                             | 3,41185                                   | 3,98721          | 6,31443           | 314,786                     | 1,5814              | 3,2377                | 2,2004                                  |
| 38500                             | 3,36493                                   | 3,92791          | 6,26731           | 314,964                     | 1,5828              | 3,2896                | 2,2027                                  |
| 38600                             | 3,31871                                   | 3,86957          | 6,22059           | 315,143                     | 1,5843              | 3,3422                | 2,2050                                  |
| 38700                             | 3,27317                                   | 3,81215          | 6,17427           | 315,322                     | 1,5857              | 3,3957                | 2,2073                                  |
| 38800                             | 3,22831                                   | 3,75566          | 6,12834           | 315,500                     | 1,5872              | 3,4499                | 2,2096                                  |
| 38900                             | 3,18412                                   | 3,70006          | 6,08281           | 315,678                     | 1,5885              | 3,5049                | 2,2119                                  |
| 39000                             | 3,14057-3                                 | 3,64534-3        | 6,03767-2         | 315,856                     | 1,5901-5            | 3,5608-3              | 2,2142-2                                |
| 39100                             | 3,09767                                   | 3,59150          | 5,99291           | 316,034                     | 1,5915              | 3,6175                | 2,2165                                  |
| 39200                             | 3,05541                                   | 3,53851          | 5,94853           | 316,212                     | 1,5930              | 3,6750                | 2,2188                                  |
| 39300                             | 3,01377                                   | 3,48636          | 5,90455           | 316,390                     | 1,5944              | 3,7333                | 2,2211                                  |
| 39400                             | 2,97274                                   | 3,43503          | 5,86091           | 316,568                     | 1,5959              | 3,7926                | 2,2233                                  |
| 39500                             | 2,93231                                   | 3,38452          | 5,81766           | 316,746                     | 1,5973              | 3,8526                | 2,2256                                  |
| 39600                             | 2,89248                                   | 3,33480          | 5,77478           | 316,923                     | 1,5988              | 3,9136                | 2,2279                                  |
| 39700                             | 2,85323                                   | 3,28588          | 5,73226           | 317,101                     | 1,6002              | 3,9755                | 2,2302                                  |
| 39800                             | 2,81456                                   | 3,23772          | 5,69009           | 317,278                     | 1,6017              | 4,0382                | 2,2325                                  |
| 39900                             | 2,77646                                   | 3,19032          | 5,64829           | 317,455                     | 1,6031              | 4,1019                | 2,2348                                  |



От 40000 до 43900 м

| Геометри-<br>ческая вы-<br>сота $h$ , м | Величины в функции геометрической высоты |               |                   |                                |                          |                                                  |
|-----------------------------------------|------------------------------------------|---------------|-------------------|--------------------------------|--------------------------|--------------------------------------------------|
|                                         | $p/p_c$                                  | $\rho/\rho_c$ | $\sqrt{p/\rho_c}$ | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                                  |
|                                         |                                          |               |                   |                                | динамич.<br>$\mu$ , Па·с | теплопро-<br>водность<br>$\lambda$ ,<br>Вт/(м·К) |
| 40000                                   | 2,83388-3                                | 3,26176-3     | 5,71119-2         | 317,189                        | 1,6009-5                 | 4,0067-3                                         |
| 40100                                   | 2,79596                                  | 3,21458       | 5,66972           | 317,364                        | 1,6024                   | 4,0691                                           |
| 40200                                   | 2,75860                                  | 3,16812       | 5,62861           | 317,539                        | 1,6038                   | 4,1324                                           |
| 40300                                   | 2,72178                                  | 3,12240       | 5,58784           | 317,714                        | 1,6052                   | 4,1967                                           |
| 40400                                   | 2,68549                                  | 3,07738       | 5,54741           | 317,889                        | 1,6066                   | 4,2618                                           |
| 40500                                   | 2,64972                                  | 3,03306       | 5,50732           | 318,064                        | 1,6080                   | 4,3279                                           |
| 40600                                   | 2,61447                                  | 2,98943       | 5,46756           | 318,238                        | 1,6095                   | 4,3950                                           |
| 40700                                   | 2,57973                                  | 2,94647       | 5,42814           | 318,413                        | 1,6109                   | 4,4630                                           |
| 40800                                   | 2,54549                                  | 2,90418       | 5,38904           | 318,587                        | 1,6123                   | 4,5320                                           |
| 40900                                   | 2,51174                                  | 2,86254       | 5,35027           | 318,762                        | 1,6137                   | 4,6020                                           |
| 41000                                   | 2,47848-3                                | 2,82154-3     | 5,31182-2         | 318,936                        | 1,6151-5                 | 4,6729-3                                         |
| 41100                                   | 2,44569                                  | 2,78118       | 5,27369           | 319,110                        | 1,6166                   | 4,7449                                           |
| 41200                                   | 2,41337                                  | 2,74144       | 5,23588           | 319,284                        | 1,6180                   | 4,8179                                           |
| 41300                                   | 2,38152                                  | 2,70231       | 5,19837           | 319,458                        | 1,6194                   | 4,8919                                           |
| 41400                                   | 2,35012                                  | 2,66378       | 5,16118           | 319,632                        | 1,6208                   | 4,9670                                           |
| 41500                                   | 2,31916                                  | 2,62584       | 5,12430           | 319,805                        | 1,6222                   | 5,0432                                           |
| 41600                                   | 2,28866                                  | 2,58849       | 5,08772           | 319,979                        | 1,6236                   | 5,1204                                           |
| 41700                                   | 2,25858                                  | 2,55170       | 5,05144           | 320,152                        | 1,6250                   | 5,1988                                           |
| 41800                                   | 2,22893                                  | 2,51548       | 5,01546           | 320,326                        | 1,6265                   | 5,2782                                           |
| 41900                                   | 2,19971                                  | 2,47982       | 4,97978           | 320,499                        | 1,6279                   | 5,3588                                           |
| 42000                                   | 2,17090-3                                | 2,44469-3     | 4,94439-2         | 320,672                        | 1,6293-5                 | 5,4405-3                                         |
| 42100                                   | 2,14249                                  | 2,41011       | 4,90928           | 320,845                        | 1,6307                   | 5,5233                                           |
| 42200                                   | 2,11450                                  | 2,37605       | 4,87447           | 321,018                        | 1,6321                   | 5,6073                                           |
| 42300                                   | 2,08689                                  | 2,34251       | 4,83994           | 321,191                        | 1,6335                   | 5,6925                                           |
| 42400                                   | 2,05968                                  | 2,30947       | 4,80570           | 321,364                        | 1,6349                   | 5,7789                                           |
| 42500                                   | 2,03285                                  | 2,27694       | 4,77173           | 321,537                        | 1,6363                   | 5,8665                                           |
| 42600                                   | 2,00640                                  | 2,24491       | 4,73805           | 321,710                        | 1,6377                   | 5,9554                                           |
| 42700                                   | 1,98032                                  | 2,21336       | 4,70463           | 321,882                        | 1,6391                   | 6,0454                                           |
| 42800                                   | 1,95461                                  | 2,18228       | 4,67149           | 322,054                        | 1,6405                   | 6,1368                                           |
| 42900                                   | 1,92927                                  | 2,15168       | 4,63862           | 322,227                        | 1,6419                   | 6,2294                                           |
| 43000                                   | 1,90427-3                                | 2,12154-3     | 4,60601-2         | 322,399                        | 1,6433-5                 | 6,3233-3                                         |
| 43100                                   | 1,87963                                  | 2,09185       | 4,57367           | 322,571                        | 1,6447                   | 6,4185                                           |
| 43200                                   | 1,85534                                  | 2,06261       | 4,54159           | 322,743                        | 1,6461                   | 6,5150                                           |
| 43300                                   | 1,83138                                  | 2,03381       | 4,50978           | 322,915                        | 1,6476                   | 6,6129                                           |
| 43400                                   | 1,80776                                  | 2,00544       | 4,47822           | 323,087                        | 1,6490                   | 6,7121                                           |
| 43500                                   | 1,78447                                  | 1,97750       | 4,44691           | 323,259                        | 1,6504                   | 6,8128                                           |
| 43600                                   | 1,76150                                  | 1,94998       | 4,41586           | 323,430                        | 1,6517                   | 6,9148                                           |
| 43700                                   | 1,73886                                  | 1,92287       | 4,38505           | 323,602                        | 1,6531                   | 7,0182                                           |
| 43800                                   | 1,71652                                  | 1,89617       | 4,35450           | 323,773                        | 1,6545                   | 7,1230                                           |
| 43900                                   | 1,69450                                  | 1,86986       | 4,32419           | 323,945                        | 1,6559                   | 7,2293                                           |

| гидротензи-<br>онная высо-<br>та $H$ , м | Величины и функции геотензиальной высоты |               |                      |                                      |                          |                                                     |
|------------------------------------------|------------------------------------------|---------------|----------------------|--------------------------------------|--------------------------|-----------------------------------------------------|
|                                          | $\rho/\rho_c$                            | $\eta/\eta_c$ | $\sqrt{\eta/\rho_c}$ | скорость<br>зависа<br>$\alpha$ , м/с | вязкость                 |                                                     |
|                                          |                                          |               |                      |                                      | динамич.<br>$\mu$ , Па·с | теплотро-<br>проводность<br>$\lambda$ ,<br>Вт/(м·К) |
| 40000                                    | 2,73891—3                                | 3,14366—3     | 5,60684—2            | 317,633                              | 1,6045—5                 | 4,1666—3                                            |
| 40100                                    | 2,70191                                  | 3,09774       | 5,56574              | 317,810                              | 1,6060                   | 4,2321                                              |
| 40200                                    | 2,66545                                  | 3,05254       | 5,52498              | 317,987                              | 1,6074                   | 4,2986                                              |
| 40300                                    | 2,62953                                  | 3,00805       | 5,48457              | 318,164                              | 1,6089                   | 4,3661                                              |
| 40400                                    | 2,59412                                  | 2,96426       | 5,44450              | 318,340                              | 1,6103                   | 4,4356                                              |
| 40500                                    | 2,55923                                  | 2,92115       | 5,40476              | 318,517                              | 1,6117                   | 4,5041                                              |
| 40600                                    | 2,52485                                  | 2,87871       | 5,36536              | 318,694                              | 1,6132                   | 4,5745                                              |
| 40700                                    | 2,49097                                  | 2,83694       | 5,32629              | 318,870                              | 1,6146                   | 4,6460                                              |
| 40800                                    | 2,45758                                  | 2,79581       | 5,28755              | 319,047                              | 1,6160                   | 4,7186                                              |
| 40900                                    | 2,42467                                  | 2,75533       | 5,24913              | 319,223                              | 1,6175                   | 4,7921                                              |
| 41000                                    | 2,39224—3                                | 2,71548—3     | 5,21103—2            | 319,399                              | 1,6189—5                 | 4,8668—3                                            |
| 41100                                    | 2,36028                                  | 2,67625       | 5,17325              | 319,575                              | 1,6203                   | 4,9425                                              |
| 41200                                    | 2,32878                                  | 2,63763       | 5,13578              | 319,751                              | 1,6218                   | 5,0193                                              |
| 41300                                    | 2,29773                                  | 2,59960       | 5,09863              | 319,927                              | 1,6232                   | 5,0972                                              |
| 41400                                    | 2,26711                                  | 2,56217       | 5,06178              | 320,103                              | 1,6246                   | 5,1762                                              |
| 41500                                    | 2,23698                                  | 2,52531       | 5,02525              | 320,279                              | 1,6261                   | 5,2564                                              |
| 41600                                    | 2,20725                                  | 2,48902       | 4,98901              | 320,454                              | 1,6275                   | 5,3377                                              |
| 41700                                    | 2,17796                                  | 2,45330       | 4,95308              | 320,630                              | 1,6289                   | 5,4202                                              |
| 41800                                    | 2,14908                                  | 2,41812       | 4,91744              | 320,805                              | 1,6304                   | 5,5039                                              |
| 41900                                    | 2,12061                                  | 2,38349       | 4,88210              | 320,980                              | 1,6318                   | 5,5888                                              |
| 42000                                    | 2,09256—3                                | 2,34939—3     | 4,84705—2            | 321,156                              | 1,6332—5                 | 5,6748—3                                            |
| 42100                                    | 2,06490                                  | 2,31581       | 4,81229              | 321,331                              | 1,6346                   | 5,7621                                              |
| 42200                                    | 2,03764                                  | 2,28275       | 4,77782              | 321,506                              | 1,6361                   | 5,8507                                              |
| 42300                                    | 2,01077                                  | 2,25020       | 4,74363              | 321,681                              | 1,6375                   | 5,9405                                              |
| 42400                                    | 1,98429                                  | 2,21815       | 4,70972              | 321,856                              | 1,6389                   | 6,0316                                              |
| 42500                                    | 1,95818                                  | 2,18658       | 4,67669              | 322,030                              | 1,6403                   | 6,1240                                              |
| 42600                                    | 1,93244                                  | 2,15550       | 4,64274              | 322,205                              | 1,6418                   | 6,2177                                              |
| 42700                                    | 1,90706                                  | 2,12490       | 4,60966              | 322,380                              | 1,6432                   | 6,3127                                              |
| 42800                                    | 1,88205                                  | 2,09476       | 4,57685              | 322,554                              | 1,6446                   | 6,4090                                              |
| 42900                                    | 1,85739                                  | 2,06508       | 4,54431              | 322,729                              | 1,6460                   | 6,5068                                              |
| 43000                                    | 1,83308—3                                | 2,03585—3     | 4,51204—2            | 322,903                              | 1,6475—5                 | 6,6059—3                                            |
| 43100                                    | 1,80911                                  | 2,00707       | 4,48003              | 323,077                              | 1,6489                   | 6,7064                                              |
| 43200                                    | 1,78549                                  | 1,97872       | 4,44828              | 323,251                              | 1,6503                   | 6,8083                                              |
| 43300                                    | 1,76219                                  | 1,95081       | 4,41679              | 323,425                              | 1,6517                   | 6,9117                                              |
| 43400                                    | 1,73923                                  | 1,92331       | 4,38556              | 323,599                              | 1,6531                   | 7,0165                                              |
| 43500                                    | 1,71658                                  | 1,89624       | 4,35458              | 323,773                              | 1,6545                   | 7,1228                                              |
| 43600                                    | 1,69426                                  | 1,86957       | 4,32385              | 323,947                              | 1,6560                   | 7,2305                                              |
| 43700                                    | 1,67225                                  | 1,84331       | 4,29338              | 324,120                              | 1,6574                   | 7,3398                                              |
| 43800                                    | 1,65055                                  | 1,81744       | 4,26314              | 324,294                              | 1,6588                   | 7,4506                                              |
| 43900                                    | 1,62915                                  | 1,79196       | 4,23316              | 324,467                              | 1,6602                   | 7,5630                                              |

От 44000 до 47900 м

| Геометри-<br>ческая вы-<br>сота H, м | Величины в функции геометрической высоты |               |                      |                             |                          |                                         |
|--------------------------------------|------------------------------------------|---------------|----------------------|-----------------------------|--------------------------|-----------------------------------------|
|                                      | $\rho/\rho_c$                            | $\rho/\rho_c$ | $\sqrt{\rho/\rho_c}$ | скорость<br>звука<br>а, м/с | вязкость                 |                                         |
|                                      |                                          |               |                      |                             | динамич.<br>$\mu$ , Па·с | кинематич.<br>$\nu$ , м <sup>2</sup> /с |
| 44000                                | 1,67279-3                                | 1,84395-3     | 4,29413-2            | 324,116                     | 1,6573-5                 | 7,3371-3                                |
| 44100                                | 1,65138                                  | 1,81843       | 4,26430              | 324,287                     | 1,6587                   | 7,4464                                  |
| 44200                                | 1,63026                                  | 1,79328       | 4,23472              | 324,458                     | 1,6601                   | 7,5571                                  |
| 44300                                | 1,60944                                  | 1,76851       | 4,20537              | 324,629                     | 1,6615                   | 7,6691                                  |
| 44400                                | 1,58890                                  | 1,74411       | 4,17626              | 324,800                     | 1,6629                   | 7,7832                                  |
| 44500                                | 1,56865                                  | 1,72007       | 4,14738              | 324,971                     | 1,6643                   | 7,8986                                  |
| 44600                                | 1,54868                                  | 1,69639       | 4,11873              | 325,141                     | 1,6657                   | 8,0156                                  |
| 44700                                | 1,52899                                  | 1,67306       | 4,09031              | 325,312                     | 1,6671                   | 8,1341                                  |
| 44800                                | 1,50956                                  | 1,65008       | 4,06211              | 325,483                     | 1,6685                   | 8,2543                                  |
| 44900                                | 1,49040                                  | 1,62743       | 4,03414              | 325,653                     | 1,6699                   | 8,3761                                  |
| 45000                                | 1,47151-3                                | 1,60512-3     | 4,00639-2            | 325,823                     | 1,6713-5                 | 8,4996-3                                |
| 45100                                | 1,45287                                  | 1,58314       | 3,97887              | 325,993                     | 1,6726                   | 8,6248                                  |
| 45200                                | 1,43450                                  | 1,56148       | 3,95156              | 326,164                     | 1,6740                   | 8,7516                                  |
| 45300                                | 1,41637                                  | 1,54014       | 3,92447              | 326,334                     | 1,6754                   | 8,8802                                  |
| 45400                                | 1,39849                                  | 1,51912       | 3,89759              | 326,504                     | 1,6768                   | 9,0106                                  |
| 45500                                | 1,38085                                  | 1,49840       | 3,87092              | 326,673                     | 1,6782                   | 9,1427                                  |
| 45600                                | 1,36346                                  | 1,47799       | 3,84447              | 326,843                     | 1,6796                   | 9,2766                                  |
| 45700                                | 1,34630                                  | 1,45788       | 3,81822              | 327,013                     | 1,6810                   | 9,4123                                  |
| 45800                                | 1,32938                                  | 1,43807       | 3,79218              | 327,182                     | 1,6823                   | 9,5499                                  |
| 45900                                | 1,31269                                  | 1,41854       | 3,76635              | 327,352                     | 1,6837                   | 9,6893                                  |
| 46000                                | 1,29622-3                                | 1,39930-3     | 3,74072-2            | 327,521                     | 1,6851-5                 | 9,8306-3                                |
| 46100                                | 1,27998                                  | 1,38034       | 3,71529              | 327,690                     | 1,6865                   | 9,9738                                  |
| 46200                                | 1,26396                                  | 1,36165       | 3,69005              | 327,860                     | 1,6879                   | 1,0119-2                                |
| 46300                                | 1,24816                                  | 1,34324       | 3,66503              | 328,029                     | 1,6892                   | 1,0266                                  |
| 46400                                | 1,23257                                  | 1,32510       | 3,64019              | 328,198                     | 1,6906                   | 1,0415                                  |
| 46500                                | 1,21719                                  | 1,30722       | 3,61555              | 328,367                     | 1,6920                   | 1,0566                                  |
| 46600                                | 1,20202                                  | 1,28960       | 3,59110              | 328,535                     | 1,6934                   | 1,0719                                  |
| 46700                                | 1,18705                                  | 1,27224       | 3,56685              | 328,704                     | 1,6947                   | 1,0874                                  |
| 46800                                | 1,17229                                  | 1,25513       | 3,54278              | 328,873                     | 1,6961                   | 1,1031                                  |
| 46900                                | 1,15772                                  | 1,23826       | 3,51890              | 329,041                     | 1,6975                   | 1,1191                                  |
| 47000                                | 1,14336-3                                | 1,22164-3     | 3,49520-2            | 329,210                     | 1,6989-5                 | 1,1352-2                                |
| 47100                                | 1,12918                                  | 1,20526       | 3,47169              | 329,378                     | 1,7002                   | 1,1516                                  |
| 47200                                | 1,11519                                  | 1,18912       | 3,44836              | 329,546                     | 1,7016                   | 1,1682                                  |
| 47300                                | 1,10140                                  | 1,17321       | 3,42522              | 329,715                     | 1,7030                   | 1,1850                                  |
| 47400                                | 1,08778                                  | 1,15812       | 3,40311              | 329,799                     | 1,7037                   | 1,2009                                  |
| 47500                                | 1,07434                                  | 1,14380       | 3,38202              | 329,799                     | 1,7037                   | 1,2159                                  |
| 47600                                | 1,06106                                  | 1,12967       | 3,36105              | 329,799                     | 1,7037                   | 1,2311                                  |
| 47700                                | 1,04795                                  | 1,11571       | 3,34022              | 329,799                     | 1,7037                   | 1,2465                                  |
| 47800                                | 1,03500                                  | 1,10192       | 3,31952              | 329,799                     | 1,7037                   | 1,2621                                  |
| 47900                                | 1,02220                                  | 1,08830       | 3,29891              | 329,799                     | 1,7037                   | 1,2779                                  |

| Геопотенциальная высота Н, м | Величины в функции геопотенциальной высоты |           |           |                       |                    |                                   |                                       |
|------------------------------|--------------------------------------------|-----------|-----------|-----------------------|--------------------|-----------------------------------|---------------------------------------|
|                              | $\rho/\rho_c$                              | $g/g_c$   | $V/v_c$   | скорость звука а, м/с | вязкость           |                                   | теплопроводность $\lambda$ , Вт/(м·К) |
|                              |                                            |           |           |                       | динамическая, Па·с | кинематическая, м <sup>2</sup> /с |                                       |
| 44000                        | 1,60806-3                                  | 1,76687-3 | 4,20342-2 | 324,641               | 1,6616-5           | 7,6770-3                          | 2,3279-2                              |
| 44100                        | 1,58726                                    | 1,74215   | 4,17391   | 324,814               | 1,6630             | 7,7925                            | 2,3302                                |
| 44200                        | 1,56675                                    | 1,71781   | 4,14465   | 324,987               | 1,6644             | 7,9096                            | 2,3324                                |
| 44300                        | 1,54652                                    | 1,69383   | 4,11562   | 325,160               | 1,6658             | 8,0284                            | 2,3347                                |
| 44400                        | 1,52658                                    | 1,67021   | 4,08682   | 325,333               | 1,6673             | 8,1488                            | 2,3370                                |
| 44500                        | 1,50692                                    | 1,64695   | 4,05826   | 325,506               | 1,6687             | 8,2709                            | 2,3392                                |
| 44600                        | 1,48753                                    | 1,62403   | 4,02993   | 325,679               | 1,6701             | 8,3947                            | 2,3415                                |
| 44700                        | 1,46841                                    | 1,60146   | 4,00182   | 325,851               | 1,6715             | 8,5202                            | 2,3437                                |
| 44800                        | 1,44955                                    | 1,57922   | 3,97394   | 326,024               | 1,6729             | 8,6475                            | 2,3460                                |
| 44900                        | 1,43096                                    | 1,55732   | 3,94628   | 326,197               | 1,6743             | 8,7765                            | 2,3482                                |
| 45000                        | 1,41262-3                                  | 1,53574-3 | 3,91885-2 | 326,369               | 1,6757-5           | 8,9073-3                          | 2,3505-2                              |
| 45100                        | 1,39454                                    | 1,51448   | 3,89163   | 326,541               | 1,6771             | 9,0399                            | 2,3527                                |
| 45200                        | 1,37671                                    | 1,49354   | 3,86463   | 326,714               | 1,6785             | 9,1743                            | 2,3550                                |
| 45300                        | 1,35912                                    | 1,47291   | 3,83785   | 326,886               | 1,6799             | 9,3106                            | 2,3572                                |
| 45400                        | 1,34178                                    | 1,45259   | 3,81128   | 327,058               | 1,6813             | 9,4487                            | 2,3595                                |
| 45500                        | 1,32468                                    | 1,43256   | 3,78492   | 327,230               | 1,6827             | 9,5888                            | 2,3618                                |
| 45600                        | 1,30781                                    | 1,41284   | 3,75877   | 327,402               | 1,6841             | 9,7307                            | 2,3640                                |
| 45700                        | 1,29118                                    | 1,39340   | 3,73283   | 327,573               | 1,6855             | 9,8747                            | 2,3662                                |
| 45800                        | 1,27477                                    | 1,37426   | 3,70710   | 327,745               | 1,6869             | 1,0021-2                          | 2,3685                                |
| 45900                        | 1,25859                                    | 1,35539   | 3,68157   | 327,917               | 1,6883             | 1,0168                            | 2,3707                                |
| 46000                        | 1,24263-3                                  | 1,33681-3 | 3,65624-2 | 328,088               | 1,6897-5           | 1,0318-2                          | 2,3730-2                              |
| 46100                        | 1,22689                                    | 1,31850   | 3,63111   | 328,260               | 1,6911             | 1,0470                            | 2,3752                                |
| 46200                        | 1,21136                                    | 1,30045   | 3,60618   | 328,431               | 1,6925             | 1,0624                            | 2,3775                                |
| 46300                        | 1,19605                                    | 1,28268   | 3,58145   | 328,602               | 1,6939             | 1,0780                            | 2,3797                                |
| 46400                        | 1,18095                                    | 1,26516   | 3,55691   | 328,774               | 1,6953             | 1,0939                            | 2,3820                                |
| 46500                        | 1,16605                                    | 1,24790   | 3,53257   | 328,945               | 1,6967             | 1,1099                            | 2,3842                                |
| 46600                        | 1,15136                                    | 1,23090   | 3,50841   | 329,116               | 1,6981             | 1,1262                            | 2,3865                                |
| 46700                        | 1,13686                                    | 1,21414   | 3,48445   | 329,287               | 1,6995             | 1,1427                            | 2,3887                                |
| 46800                        | 1,12257                                    | 1,19763   | 3,46068   | 329,457               | 1,7009             | 1,1594                            | 2,3909                                |
| 46900                        | 1,10846                                    | 1,18136   | 3,43709   | 329,628               | 1,7023             | 1,1763                            | 2,3932                                |
| 47000                        | 1,09455-4                                  | 1,16533-3 | 3,41369-2 | 329,799               | 1,7037-5           | 1,1934-2                          | 2,3954-2                              |
| 47100                        | 1,08082                                    | 1,15071   | 3,39221   | 329,970               | 1,7051             | 1,2086                            | 2,3954                                |
| 47200                        | 1,06727                                    | 1,13627   | 3,37087   | 329,999               | 1,7073             | 1,2240                            | 2,3954                                |
| 47300                        | 1,05388                                    | 1,12202   | 3,34966   | 329,999               | 1,7097             | 1,2395                            | 2,3964                                |
| 47400                        | 1,04066                                    | 1,10795   | 3,32859   | 329,999               | 1,7107             | 1,2553                            | 2,3964                                |
| 47500                        | 1,02781                                    | 1,09405   | 3,30764   | 329,999               | 1,7121             | 1,2712                            | 2,3954                                |
| 47600                        | 1,01472                                    | 1,08033   | 3,28683   | 329,999               | 1,7135             | 1,2873                            | 2,3954                                |
| 47700                        | 1,00199                                    | 1,06678   | 3,26615   | 329,999               | 1,7150             | 1,3037                            | 2,3954                                |
| 47800                        | 9,89421                                    | 1,05340   | 3,24561   | 329,999               | 1,7164             | 1,3203                            | 2,3954                                |
| 47900                        | 9,77011                                    | 1,04018   | 3,22519   | 329,999               | 1,7178             | 1,3370                            | 2,3954                                |

От 48000 до 52800 м

| Геометри-<br>ческая вы-<br>сота $h$ , м | Величины в функции геометрической высоты |               |                   |                                |                          |                                                  |
|-----------------------------------------|------------------------------------------|---------------|-------------------|--------------------------------|--------------------------|--------------------------------------------------|
|                                         | $p/p_c$                                  | $\rho/\rho_c$ | $\sqrt{p/\rho_c}$ | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                                  |
|                                         |                                          |               |                   |                                | динамич.<br>$\mu$ , Па·с | теплопро-<br>водность<br>$\lambda$ ,<br>Вт/(м·К) |
| 48000                                   | 1,00957-3                                | 1,07485-3     | 3,27849-2         | 329,799                        | 1,7037-5                 | 1,2939-2                                         |
| 48100                                   | 9,97099-4                                | 1,06157       | 3,25817           | 329,799                        | 1,7037                   | 1,3101                                           |
| 48200                                   | 9,84778                                  | 1,04845       | 3,2378            | 329,799                        | 1,7037                   | 1,3265                                           |
| 48300                                   | 9,72610                                  | 1,03550       | 3,21791           | 329,799                        | 1,7037                   | 1,3431                                           |
| 48400                                   | 9,60593                                  | 1,02270       | 3,19797           | 329,799                        | 1,7037                   | 1,3599                                           |
| 48500                                   | 9,48724                                  | 1,01007       | 3,17816           | 329,799                        | 1,7037                   | 1,3769                                           |
| 48600                                   | 9,37002                                  | 9,97588-4     | 3,15845           | 329,799                        | 1,7037                   | 1,3941                                           |
| 48700                                   | 9,25426                                  | 9,85263       | 3,13889           | 329,799                        | 1,7037                   | 1,4116                                           |
| 48800                                   | 9,13993                                  | 9,73091       | 3,11944           | 329,799                        | 1,7037                   | 1,4292                                           |
| 48900                                   | 9,02702                                  | 9,61070       | 3,10011           | 329,799                        | 1,7037                   | 1,4471                                           |
| 49000                                   | 8,91550-4                                | 9,49197-4     | 3,08090-2         | 329,799                        | 1,7037-5                 | 1,4652-2                                         |
| 49100                                   | 8,80537                                  | 9,37471       | 3,06182           | 329,799                        | 1,7037                   | 1,4835                                           |
| 49200                                   | 8,69660                                  | 9,25891       | 3,04284           | 329,799                        | 1,7037                   | 1,5021                                           |
| 49300                                   | 8,58917                                  | 9,14454       | 3,02399           | 329,799                        | 1,7037                   | 1,5209                                           |
| 49400                                   | 8,48303                                  | 9,03159       | 3,00526           | 329,799                        | 1,7037                   | 1,5399                                           |
| 49500                                   | 8,37830                                  | 8,92003       | 2,98664           | 329,799                        | 1,7037                   | 1,5591                                           |
| 49600                                   | 8,27482                                  | 8,80986       | 2,96814           | 329,799                        | 1,7037                   | 1,5786                                           |
| 49700                                   | 8,17262                                  | 8,70105       | 2,94975           | 329,799                        | 1,7037                   | 1,5984                                           |
| 49800                                   | 8,07168                                  | 8,59359       | 2,93148           | 329,799                        | 1,7037                   | 1,6184                                           |
| 49900                                   | 7,97200                                  | 8,48746       | 2,91332           | 329,799                        | 1,7037                   | 1,6386                                           |
| 50000                                   | 7,87354-4                                | 8,38264-4     | 2,89528-2         | 329,799                        | 1,7037-5                 | 1,6591-2                                         |
| 50100                                   | 7,77631                                  | 8,27912       | 2,87735           | 329,799                        | 1,7037                   | 1,6798                                           |
| 50200                                   | 7,68028                                  | 8,17688       | 2,85952           | 329,799                        | 1,7037                   | 1,7008                                           |
| 50300                                   | 7,58544                                  | 8,07591       | 2,84181           | 329,799                        | 1,7037                   | 1,7221                                           |
| 50400                                   | 7,49178                                  | 7,97619       | 2,82421           | 329,799                        | 1,7037                   | 1,7436                                           |
| 50500                                   | 7,39927                                  | 7,87770       | 2,80672           | 329,799                        | 1,7037                   | 1,7654                                           |
| 50600                                   | 7,30791                                  | 7,78043       | 2,78934           | 329,799                        | 1,7037                   | 1,7875                                           |
| 50700                                   | 7,21768                                  | 7,68436       | 2,77207           | 329,799                        | 1,7037                   | 1,8099                                           |
| 50800                                   | 7,12856                                  | 7,58949       | 2,75493           | 329,799                        | 1,7037                   | 1,8325                                           |
| 50900                                   | 7,04055                                  | 7,49579       | 2,73784           | 329,799                        | 1,7037                   | 1,8554                                           |
| 51000                                   | 6,95363-4                                | 7,40324-4     | 2,72089-2         | 329,799                        | 1,7037-5                 | 1,8786-2                                         |
| 51200                                   | 6,78300                                  | 7,22158       | 2,68730           | 329,799                        | 1,7037                   | 1,9258                                           |
| 51400                                   | 6,61657                                  | 7,04439       | 2,65413           | 329,799                        | 1,7037                   | 1,9743                                           |
| 51600                                   | 6,45409                                  | 6,88154       | 2,62384           | 329,484                        | 1,7011                   | 2,0171                                           |
| 51800                                   | 6,29528                                  | 6,72887       | 2,59401           | 329,148                        | 1,6984                   | 2,0604                                           |
| 52000                                   | 6,14009                                  | 6,57643       | 2,56445           | 328,811                        | 1,6956                   | 2,1048                                           |
| 52200                                   | 5,98842                                  | 6,42714       | 2,53518           | 328,474                        | 1,6929                   | 2,1502                                           |
| 52400                                   | 5,84020                                  | 6,28096       | 2,50618           | 328,137                        | 1,6901                   | 2,1966                                           |
| 52600                                   | 5,69538                                  | 6,13782       | 2,47746           | 327,800                        | 1,6874                   | 2,2442                                           |
| 52800                                   | 5,55386                                  | 6,99766       | 2,44901           | 327,462                        | 1,6846                   | 2,2929                                           |

| Геопотенциальная высота $H$ , м | Величины в функции геопотенциальной высоты |               |                   |                          |                       |                                       |
|---------------------------------|--------------------------------------------|---------------|-------------------|--------------------------|-----------------------|---------------------------------------|
|                                 | $p/p_c$                                    | $\rho/\rho_c$ | $\gamma/\gamma_c$ | скорость звука $a$ , м/с | вязкость              |                                       |
|                                 |                                            |               |                   |                          | динамич. $\mu$ , Па·с | теплопроводность $\lambda$ , Вт/(м·К) |
| 48000                           | 9,64756-4                                  | 1,02714-3     | 3,20490-2         | 329,799                  | 1,7037-5              | 1,3540-2                              |
| 48100                           | 9,52654                                    | 1,01425       | 3,18473           | 329,799                  | 1,7037                | 1,3712                                |
| 48200                           | 9,40705                                    | 1,00153       | 3,16470           | 329,799                  | 1,7037                | 1,3886                                |
| 48300                           | 9,28905                                    | 9,88968-4     | 3,14479           | 329,799                  | 1,7037                | 1,4063                                |
| 48400                           | 9,17254                                    | 9,76563       | 3,12500           | 329,799                  | 1,7037                | 1,4241                                |
| 48500                           | 9,05749                                    | 9,64313       | 3,10534           | 329,799                  | 1,7037                | 1,4422                                |
| 48600                           | 8,94387                                    | 9,52218       | 3,08580           | 329,799                  | 1,7037                | 1,4605                                |
| 48700                           | 8,83169                                    | 9,40274       | 3,06639           | 329,799                  | 1,7037                | 1,4791                                |
| 48800                           | 8,72091                                    | 9,28479       | 3,04710           | 329,799                  | 1,7037                | 1,4979                                |
| 48900                           | 8,61152                                    | 9,16833       | 3,02793           | 329,799                  | 1,7037                | 1,5169                                |
| 49000                           | 8,50350-4                                  | 9,05333-4     | 3,00888-2         | 329,799                  | 1,7037-5              | 1,5362-2                              |
| 49100                           | 8,39684                                    | 8,93977       | 2,98995           | 329,799                  | 1,7037                | 1,5557                                |
| 49200                           | 8,29152                                    | 8,82764       | 2,97113           | 329,799                  | 1,7037                | 1,5755                                |
| 49300                           | 8,18751                                    | 8,71691       | 2,95244           | 329,799                  | 1,7037                | 1,5955                                |
| 49400                           | 8,08481                                    | 8,60757       | 2,93387           | 329,799                  | 1,7037                | 1,6157                                |
| 49500                           | 7,98340                                    | 8,49960       | 2,91541           | 329,799                  | 1,7037                | 1,6363                                |
| 49600                           | 7,88327                                    | 8,39299       | 2,89707           | 329,799                  | 1,7037                | 1,6570                                |
| 49700                           | 7,78438                                    | 8,28771       | 2,87884           | 329,799                  | 1,7037                | 1,6781                                |
| 49800                           | 7,68674                                    | 8,18376       | 2,86073           | 329,799                  | 1,7037                | 1,6994                                |
| 49900                           | 7,59032                                    | 8,08111       | 2,84273           | 329,799                  | 1,7037                | 1,7210                                |
| 50000                           | 7,49512-4                                  | 7,97974-4     | 2,82484-2         | 329,799                  | 1,7037-5              | 1,7429-2                              |
| 50100                           | 7,40110                                    | 7,87965       | 2,80707           | 329,799                  | 1,7037                | 1,7650                                |
| 50200                           | 7,30827                                    | 7,78031       | 2,78941           | 329,799                  | 1,7037                | 1,7874                                |
| 50300                           | 7,21660                                    | 7,68322       | 2,77186           | 329,799                  | 1,7037                | 1,8101                                |
| 50400                           | 7,12608                                    | 7,58684       | 2,75442           | 329,799                  | 1,7037                | 1,8331                                |
| 50500                           | 7,03669                                    | 7,49168       | 2,73709           | 329,799                  | 1,7037                | 1,8564                                |
| 50600                           | 6,94843                                    | 7,39771       | 2,71987           | 329,799                  | 1,7037                | 1,8800                                |
| 50700                           | 6,86127                                    | 7,30492       | 2,70276           | 329,799                  | 1,7037                | 1,9039                                |
| 50800                           | 6,77521                                    | 7,21329       | 2,68576           | 329,799                  | 1,7037                | 1,9280                                |
| 50900                           | 6,69023                                    | 7,12281       | 2,66886           | 329,799                  | 1,7037                | 1,9525                                |
| 51000                           | 6,60631-4                                  | 7,03347-4     | 2,65207-2         | 329,799                  | 1,7037-5              | 1,9773-2                              |
| 51200                           | 6,44145                                    | 6,87217       | 2,62148           | 329,457                  | 1,7009                | 2,0204                                |
| 51400                           | 6,28038                                    | 6,71424       | 2,59118           | 329,116                  | 1,6981                | 2,0646                                |
| 51600                           | 6,12301                                    | 6,55963       | 2,56118           | 328,774                  | 1,6953                | 2,1098                                |
| 51800                           | 5,96926                                    | 6,40827       | 2,53145           | 328,431                  | 1,6925                | 2,1560                                |
| 52000                           | 5,81907                                    | 6,26009       | 2,50202           | 328,088                  | 1,6897                | 2,2034                                |
| 52200                           | 5,67236                                    | 6,11505       | 2,47285           | 327,745                  | 1,6869                | 2,2520                                |
| 52400                           | 5,52905                                    | 5,97306       | 2,44398           | 327,402                  | 1,6841                | 2,3017                                |
| 52600                           | 5,38907                                    | 5,83409       | 2,41539           | 327,058                  | 1,6813                | 2,3526                                |
| 52800                           | 5,25235                                    | 5,69807       | 2,38706           | 326,714                  | 1,6785                | 2,4047                                |

От 53000 до 60800 м

| Геометри-<br>ческая вы-<br>сота $h$ , м | Величины в функции геометрической высоты |               |                |                                |                          |                                                  |
|-----------------------------------------|------------------------------------------|---------------|----------------|--------------------------------|--------------------------|--------------------------------------------------|
|                                         | $p/p_c$                                  | $\rho/\rho_c$ | $\sqrt{T/T_c}$ | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                                  |
|                                         |                                          |               |                |                                | динамич.<br>$\mu$ , Па·с | теплопро-<br>водность<br>$\lambda$ ,<br>Вт/(м·К) |
| 53000                                   | 5,41559-4                                | 5,86044-4     | 2,42083-2      | 327,124                        | 1,6819-5                 | 2,3427-2                                         |
| 53200                                   | 5,28049                                  | 5,72609       | 2,39292        | 326,785                        | 1,6791                   | 2,3398                                           |
| 53400                                   | 5,14850                                  | 5,59455       | 2,36528        | 326,446                        | 1,6763                   | 2,4460                                           |
| 53600                                   | 5,01955                                  | 5,46579       | 2,33790        | 326,107                        | 1,6736                   | 2,4995                                           |
| 53800                                   | 4,89358                                  | 5,33973       | 2,31079        | 325,768                        | 1,6708                   | 2,5543                                           |
| 54000                                   | 4,77053                                  | 5,21634       | 2,28393        | 325,428                        | 1,6680                   | 2,6104                                           |
| 54200                                   | 4,65033                                  | 5,09555       | 2,25733        | 325,088                        | 1,6653                   | 2,6678                                           |
| 54400                                   | 4,53293                                  | 4,97733       | 2,23099        | 324,747                        | 1,6625                   | 2,7266                                           |
| 54600                                   | 4,41825                                  | 4,86161       | 2,20491        | 324,406                        | 1,6597                   | 2,7869                                           |
| 54800                                   | 4,30626                                  | 4,74836       | 2,17907        | 324,065                        | 1,6569                   | 2,8485                                           |
| 55000                                   | 4,19688-4                                | 4,63752-4     | 2,15349-2      | 323,724                        | 1,6541-5                 | 2,9117-2                                         |
| 55200                                   | 4,09007                                  | 4,52905       | 2,12816        | 323,382                        | 1,6514                   | 2,9764                                           |
| 55400                                   | 3,98576                                  | 4,42290       | 2,10307        | 323,040                        | 1,6486                   | 3,0427                                           |
| 55600                                   | 3,88391                                  | 4,31903       | 2,07823        | 322,697                        | 1,6458                   | 3,1106                                           |
| 55800                                   | 3,78445                                  | 4,21739       | 2,05363        | 322,354                        | 1,6430                   | 3,1802                                           |
| 56000                                   | 3,68735                                  | 4,11794       | 2,02927        | 322,011                        | 1,6402                   | 3,2514                                           |
| 56200                                   | 3,59254                                  | 4,02064       | 2,00515        | 321,668                        | 1,6374                   | 3,3245                                           |
| 56400                                   | 3,49998                                  | 3,92544       | 1,98127        | 321,324                        | 1,6346                   | 3,3993                                           |
| 56600                                   | 3,40962                                  | 3,83231       | 1,95763        | 320,980                        | 1,6318                   | 3,4759                                           |
| 56800                                   | 3,32142                                  | 3,74119       | 1,93422        | 320,635                        | 1,6290                   | 3,5544                                           |
| 57000                                   | 3,23531-4                                | 3,65206-4     | 1,91104-2      | 320,290                        | 1,6262-5                 | 3,6349-2                                         |
| 57200                                   | 3,15127                                  | 3,56487       | 1,88809        | 319,945                        | 1,6234                   | 3,7174                                           |
| 57400                                   | 3,06924                                  | 3,47959       | 1,86537        | 319,599                        | 1,6205                   | 3,8019                                           |
| 57600                                   | 2,98918                                  | 3,39617       | 1,84287        | 319,253                        | 1,6177                   | 3,8885                                           |
| 57800                                   | 2,91104                                  | 3,31459       | 1,82060        | 318,907                        | 1,6149                   | 3,9772                                           |
| 58000                                   | 2,83479                                  | 3,23480       | 1,79855        | 318,560                        | 1,6121                   | 4,0682                                           |
| 58200                                   | 2,76039                                  | 3,15676       | 1,77673        | 318,213                        | 1,6093                   | 4,1615                                           |
| 58400                                   | 2,68778                                  | 3,08045       | 1,75512        | 317,866                        | 1,6064                   | 4,2571                                           |
| 58600                                   | 2,61693                                  | 3,00583       | 1,73373        | 317,518                        | 1,6036                   | 4,3551                                           |
| 58800                                   | 2,54781                                  | 2,93286       | 1,71256        | 317,170                        | 1,6008                   | 4,4556                                           |
| 59000                                   | 2,48037-4                                | 2,86151-4     | 1,69160-2      | 316,821                        | 1,5979-5                 | 4,5586-2                                         |
| 59200                                   | 2,41458                                  | 2,79176       | 1,67085        | 316,473                        | 1,5951                   | 4,6642                                           |
| 59400                                   | 2,35039                                  | 2,72355       | 1,65032        | 316,123                        | 1,5923                   | 4,7724                                           |
| 59600                                   | 2,28778                                  | 2,65688       | 1,62999        | 315,774                        | 1,5894                   | 4,8833                                           |
| 59800                                   | 2,22671                                  | 2,59169       | 1,60987        | 315,424                        | 1,5866                   | 4,9973                                           |
| 60000                                   | 2,16714                                  | 2,52797       | 1,58996        | 315,073                        | 1,5837                   | 5,1141                                           |
| 60200                                   | 2,10904                                  | 2,46569       | 1,57025        | 314,723                        | 1,5809                   | 5,2339                                           |
| 60400                                   | 1,05238                                  | 2,40480       | 1,55074        | 314,372                        | 1,5780                   | 5,3567                                           |
| 60600                                   | 1,99712                                  | 2,34530       | 1,53144        | 314,020                        | 1,5752                   | 5,4826                                           |
| 60800                                   | 1,94324                                  | 2,28714       | 1,51233        | 313,669                        | 1,5723                   | 5,6118                                           |

| Геопотенциальность<br>H, м | Величины в функции геопотенциальной высоты |         |                |                             |                          |                                         |                                             |
|----------------------------|--------------------------------------------|---------|----------------|-----------------------------|--------------------------|-----------------------------------------|---------------------------------------------|
|                            | $p/p_c$                                    | $t/t_c$ | $\sqrt{p/p_c}$ | скорость<br>звука<br>a, м/с | вязкость                 |                                         | теплопроводность<br>$\lambda$ ,<br>Вт/(м·К) |
|                            |                                            |         |                |                             | динамич.<br>$\mu$ , Па·с | кинематич.<br>$\nu$ , м <sup>2</sup> /с |                                             |
| 53000                      | 5,11882                                    | 4       | 2,35901        | 326,369                     | 1,6757                   | 2,4581                                  | 2,3505                                      |
| 53200                      | 4,98841                                    | 5       | 2,33123        | 326,024                     | 1,6729                   | 2,5128                                  | 2,3460                                      |
| 53400                      | 4,88106                                    | 5       | 2,30372        | 325,679                     | 1,6701                   | 2,5689                                  | 2,3415                                      |
| 53600                      | 4,73670                                    | 5       | 2,27648        | 325,333                     | 1,6673                   | 2,6263                                  | 2,3370                                      |
| 53800                      | 4,61527                                    | 5       | 2,24950        | 324,987                     | 1,6644                   | 2,6851                                  | 2,3324                                      |
| 54000                      | 4,49670                                    | 4       | 2,22279        | 324,641                     | 1,6616                   | 2,7453                                  | 2,3279                                      |
| 54200                      | 4,38094                                    | 4       | 2,19634        | 324,294                     | 1,6588                   | 2,8071                                  | 2,3234                                      |
| 54400                      | 4,26791                                    | 4       | 2,17014        | 323,947                     | 1,6560                   | 2,8701                                  | 2,3189                                      |
| 54600                      | 4,15757                                    | 4       | 2,14421        | 323,599                     | 1,6531                   | 2,9352                                  | 2,3144                                      |
| 54800                      | 4,04988                                    | 4       | 2,11853        | 323,251                     | 1,6503                   | 3,0016                                  | 2,3098                                      |
| 55000                      | 3,94471                                    | 4       | 2,09310        | 322,903                     | 1,6475                   | 3,0697                                  | 2,3053                                      |
| 55200                      | 3,84207                                    | 4       | 2,06792        | 322,554                     | 1,6446                   | 3,1395                                  | 2,3008                                      |
| 55400                      | 3,74189                                    | 4       | 2,04299        | 322,205                     | 1,6418                   | 3,2110                                  | 2,2962                                      |
| 55600                      | 3,64411                                    | 4       | 2,01831        | 321,856                     | 1,6389                   | 3,2843                                  | 2,2917                                      |
| 55800                      | 3,54888                                    | 3       | 1,99388        | 321,506                     | 1,6361                   | 3,3594                                  | 2,2872                                      |
| 56000                      | 3,45555                                    | 3       | 1,96969        | 321,156                     | 1,6332                   | 3,4365                                  | 2,2826                                      |
| 56200                      | 3,36468                                    | 3       | 1,94574        | 320,805                     | 1,6304                   | 3,5154                                  | 2,2781                                      |
| 56400                      | 3,27600                                    | 3       | 1,92203        | 320,454                     | 1,6276                   | 3,5964                                  | 2,2735                                      |
| 56600                      | 3,18947                                    | 3       | 1,89856        | 320,103                     | 1,6246                   | 3,6794                                  | 2,2690                                      |
| 56800                      | 3,10504                                    | 3       | 1,87532        | 319,751                     | 1,6218                   | 3,7645                                  | 2,2644                                      |
| 57000                      | 3,02267                                    | 4       | 1,85232        | 319,399                     | 1,6189                   | 3,8517                                  | 2,2599                                      |
| 57200                      | 2,94231                                    | 3       | 1,82955        | 319,047                     | 1,6160                   | 3,9412                                  | 2,2553                                      |
| 57400                      | 2,86391                                    | 3       | 1,80701        | 318,694                     | 1,6132                   | 4,0330                                  | 2,2508                                      |
| 57600                      | 2,78744                                    | 3       | 1,78470        | 318,340                     | 1,6103                   | 4,1270                                  | 2,2462                                      |
| 57800                      | 2,71284                                    | 3       | 1,76262        | 317,987                     | 1,6074                   | 4,2235                                  | 2,2416                                      |
| 58000                      | 2,64009                                    | 3       | 1,74076        | 317,633                     | 1,6045                   | 4,3225                                  | 2,2371                                      |
| 58200                      | 2,56912                                    | 2       | 1,71912        | 317,278                     | 1,6017                   | 4,4240                                  | 2,2325                                      |
| 58400                      | 2,49992                                    | 2       | 1,69771        | 316,923                     | 1,5988                   | 4,5282                                  | 2,2279                                      |
| 58600                      | 2,43242                                    | 2       | 1,67651        | 316,568                     | 1,5959                   | 4,6350                                  | 2,2233                                      |
| 58800                      | 2,36661                                    | 2       | 1,65554        | 316,212                     | 1,5930                   | 4,7446                                  | 2,2188                                      |
| 59000                      | 2,30243                                    | 4       | 1,63478        | 315,856                     | 1,5901                   | 4,8570                                  | 2,2142                                      |
| 59200                      | 2,23985                                    | 2       | 1,61423        | 315,500                     | 1,5872                   | 4,9723                                  | 2,2096                                      |
| 59400                      | 2,17884                                    | 2       | 1,59389        | 315,143                     | 1,5843                   | 5,0907                                  | 2,2050                                      |
| 59600                      | 2,11936                                    | 2       | 1,57377        | 314,786                     | 1,5814                   | 5,2121                                  | 2,2004                                      |
| 59800                      | 2,06138                                    | 2       | 1,55386        | 314,428                     | 1,5785                   | 5,3368                                  | 2,1958                                      |
| 60000                      | 2,00485                                    | 2       | 1,53415        | 314,070                     | 1,5756                   | 5,4646                                  | 2,1913                                      |
| 60200                      | 1,94975                                    | 2       | 1,51465        | 313,712                     | 1,5726                   | 5,5959                                  | 2,1867                                      |
| 60400                      | 1,89604                                    | 2       | 1,49535        | 313,353                     | 1,5697                   | 5,7306                                  | 2,1821                                      |
| 60600                      | 1,84369                                    | 2       | 1,47626        | 312,993                     | 1,5668                   | 5,8689                                  | 2,1775                                      |
| 60800                      | 1,79267                                    | 2       | 1,45737        | 312,634                     | 1,5639                   | 6,0108                                  | 2,1729                                      |



От 61000 до 68800 м

| Геометри-<br>ческая вы-<br>сота h, м | Величины и функции геометрической высоты |               |                   |                                |                          |                                                  |
|--------------------------------------|------------------------------------------|---------------|-------------------|--------------------------------|--------------------------|--------------------------------------------------|
|                                      | $p/p_c$                                  | $\rho/\rho_c$ | $\gamma/\gamma_c$ | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                                  |
|                                      |                                          |               |                   |                                | динамич.<br>$\mu$ , Па·с | теплопро-<br>водность<br>$\lambda$ ,<br>Вт/(м·К) |
| 61000                                | 1,89069-4                                | 2,23030-4     | 1,49342-2         | 313,316                        | 1,5694-5                 | 5,7444-2                                         |
| 61200                                | 1,83946                                  | 2,17475       | 1,47470           | 312,964                        | 1,5666                   | 5,8804                                           |
| 61400                                | 1,78950                                  | 2,12047       | 1,46618           | 312,611                        | 1,5637                   | 6,0198                                           |
| 61600                                | 1,74080                                  | 2,06743       | 1,43786           | 312,258                        | 1,5608                   | 6,1629                                           |
| 61800                                | 1,69332                                  | 2,01561       | 1,41972           | 311,904                        | 1,5580                   | 6,3098                                           |
| 62000                                | 1,64704                                  | 1,96497       | 1,40177           | 311,550                        | 1,5551                   | 6,4604                                           |
| 62200                                | 1,60192                                  | 1,91550       | 1,38402           | 311,196                        | 1,5522                   | 6,6150                                           |
| 62400                                | 1,55794                                  | 1,86717       | 1,36644           | 310,841                        | 1,5493                   | 6,7736                                           |
| 62600                                | 1,51507                                  | 1,81995       | 1,34905           | 310,486                        | 1,5464                   | 6,9364                                           |
| 62800                                | 1,47330                                  | 1,77383       | 1,33185           | 310,130                        | 1,5435                   | 7,1035                                           |
| 63000                                | 1,43258-4                                | 1,72877-4     | 1,31483-2         | 309,774                        | 1,5407-5                 | 7,2750-2                                         |
| 63200                                | 1,39290                                  | 1,68476       | 1,29798           | 309,418                        | 1,5378                   | 7,4510                                           |
| 63400                                | 1,35424                                  | 1,64178       | 1,28132           | 309,061                        | 1,5349                   | 7,6317                                           |
| 63600                                | 1,31657                                  | 1,59980       | 1,26483           | 308,704                        | 1,5320                   | 7,8171                                           |
| 63800                                | 1,27986                                  | 1,55881       | 1,24852           | 308,346                        | 1,5291                   | 8,0075                                           |
| 64000                                | 1,24409                                  | 1,51877       | 1,23239           | 307,988                        | 1,5262                   | 8,2030                                           |
| 64200                                | 1,20925                                  | 1,47968       | 1,21642           | 307,630                        | 1,5233                   | 8,4037                                           |
| 64400                                | 1,17531                                  | 1,44151       | 1,20063           | 307,271                        | 1,5204                   | 8,6098                                           |
| 64600                                | 1,14225                                  | 1,40424       | 1,18500           | 306,912                        | 1,5174                   | 8,8213                                           |
| 64800                                | 1,11004                                  | 1,36785       | 1,16955           | 306,553                        | 1,5145                   | 9,0386                                           |
| 65000                                | 1,07867-4                                | 1,33232-4     | 1,15426-2         | 306,193                        | 1,5116-5                 | 9,2618-2                                         |
| 65200                                | 1,04812                                  | 1,29764       | 1,13914           | 305,833                        | 1,5087                   | 9,4909                                           |
| 65400                                | 1,01837                                  | 1,26378       | 1,12418           | 305,472                        | 1,5058                   | 9,7263                                           |
| 65600                                | 9,89399-5                                | 1,23074       | 1,10939           | 305,111                        | 1,5028                   | 9,9680                                           |
| 65800                                | 9,61186                                  | 1,19848       | 1,09475           | 304,749                        | 1,4999                   | 1,0216-1                                         |
| 66000                                | 9,33714                                  | 1,16699       | 1,08028           | 304,387                        | 1,4970                   | 1,0471                                           |
| 66200                                | 9,06967                                  | 1,13627       | 1,06596           | 304,025                        | 1,4940                   | 1,0734                                           |
| 66400                                | 8,80927                                  | 1,10628       | 1,05180           | 303,662                        | 1,4911                   | 1,1003                                           |
| 66600                                | 8,55576                                  | 1,07702       | 1,03780           | 303,299                        | 1,4882                   | 1,1279                                           |
| 66800                                | 8,30898                                  | 1,04847       | 1,02395           | 302,936                        | 1,4852                   | 1,1564                                           |
| 67000                                | 8,06877-5                                | 1,02061-4     | 1,01025-2         | 302,572                        | 1,4823-5                 | 1,1856-1                                         |
| 67200                                | 7,83496                                  | 9,93425-5     | 9,96707-3         | 302,207                        | 1,4793                   | 1,2156                                           |
| 67400                                | 7,60740                                  | 9,66905       | 9,83313           | 301,842                        | 1,4764                   | 1,2454                                           |
| 67600                                | 7,38593                                  | 9,41033       | 9,70069           | 301,477                        | 1,4734                   | 1,2781                                           |
| 67800                                | 7,17042                                  | 9,15794       | 9,56971           | 301,112                        | 1,4704                   | 1,3107                                           |
| 68000                                | 6,96070                                  | 8,91175       | 9,44020           | 300,746                        | 1,4675                   | 1,3442                                           |
| 68200                                | 6,75664                                  | 8,67161       | 9,31215           | 300,379                        | 1,4645                   | 1,3787                                           |
| 68400                                | 6,55809                                  | 8,43739       | 9,18553           | 300,012                        | 1,4615                   | 1,4141                                           |
| 68600                                | 6,36493                                  | 8,20897       | 9,06033           | 299,645                        | 1,4586                   | 1,4505                                           |
| 68800                                | 6,17701                                  | 7,98620       | 8,93655           | 299,277                        | 1,4556                   | 1,4879                                           |

| Геоцентрическая высота $H$ , м | Величины в функции геопотенциальной высоты |               |                |                          |                       |                                      |                                       |
|--------------------------------|--------------------------------------------|---------------|----------------|--------------------------|-----------------------|--------------------------------------|---------------------------------------|
|                                | $P/P_c$                                    | $\rho/\rho_c$ | $\sqrt{P/P_c}$ | скорость звука $a$ , м/с | вязкость              |                                      | теплопроводность $\lambda$ , Вт/(м·К) |
|                                |                                            |               |                |                          | динамич. $\mu$ , Па·с | кинематич. $\nu$ , м <sup>2</sup> /с |                                       |
| 61000                          | 1,74295-4                                  | 2,06978-4     | 1,43867-2      | 312,274                  | 1,5610-5              | 6,1565-2                             | 2,1683-2                              |
| 61200                          | 1,69451                                    | 2,01690       | 1,42018        | 311,913                  | 1,5580                | 6,3060                               | 2,1637                                |
| 61400                          | 1,64729                                    | 1,96525       | 1,40188        | 311,552                  | 1,5551                | 6,4596                               | 2,1590                                |
| 61600                          | 1,60129                                    | 1,91481       | 1,38377        | 311,191                  | 1,5522                | 6,6172                               | 2,1544                                |
| 61800                          | 1,55648                                    | 1,86556       | 1,36585        | 310,829                  | 1,5492                | 6,7791                               | 2,1498                                |
| 62000                          | 1,51281                                    | 1,81746       | 1,34813        | 310,467                  | 1,5463                | 6,9453                               | 2,1452                                |
| 62200                          | 1,47028                                    | 1,77049       | 1,33060        | 310,104                  | 1,5433                | 7,1159                               | 2,1406                                |
| 62400                          | 1,42884                                    | 1,72463       | 1,31325        | 309,741                  | 1,5404                | 7,2912                               | 2,1360                                |
| 62600                          | 1,38848                                    | 1,67985       | 1,29609        | 309,377                  | 1,5374                | 7,4712                               | 2,1313                                |
| 62800                          | 1,34917                                    | 1,63614       | 1,27911        | 309,013                  | 1,5345                | 7,6561                               | 2,1267                                |
| 63000                          | 1,31088-4                                  | 1,59346-4     | 1,26232-2      | 308,649                  | 1,5315-5              | 7,8460-2                             | 2,1221-2                              |
| 63200                          | 1,27359                                    | 1,55180       | 1,24571        | 308,284                  | 1,5286                | 8,0411                               | 2,1175                                |
| 63400                          | 1,23728                                    | 1,51113       | 1,22928        | 307,919                  | 1,5256                | 8,2414                               | 2,1128                                |
| 63600                          | 1,20192                                    | 1,47144       | 1,21303        | 307,553                  | 1,5226                | 8,4473                               | 2,1082                                |
| 63800                          | 1,16749                                    | 1,43270       | 1,19695        | 307,187                  | 1,5197                | 8,6588                               | 2,1035                                |
| 64000                          | 1,13397                                    | 1,39489       | 1,18105        | 306,821                  | 1,5167                | 8,8761                               | 2,0989                                |
| 64200                          | 1,10133                                    | 1,35799       | 1,16533        | 306,454                  | 1,5137                | 9,0994                               | 2,0943                                |
| 64400                          | 1,06956                                    | 1,32198       | 1,14977        | 306,086                  | 1,5107                | 9,3289                               | 2,0896                                |
| 64600                          | 1,03853                                    | 1,28684       | 1,13439        | 305,719                  | 1,5078                | 9,5647                               | 2,0850                                |
| 64800                          | 1,00852                                    | 1,25256       | 1,11918        | 305,350                  | 1,5048                | 9,8070                               | 2,0803                                |
| 65000                          | 9,79221-5                                  | 1,21911-4     | 1,10413-2      | 304,982                  | 1,5018-5              | 1,0056-1                             | 2,0757-2                              |
| 65200                          | 9,50702                                    | 1,18647       | 1,08925        | 304,612                  | 1,4988                | 1,0312                               | 2,0710                                |
| 65400                          | 9,22947                                    | 1,15464       | 1,07454        | 304,243                  | 1,4958                | 1,0575                               | 2,0663                                |
| 65600                          | 8,95938                                    | 1,12358       | 1,05999        | 303,873                  | 1,4928                | 1,0846                               | 2,0617                                |
| 65800                          | 8,69656                                    | 1,09328       | 1,04560        | 303,502                  | 1,4898                | 1,1124                               | 2,0570                                |
| 66000                          | 8,44084                                    | 1,06373       | 1,03137        | 303,131                  | 1,4868                | 1,1410                               | 2,0523                                |
| 66200                          | 8,19203                                    | 1,03491       | 1,01731        | 302,760                  | 1,4838                | 1,1704                               | 2,0477                                |
| 66400                          | 8,94998                                    | 1,00681       | 1,00340        | 302,388                  | 1,4808                | 1,2006                               | 2,0430                                |
| 66600                          | 7,71451                                    | 9,79396-5     | 9,89645-3      | 302,015                  | 1,4778                | 1,2317                               | 2,0383                                |
| 66800                          | 7,48546                                    | 9,52667       | 9,76047        | 301,643                  | 1,4747                | 1,2637                               | 2,0337                                |
| 67000                          | 7,26266-5                                  | 9,26604-5     | 9,62603-3      | 301,269                  | 1,4717-5              | 1,2966-1                             | 2,0290-2                              |
| 67200                          | 7,04597                                    | 9,01192       | 9,49312        | 300,896                  | 1,4687                | 1,3304                               | 2,0243                                |
| 67400                          | 6,83523                                    | 8,76417       | 9,36171        | 300,521                  | 1,4657                | 1,3652                               | 2,0196                                |
| 67600                          | 6,63029                                    | 8,52263       | 9,23181        | 300,147                  | 1,4626                | 1,4010                               | 2,0149                                |
| 67800                          | 6,43100                                    | 8,28717       | 9,10339        | 299,772                  | 1,4596                | 1,4378                               | 2,0102                                |
| 68000                          | 6,23723                                    | 8,05764       | 8,97644        | 299,396                  | 1,4566                | 1,4757                               | 2,0056                                |
| 68200                          | 6,04883                                    | 7,83392       | 8,85095        | 299,020                  | 1,4535                | 1,5146                               | 2,0009                                |
| 68400                          | 5,86567                                    | 7,61588       | 8,72690        | 298,643                  | 1,4505                | 1,5547                               | 1,9962                                |
| 68600                          | 5,68761                                    | 7,40337       | 8,60428        | 298,266                  | 1,4474                | 1,5960                               | 1,9915                                |
| 68800                          | 5,51452                                    | 7,19628       | 8,48309        | 297,889                  | 1,4444                | 1,6385                               | 1,9868                                |

От 69000 до 76800 м

| Геометри-<br>ческая высо-<br>та $h$ , м | Величины в функции геометрической высоты |               |                      |                                |                          |                                         |                                                    |
|-----------------------------------------|------------------------------------------|---------------|----------------------|--------------------------------|--------------------------|-----------------------------------------|----------------------------------------------------|
|                                         | $\rho/\rho_c$                            | $\eta/\eta_c$ | $\sqrt{\rho/\rho_c}$ | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                         | темперо-<br>проводность<br>$\lambda$ ,<br>Вт/(м·К) |
|                                         |                                          |               |                      |                                | динамич.<br>$\mu$ , Па·с | кинематич.<br>$\nu$ , м <sup>2</sup> /с |                                                    |
| 69000                                   | 5,99421-5                                | 7,76895-5     | 8,81417-3            | 238,939                        | 1,4526-5                 | 1,5264-1                                | 1,9995-2                                           |
| 69200                                   | 5,81640                                  | 7,55714       | 8,69318              | 238,540                        | 1,4496                   | 1,5559                                  | 1,9949                                             |
| 69400                                   | 5,64346                                  | 7,35067       | 8,57356              | 238,171                        | 1,4467                   | 1,6066                                  | 1,9903                                             |
| 69600                                   | 5,47526                                  | 7,14922       | 8,45531              | 237,802                        | 1,4437                   | 1,6184                                  | 1,9857                                             |
| 69800                                   | 5,31168                                  | 6,95289       | 8,33840              | 237,432                        | 1,4407                   | 1,6915                                  | 1,9811                                             |
| 70000                                   | 5,15261                                  | 6,76150       | 8,22283              | 237,061                        | 1,4377                   | 1,7353                                  | 1,9765                                             |
| 70200                                   | 4,99793                                  | 6,57493       | 8,10839              | 236,691                        | 1,4347                   | 1,7813                                  | 1,9719                                             |
| 70400                                   | 4,84753                                  | 6,39307       | 7,99567              | 236,319                        | 1,4317                   | 1,8281                                  | 1,9673                                             |
| 70600                                   | 4,70131                                  | 6,21581       | 7,88401              | 235,948                        | 1,4287                   | 1,8763                                  | 1,9626                                             |
| 70800                                   | 4,55916                                  | 6,04305       | 7,77371              | 235,576                        | 1,4257                   | 1,9239                                  | 1,9580                                             |
| 71000                                   | 4,42097-5                                | 5,87469-5     | 7,66165-3            | 235,203                        | 1,4227-5                 | 1,9769-1                                | 1,9534-2                                           |
| 71200                                   | 4,28665                                  | 5,71062       | 7,55686              | 234,830                        | 1,4197                   | 2,0294                                  | 1,9488                                             |
| 71400                                   | 4,15608                                  | 5,55074       | 7,45033              | 234,456                        | 1,4167                   | 2,0834                                  | 1,9442                                             |
| 71600                                   | 4,02919                                  | 5,39495       | 7,34504              | 234,083                        | 1,4136                   | 2,1390                                  | 1,9396                                             |
| 71800                                   | 3,90587                                  | 5,24317       | 7,24038              | 233,708                        | 1,4106                   | 2,1963                                  | 1,9349                                             |
| 72000                                   | 3,78607                                  | 5,09168       | 7,13560              | 233,339                        | 1,4075                   | 2,2581                                  | 1,9302                                             |
| 72200                                   | 3,66975                                  | 4,94426       | 7,03354              | 232,971                        | 1,4043                   | 2,3219                                  | 1,9253                                             |
| 72400                                   | 3,55680                                  | 4,80187       | 6,92883              | 232,603                        | 1,4011                   | 2,3876                                  | 1,9205                                             |
| 72600                                   | 3,44714                                  | 4,66139       | 6,82743              | 232,235                        | 1,4020                   | 2,4552                                  | 1,9217                                             |
| 72800                                   | 3,34067                                  | 4,52572       | 6,72735              | 231,866                        | 1,3998                   | 2,5249                                  | 1,9184                                             |
| 73000                                   | 3,23732-5                                | 4,39378-5     | 6,62856-3            | 231,497                        | 1,3976-5                 | 2,5967-1                                | 1,9151-2                                           |
| 73200                                   | 3,13698                                  | 4,26545       | 6,53104              | 231,128                        | 1,3955                   | 2,6707                                  | 1,9118                                             |
| 73400                                   | 3,03958                                  | 4,14066       | 6,43479              | 230,759                        | 1,3933                   | 2,7469                                  | 1,9085                                             |
| 73600                                   | 2,94504                                  | 4,01930       | 6,33979              | 230,390                        | 1,3911                   | 2,8254                                  | 1,9052                                             |
| 73800                                   | 2,85328                                  | 3,90129       | 6,24603              | 230,020                        | 1,3890                   | 2,9063                                  | 1,9019                                             |
| 74000                                   | 2,76422                                  | 3,78654       | 6,15349              | 229,650                        | 1,3868                   | 2,9897                                  | 1,8985                                             |
| 74200                                   | 2,67779                                  | 3,67497       | 6,06216              | 229,280                        | 1,3846                   | 3,0757                                  | 1,8952                                             |
| 74400                                   | 2,59392                                  | 3,56650       | 5,97202              | 228,909                        | 1,3824                   | 3,1642                                  | 1,8919                                             |
| 74600                                   | 2,51252                                  | 3,46104       | 5,88306              | 228,538                        | 1,3803                   | 3,2555                                  | 1,8886                                             |
| 74800                                   | 2,43354                                  | 3,35852       | 5,79527              | 228,167                        | 1,3781                   | 3,3496                                  | 1,8853                                             |
| 75000                                   | 2,35691-5                                | 3,25886-5     | 5,70864-3            | 227,796                        | 1,3759-5                 | 3,4465-1                                | 1,8820-2                                           |
| 75200                                   | 2,28255                                  | 3,16198       | 5,62315              | 227,425                        | 1,3737                   | 3,5465                                  | 1,8786                                             |
| 75400                                   | 2,21042                                  | 3,06781       | 5,53878              | 227,053                        | 1,3715                   | 3,6495                                  | 1,8753                                             |
| 75600                                   | 2,14044                                  | 2,97629       | 5,45553              | 226,681                        | 1,3693                   | 3,7558                                  | 1,8720                                             |
| 75800                                   | 2,07255                                  | 2,88733       | 5,37339              | 226,309                        | 1,3671                   | 3,8653                                  | 1,8687                                             |
| 76000                                   | 2,00670                                  | 2,80088       | 5,29233              | 225,937                        | 1,3650                   | 3,9782                                  | 1,8654                                             |
| 76200                                   | 1,94282                                  | 2,71686       | 5,21235              | 225,564                        | 1,3628                   | 4,0946                                  | 1,8620                                             |
| 76400                                   | 1,88087                                  | 2,63522       | 5,13344              | 225,191                        | 1,3606                   | 4,2147                                  | 1,8587                                             |
| 76600                                   | 1,82078                                  | 2,55589       | 5,05558              | 224,818                        | 1,3584                   | 4,3385                                  | 1,8554                                             |
| 76800                                   | 1,76251                                  | 2,47881       | 4,97876              | 224,445                        | 1,3562                   | 4,4662                                  | 1,8521                                             |

| Геоцентрическая<br>высота,<br>та Н, м | Величины в функции геопотенциальной высоты |               |                |                          |                     |                                 |
|---------------------------------------|--------------------------------------------|---------------|----------------|--------------------------|---------------------|---------------------------------|
|                                       | $p/p_c$                                    | $\rho/\rho_c$ | $V \sqrt{g_c}$ | скорость<br>звука<br>м/с | вязкость            |                                 |
|                                       |                                            |               |                |                          | динамич.<br>м. Па·с | кинематич.<br>м <sup>2</sup> /с |
| 69000                                 | 5,34629-5                                  | 6,99447-5     | 8,36330-3      | 297,511                  | 1,4413-5            | 1,6822-1                        |
| 69200                                 | 5,18278                                    | 6,79784       | 8,24490        | 297,132                  | 1,4383              | 1,7272                          |
| 69400                                 | 5,02387                                    | 6,60625       | 8,12788        | 296,754                  | 1,4352              | 1,7735                          |
| 69600                                 | 4,88944                                    | 6,41959       | 8,01223        | 296,374                  | 1,4321              | 1,8211                          |
| 69800                                 | 4,71938                                    | 6,23774       | 7,89794        | 295,994                  | 1,4291              | 1,8702                          |
| 70000                                 | 4,57358                                    | 6,06060       | 7,78499        | 295,614                  | 1,4260              | 1,9207                          |
| 70200                                 | 4,43193                                    | 5,88805       | 7,67337        | 295,233                  | 1,4229              | 1,9728                          |
| 70400                                 | 4,29431                                    | 5,71999       | 7,56306        | 294,852                  | 1,4199              | 2,0263                          |
| 70600                                 | 4,16063                                    | 5,55631       | 7,45407        | 294,470                  | 1,4168              | 2,0815                          |
| 70800                                 | 4,03077                                    | 5,39690       | 7,34636        | 294,087                  | 1,4137              | 2,1383                          |
| 71000                                 | 3,90465-5                                  | 5,24167-5     | 7,23994-3      | 293,704                  | 1,4106-5            | 2,1968-1                        |
| 71200                                 | 3,78220                                    | 5,08678       | 7,13217        | 293,321                  | 1,4084              | 2,2562                          |
| 71400                                 | 3,66338                                    | 4,93619       | 7,02580        | 292,937                  | 1,4062              | 2,3155                          |
| 71600                                 | 3,54808                                    | 4,78978       | 6,92082        | 292,552                  | 1,4040              | 2,3758                          |
| 71800                                 | 3,43620                                    | 4,64745       | 6,81722        | 292,168                  | 1,4018              | 2,4372                          |
| 72000                                 | 3,32764                                    | 4,50910       | 6,71499        | 291,783                  | 1,3995              | 2,4995                          |
| 72200                                 | 3,22233                                    | 4,37462       | 6,61400        | 291,398                  | 1,3973              | 2,5627                          |
| 72400                                 | 3,12015                                    | 4,24391       | 6,51453        | 291,012                  | 1,3951              | 2,6268                          |
| 72600                                 | 3,02103                                    | 4,11686       | 6,41628        | 290,627                  | 1,3929              | 2,6919                          |
| 72800                                 | 2,92488                                    | 3,99339       | 6,31933        | 290,241                  | 1,3907              | 2,7578                          |
| 73000                                 | 2,83162-5                                  | 3,87340-5     | 6,22366-3      | 290,855                  | 1,3884-5            | 2,8242-1                        |
| 73200                                 | 2,74116                                    | 3,75680       | 6,12927        | 290,469                  | 1,3862              | 3,0121                          |
| 73400                                 | 2,65343                                    | 3,64349       | 6,03613        | 290,082                  | 1,3840              | 3,1008                          |
| 73600                                 | 2,56835                                    | 3,53340       | 5,94424        | 289,695                  | 1,3818              | 3,1923                          |
| 73800                                 | 2,48584                                    | 3,42643       | 5,85357        | 289,308                  | 1,3795              | 3,2866                          |
| 74000                                 | 2,40583                                    | 3,32250       | 5,76411        | 288,920                  | 1,3773              | 3,3840                          |
| 74200                                 | 2,32825                                    | 3,22154       | 5,67586        | 288,533                  | 1,3751              | 3,4844                          |
| 74400                                 | 2,25303                                    | 3,12345       | 5,58879        | 288,145                  | 1,3728              | 3,5879                          |
| 74600                                 | 2,18010                                    | 3,02818       | 5,50289        | 287,757                  | 1,3706              | 3,6948                          |
| 74800                                 | 2,10940                                    | 2,93563       | 5,41815        | 287,369                  | 1,3683              | 3,8050                          |
| 75000                                 | 2,04086-5                                  | 2,84575-5     | 5,33455-3      | 287,981                  | 1,3661-5            | 3,9188-1                        |
| 75200                                 | 1,97442                                    | 2,75844       | 5,25209        | 287,594                  | 1,3639              | 4,0362                          |
| 75400                                 | 1,91002                                    | 2,67366       | 5,17074        | 287,206                  | 1,3616              | 4,1573                          |
| 75600                                 | 1,84760                                    | 2,59132       | 5,09050        | 286,818                  | 1,3594              | 4,2823                          |
| 75800                                 | 1,78711                                    | 2,51137       | 5,01136        | 286,430                  | 1,3571              | 4,4113                          |
| 76000                                 | 1,72849                                    | 2,43373       | 4,93329        | 286,042                  | 1,3549              | 4,5445                          |
| 76200                                 | 1,67168                                    | 2,35835       | 4,85629        | 285,654                  | 1,3526              | 4,6820                          |
| 76400                                 | 1,61663                                    | 2,28516       | 4,78034        | 285,266                  | 1,3504              | 4,8239                          |
| 76600                                 | 1,56329                                    | 2,21411       | 4,70543        | 284,878                  | 1,3481              | 4,9703                          |
| 76800                                 | 1,51161                                    | 2,14513       | 4,63156        | 284,490                  | 1,3458              | 5,1216                          |

От 77000 до 80000 м

| Геометри-<br>ческая высо-<br>та $h$ , м | Величины в функции геометрической высоты |               |               |                                |                          |                                         |
|-----------------------------------------|------------------------------------------|---------------|---------------|--------------------------------|--------------------------|-----------------------------------------|
|                                         | $p/p_c$                                  | $\rho/\rho_c$ | $V/\bar{p}_c$ | скорость<br>звука<br>$a$ , м/с | вязкость                 |                                         |
|                                         |                                          |               |               |                                | динамич.<br>$\mu$ , Па·с | кинематич.<br>$\nu$ , м <sup>2</sup> /с |
| 77000                                   | 1,70600-5                                | 2,40391-5     | 4,90297-3     | 286,671                        | 1,3540-5                 | 4,5979-1                                |
| 77200                                   | 1,65120                                  | 2,33115       | 4,82820       | 286,398                        | 1,3518                   | 4,7337                                  |
| 77400                                   | 1,58807                                  | 2,26046       | 4,75443       | 286,124                        | 1,3496                   | 4,8738                                  |
| 77600                                   | 1,54655                                  | 2,19179       | 4,68165       | 285,849                        | 1,3474                   | 5,0183                                  |
| 77800                                   | 1,49660                                  | 2,12508       | 4,60986       | 285,575                        | 1,3452                   | 5,1673                                  |
| 78000                                   | 1,44818                                  | 2,06028       | 4,53904       | 285,300                        | 1,3430                   | 5,3211                                  |
| 78200                                   | 1,40123                                  | 1,99735       | 4,46917       | 285,025                        | 1,3408                   | 5,4797                                  |
| 78400                                   | 1,35573                                  | 1,93622       | 4,40025       | 284,749                        | 1,3385                   | 5,6434                                  |
| 78600                                   | 1,31162                                  | 1,87686       | 4,33227       | 284,474                        | 1,3363                   | 5,8123                                  |
| 78800                                   | 1,26887                                  | 1,81921       | 4,26522       | 284,198                        | 1,3341                   | 5,9866                                  |
| 79000                                   | 1,22743-5                                | 1,76323-5     | 4,49908-3     | 283,922                        | 1,3319-5                 | 6,1664-1                                |
| 79200                                   | 1,18728                                  | 1,70886       | 4,13384       | 283,646                        | 1,3297                   | 6,3520                                  |
| 79400                                   | 1,14836                                  | 1,65608       | 4,06950       | 283,369                        | 1,3275                   | 6,5435                                  |
| 79600                                   | 1,11065                                  | 1,60483       | 4,00604       | 283,092                        | 1,3253                   | 6,7411                                  |
| 79800                                   | 1,07411                                  | 1,55508       | 3,94345       | 282,815                        | 1,3230                   | 6,9452                                  |
| 80000                                   | 1,03871                                  | 1,50678       | 3,88172       | 282,538                        | 1,3208                   | 7,1558                                  |

Примечание. Однозначное число со знаком плюс или минус, стоящее данного и каждого последующего значений.

Продолжение табл. 2

| Геотермическая классификация по $H$ , м | Величины в функции геотермической высоты |               |                |                          |                       |                                      |
|-----------------------------------------|------------------------------------------|---------------|----------------|--------------------------|-----------------------|--------------------------------------|
|                                         | $p/p_c$                                  | $\rho/\rho_c$ | $\sqrt{V/p_c}$ | скорость звука $a$ , м/с | вязкость              |                                      |
|                                         |                                          |               |                |                          | динамич. $\mu$ , Па·с | кинематич. $\nu$ , м <sup>2</sup> /с |
| 77000                                   | 1,46154—5                                | 2,07818—5     | 4,55870—3      | 285,377                  | 1,3436—5              | 5,2777—1                             |
| 77200                                   | 1,41304                                  | 2,01318       | 4,48685        | 285,095                  | 1,3413                | 5,4389                               |
| 77400                                   | 1,36605                                  | 1,95010       | 4,41599        | 284,813                  | 1,3391                | 5,6054                               |
| 77600                                   | 1,32054                                  | 1,88887       | 4,34612        | 284,530                  | 1,3368                | 5,7773                               |
| 77800                                   | 1,27646                                  | 1,82945       | 4,27721        | 284,248                  | 1,3345                | 5,9548                               |
| 78000                                   | 1,23376                                  | 1,77179       | 4,20926        | 283,965                  | 1,3323                | 6,1382                               |
| 78200                                   | 1,19242                                  | 1,71583       | 4,14226        | 283,682                  | 1,3300                | 6,3275                               |
| 78400                                   | 1,15238                                  | 1,66154       | 4,07620        | 283,398                  | 1,3277                | 6,5231                               |
| 78600                                   | 1,11361                                  | 1,60886       | 4,01106        | 283,114                  | 1,3254                | 6,7262                               |
| 78800                                   | 1,07607                                  | 1,55775       | 3,94683        | 282,830                  | 1,3232                | 6,9339                               |
| 79000                                   | 1,03972—5                                | 1,50816—5     | 3,88350—3      | 282,546                  | 1,3209—5              | 7,1495—1                             |
| 79200                                   | 1,00453                                  | 1,46006       | 3,82107        | 282,261                  | 1,3186                | 7,3723                               |
| 79400                                   | 9,70469—6                                | 1,41340       | 3,75952        | 281,977                  | 1,3163                | 7,6025                               |
| 79600                                   | 9,37493                                  | 1,36814       | 3,69883        | 281,691                  | 1,3140                | 7,8404                               |
| 79800                                   | 9,05575                                  | 1,32424       | 3,63901        | 281,406                  | 1,3117                | 8,0862                               |
| 80000                                   | 8,74682                                  | 1,28167       | 3,58004        | 281,120                  | 1,3095                | 8,3402                               |

после значения параметра, является показателем степени десяти — сомножителя

Масштаб высоты по давлению, удельный вес воздуха,  
и средняя длина свободного пробега частиц воздуха в функции  
От —2000 до —50 м

| Геометри-<br>ческая<br>высота<br>h, м | Величины в функции геометрической высоты      |                                    |                                     |                                            |                                         |                                                         |
|---------------------------------------|-----------------------------------------------|------------------------------------|-------------------------------------|--------------------------------------------|-----------------------------------------|---------------------------------------------------------|
|                                       | масштаб<br>высоты по<br>давлению<br>$H_p$ , м | удельный<br>вес<br>$\gamma$ , Н/м³ | концентрация<br>частиц<br>$n$ , м⁻³ | средняя<br>скорость<br>частиц<br>$v$ , м/с | частота<br>соударений<br>$\omega$ , с⁻¹ | средняя длина<br>свободного<br>пробега<br>$\lambda$ , м |
| —2000                                 | 8809,6                                        | 1,4505+1                           | 3,0735+25                           | 469,19                                     | 8,5356+9                                | 5,4968—8                                                |
| —1950                                 | 8800,2                                        | 1,4438                             | 3,0594                              | 468,93                                     | 8,4919                                  | 5,5221                                                  |
| —1900                                 | 8790,9                                        | 1,4372                             | 3,0454                              | 468,68                                     | 8,4483                                  | 5,5476                                                  |
| —1850                                 | 8781,5                                        | 1,4305                             | 3,0314                              | 468,43                                     | 8,4049                                  | 5,5732                                                  |
| —1800                                 | 8772,1                                        | 1,4239                             | 3,0174                              | 468,17                                     | 8,3617                                  | 5,5990                                                  |
| —1750                                 | 8762,7                                        | 1,4173                             | 3,0035                              | 467,92                                     | 8,3187                                  | 5,6249                                                  |
| —1700                                 | 8753,4                                        | 1,4108                             | 2,9897                              | 467,66                                     | 8,2758                                  | 5,6510                                                  |
| —1650                                 | 8744,0                                        | 1,4042                             | 2,9759                              | 467,41                                     | 8,2331                                  | 5,6772                                                  |
| —1600                                 | 8734,6                                        | 1,3977                             | 2,9621                              | 467,16                                     | 8,1906                                  | 5,7036                                                  |
| —1550                                 | 8725,2                                        | 1,3912                             | 2,9484                              | 466,90                                     | 8,1483                                  | 5,7301                                                  |
| —1500                                 | 8715,9                                        | 1,3848+1                           | 2,9348+25                           | 466,65                                     | 8,1061+9                                | 5,7567—8                                                |
| —1450                                 | 8706,5                                        | 1,3783                             | 2,9212                              | 466,39                                     | 8,0641                                  | 5,7836                                                  |
| —1400                                 | 8697,1                                        | 1,3719                             | 2,9076                              | 466,14                                     | 8,0223                                  | 5,8105                                                  |
| —1350                                 | 8687,7                                        | 1,3655                             | 2,8941                              | 465,88                                     | 7,9806                                  | 5,8377                                                  |
| —1300                                 | 8678,4                                        | 1,3591                             | 2,8806                              | 465,63                                     | 7,9392                                  | 5,8649                                                  |
| —1250                                 | 8669,0                                        | 1,3528                             | 2,8672                              | 465,37                                     | 7,8979                                  | 5,8924                                                  |
| —1200                                 | 8659,6                                        | 1,3465                             | 2,8538                              | 465,12                                     | 7,8567                                  | 5,9200                                                  |
| —1150                                 | 8650,2                                        | 1,3402                             | 2,8405                              | 464,86                                     | 7,8158                                  | 5,9477                                                  |
| —1100                                 | 8640,8                                        | 1,3339                             | 2,8272                              | 464,60                                     | 7,7750                                  | 5,9757                                                  |
| —1050                                 | 8631,5                                        | 1,3276                             | 2,8140                              | 464,35                                     | 7,7343                                  | 6,0037                                                  |
| —1000                                 | 8622,1                                        | 1,3214+1                           | 2,8008+25                           | 464,09                                     | 7,6939+9                                | 6,0320—8                                                |
| —950                                  | 8612,7                                        | 1,3152                             | 2,7877                              | 463,84                                     | 7,6536                                  | 6,0604                                                  |
| —900                                  | 8603,3                                        | 1,3090                             | 2,7746                              | 463,58                                     | 7,6135                                  | 6,0890                                                  |
| —850                                  | 8594,0                                        | 1,3028                             | 2,7616                              | 463,32                                     | 7,5735                                  | 6,1177                                                  |
| —800                                  | 8584,6                                        | 1,2967                             | 2,7486                              | 463,07                                     | 7,5337                                  | 6,1466                                                  |
| —750                                  | 8575,2                                        | 1,2905                             | 2,7357                              | 462,81                                     | 7,4941                                  | 6,1757                                                  |
| —700                                  | 8565,8                                        | 1,2844                             | 2,7228                              | 462,55                                     | 7,4546                                  | 6,2049                                                  |
| —650                                  | 8556,4                                        | 1,2784                             | 2,7099                              | 462,30                                     | 7,4154                                  | 6,2343                                                  |
| —600                                  | 8547,1                                        | 1,2723                             | 2,6971                              | 462,04                                     | 7,3762                                  | 6,2639                                                  |
| —550                                  | 8537,7                                        | 1,2663                             | 2,6844                              | 461,78                                     | 7,3373                                  | 6,2937                                                  |
| —500                                  | 8528,3                                        | 1,2603+1                           | 2,6717+25                           | 461,53                                     | 7,2985+9                                | 6,3236—8                                                |
| —450                                  | 8518,9                                        | 1,2543                             | 2,6590                              | 461,27                                     | 7,2596                                  | 6,3537                                                  |
| —400                                  | 8509,5                                        | 1,2483                             | 2,6464                              | 461,01                                     | 7,2214                                  | 6,3840                                                  |
| —350                                  | 8500,2                                        | 1,2423                             | 2,6338                              | 460,75                                     | 7,1830                                  | 6,4145                                                  |
| —300                                  | 8490,8                                        | 1,2364                             | 2,6213                              | 460,50                                     | 7,1449                                  | 6,4451                                                  |
| —250                                  | 8481,4                                        | 1,2305                             | 2,6088                              | 460,24                                     | 7,1069                                  | 6,4759                                                  |
| —200                                  | 8472,0                                        | 1,2246                             | 2,5964                              | 459,98                                     | 7,0691                                  | 6,5069                                                  |
| —150                                  | 8462,7                                        | 1,2188                             | 2,5840                              | 459,72                                     | 7,0314                                  | 6,5381                                                  |
| —100                                  | 8453,3                                        | 1,2129                             | 2,5717                              | 459,46                                     | 6,9939                                  | 6,5695                                                  |
| —50                                   | 8443,9                                        | 1,2071                             | 2,5594                              | 459,20                                     | 6,9565                                  | 6,6010                                                  |

Таблица 3

концентрация, скорость, частота соударений  
геометрической и геопотенциальной высот

| Геопотенциальная<br>высота<br>$H$ , м | Величины в функции геопотенциальной высоты  |                                                |                                                 |                                                  |                                                     |                                                   |
|---------------------------------------|---------------------------------------------|------------------------------------------------|-------------------------------------------------|--------------------------------------------------|-----------------------------------------------------|---------------------------------------------------|
|                                       | масса<br>высоты по<br>длинному<br>$H_p$ , м | удельный<br>вес<br>$\gamma$ , Н/м <sup>3</sup> | концентрация<br>частиц<br>$n$ , м <sup>-3</sup> | средняя<br>скорость<br>частиц<br>$\bar{c}$ , м/с | частота<br>соударений<br>$\alpha$ , с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>$l$ , м |
| —2000                                 | 8809,5                                      | 1,4504+1                                       | 3,0734+25                                       | 469,18                                           | 8,5351+9                                            | 5,4971—8                                          |
| —1950                                 | 8800,1                                      | 1,4437                                         | 3,0593                                          | 468,93                                           | 8,4913                                              | 5,5224                                            |
| —1900                                 | 8790,8                                      | 1,4371                                         | 3,0452                                          | 468,68                                           | 8,4478                                              | 5,5479                                            |
| —1850                                 | 8781,4                                      | 1,4305                                         | 3,0312                                          | 468,42                                           | 8,4044                                              | 5,5735                                            |
| —1800                                 | 8772,0                                      | 1,4239                                         | 3,0173                                          | 468,17                                           | 8,3613                                              | 5,5993                                            |
| —1750                                 | 8762,6                                      | 1,4173                                         | 3,0034                                          | 467,92                                           | 8,3182                                              | 5,6252                                            |
| —1700                                 | 8753,3                                      | 1,4107                                         | 2,9896                                          | 467,66                                           | 8,2754                                              | 5,6512                                            |
| —1650                                 | 8743,9                                      | 1,4042                                         | 2,9758                                          | 467,41                                           | 8,2327                                              | 5,6774                                            |
| —1600                                 | 8734,5                                      | 1,3977                                         | 2,9620                                          | 467,15                                           | 8,1903                                              | 5,7038                                            |
| —1550                                 | 8725,2                                      | 1,3912                                         | 2,9483                                          | 466,90                                           | 8,1479                                              | 5,7303                                            |
| —1500                                 | 8715,8                                      | 1,3847+1                                       | 2,9347+25                                       | 466,64                                           | 8,1058+9                                            | 5,7569—8                                          |
| —1450                                 | 8706,4                                      | 1,3783                                         | 2,9211                                          | 466,39                                           | 8,0638                                              | 5,7837                                            |
| —1400                                 | 8697,0                                      | 1,3719                                         | 2,9075                                          | 466,14                                           | 8,0220                                              | 5,8107                                            |
| —1350                                 | 8687,7                                      | 1,3655                                         | 2,8940                                          | 465,88                                           | 7,9804                                              | 5,8378                                            |
| —1300                                 | 8678,3                                      | 1,3591                                         | 2,8805                                          | 465,63                                           | 7,9389                                              | 5,8651                                            |
| —1250                                 | 8668,9                                      | 1,3528                                         | 2,8671                                          | 465,37                                           | 7,8976                                              | 5,8925                                            |
| —1200                                 | 8659,6                                      | 1,3464                                         | 2,8538                                          | 465,11                                           | 7,8565                                              | 5,9201                                            |
| —1150                                 | 8650,2                                      | 1,3401                                         | 2,8405                                          | 464,86                                           | 7,8156                                              | 5,9479                                            |
| —1100                                 | 8640,8                                      | 1,3339                                         | 2,8272                                          | 464,60                                           | 7,7748                                              | 5,9758                                            |
| —1050                                 | 8631,4                                      | 1,3276                                         | 2,8140                                          | 464,35                                           | 7,7342                                              | 6,0038                                            |
| —1000                                 | 8622,1                                      | 1,3214+1                                       | 2,8008+25                                       | 464,09                                           | 7,6938+9                                            | 6,0321—8                                          |
| —950                                  | 8612,7                                      | 1,3152                                         | 2,7877                                          | 463,84                                           | 7,6535                                              | 6,0605                                            |
| —900                                  | 8603,3                                      | 1,3090                                         | 2,7746                                          | 463,58                                           | 7,6134                                              | 6,0890                                            |
| —850                                  | 8593,9                                      | 1,3028                                         | 2,7616                                          | 463,32                                           | 7,5734                                              | 6,1178                                            |
| —800                                  | 8584,6                                      | 1,2967                                         | 2,7486                                          | 463,07                                           | 7,5336                                              | 6,1467                                            |
| —750                                  | 8575,2                                      | 1,2905                                         | 2,7357                                          | 462,81                                           | 7,4940                                              | 6,1757                                            |
| —700                                  | 8565,8                                      | 1,2844                                         | 2,7228                                          | 462,55                                           | 7,4546                                              | 6,2050                                            |
| —650                                  | 8556,4                                      | 1,2783                                         | 2,7099                                          | 462,30                                           | 7,4153                                              | 6,2344                                            |
| —600                                  | 8547,1                                      | 1,2723                                         | 2,6971                                          | 462,04                                           | 7,3762                                              | 6,2639                                            |
| —550                                  | 8537,7                                      | 1,2663                                         | 2,6844                                          | 461,78                                           | 7,3372                                              | 6,2937                                            |
| —500                                  | 8528,3                                      | 1,2602+1                                       | 2,6717+25                                       | 461,53                                           | 7,2984+9                                            | 6,3236—8                                          |
| —450                                  | 8518,9                                      | 1,2543                                         | 2,6590                                          | 461,27                                           | 7,2598                                              | 6,3537                                            |
| —400                                  | 8509,5                                      | 1,2483                                         | 2,6464                                          | 461,01                                           | 7,2213                                              | 6,3840                                            |
| —350                                  | 8500,2                                      | 1,2423                                         | 2,6338                                          | 460,75                                           | 7,1830                                              | 6,4145                                            |
| —300                                  | 8490,8                                      | 1,2364                                         | 2,6213                                          | 460,49                                           | 7,1449                                              | 6,4451                                            |
| —250                                  | 8481,4                                      | 1,2305                                         | 2,6088                                          | 460,24                                           | 7,1069                                              | 6,4759                                            |
| —200                                  | 8472,0                                      | 1,2246                                         | 2,5964                                          | 459,98                                           | 7,0691                                              | 6,5069                                            |
| —150                                  | 8462,7                                      | 1,2188                                         | 2,5840                                          | 459,72                                           | 7,0314                                              | 6,5381                                            |
| —100                                  | 8453,3                                      | 1,2129                                         | 2,5717                                          | 459,46                                           | 6,9939                                              | 6,5695                                            |
| —50                                   | 8443,9                                      | 1,2071                                         | 2,5594                                          | 459,20                                           | 6,9565                                              | 6,6010                                            |



От 0 до 1950 м

| Геометри-<br>ческая<br>высота<br>h, м | Величины в функции геометрической высоты                 |                            |                                              |                                         |                                             |                                                |
|---------------------------------------|----------------------------------------------------------|----------------------------|----------------------------------------------|-----------------------------------------|---------------------------------------------|------------------------------------------------|
|                                       | масштаб<br>высоты по<br>дальномеру<br>H <sub>p</sub> , м | удельный<br>вес<br>γ, Н/м³ | концентрация<br>частиц<br>л, м <sup>-3</sup> | средняя<br>скорость<br>частиц<br>v, м/с | частота<br>соударений<br>φ, с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>l, м |
| 0                                     | 8434,5                                                   | 1,2013+1                   | 2,5471+25                                    | 458,94                                  | 6,9193+9                                    | 6,6328-8                                       |
| 50                                    | 8425,1                                                   | 1,1955                     | 2,5349                                       | 458,69                                  | 6,8823                                      | 6,6647                                         |
| 100                                   | 8415,7                                                   | 1,1898                     | 2,5228                                       | 458,43                                  | 6,8454                                      | 6,6968                                         |
| 150                                   | 8406,4                                                   | 1,1841                     | 2,5107                                       | 458,17                                  | 6,8087                                      | 6,7292                                         |
| 200                                   | 8397,0                                                   | 1,1783                     | 2,4986                                       | 457,91                                  | 6,7721                                      | 6,7617                                         |
| 250                                   | 8387,6                                                   | 1,1727                     | 2,4866                                       | 457,65                                  | 6,7357                                      | 6,7944                                         |
| 300                                   | 8378,2                                                   | 1,1670                     | 2,4746                                       | 457,39                                  | 6,6995                                      | 6,8273                                         |
| 350                                   | 8368,8                                                   | 1,1613                     | 2,4627                                       | 457,13                                  | 6,6634                                      | 6,8603                                         |
| 400                                   | 8359,5                                                   | 1,1557                     | 2,4508                                       | 456,87                                  | 6,6274                                      | 6,8936                                         |
| 450                                   | 8350,1                                                   | 1,1501                     | 2,4389                                       | 456,61                                  | 6,5916                                      | 6,9271                                         |
| 500                                   | 8340,7                                                   | 1,1445+1                   | 2,4271+25                                    | 456,35                                  | 6,5560+9                                    | 6,9608-8                                       |
| 550                                   | 8331,3                                                   | 1,1390                     | 2,4154                                       | 456,09                                  | 6,5205                                      | 6,9947                                         |
| 600                                   | 8321,9                                                   | 1,1334                     | 2,4036                                       | 455,83                                  | 6,4852                                      | 7,0288                                         |
| 650                                   | 8312,6                                                   | 1,1279                     | 2,3920                                       | 455,57                                  | 6,4500                                      | 7,0631                                         |
| 700                                   | 8303,2                                                   | 1,1224                     | 2,3803                                       | 455,31                                  | 6,4149                                      | 7,0976                                         |
| 750                                   | 8293,8                                                   | 1,1169                     | 2,3687                                       | 455,05                                  | 6,3801                                      | 7,1323                                         |
| 800                                   | 8284,4                                                   | 1,1115                     | 2,3572                                       | 454,79                                  | 6,3453                                      | 7,1672                                         |
| 850                                   | 8275,0                                                   | 1,1060                     | 2,3457                                       | 454,52                                  | 6,3108                                      | 7,2024                                         |
| 900                                   | 8265,6                                                   | 1,1006                     | 2,3343                                       | 454,26                                  | 6,2763                                      | 7,2377                                         |
| 950                                   | 8256,3                                                   | 1,0952                     | 2,3228                                       | 454,00                                  | 6,2421                                      | 7,2733                                         |
| 1000                                  | 8246,9                                                   | 1,0898+1                   | 2,3115+25                                    | 453,74                                  | 6,2079+9                                    | 7,3090-8                                       |
| 1050                                  | 8237,5                                                   | 1,0845                     | 2,3001                                       | 453,48                                  | 6,1739                                      | 7,3450                                         |
| 1100                                  | 8228,1                                                   | 1,0791                     | 2,2889                                       | 453,22                                  | 6,1401                                      | 7,3812                                         |
| 1150                                  | 8218,7                                                   | 1,0738                     | 2,2776                                       | 452,95                                  | 6,1064                                      | 7,4177                                         |
| 1200                                  | 8209,3                                                   | 1,0685                     | 2,2664                                       | 452,69                                  | 6,0729                                      | 7,4543                                         |
| 1250                                  | 8200,0                                                   | 1,0632                     | 2,2553                                       | 452,43                                  | 6,0395                                      | 7,4912                                         |
| 1300                                  | 8190,6                                                   | 1,0580                     | 2,2442                                       | 452,17                                  | 6,0062                                      | 7,5283                                         |
| 1350                                  | 8181,2                                                   | 1,0527                     | 2,2331                                       | 451,90                                  | 5,9731                                      | 7,5656                                         |
| 1400                                  | 8171,8                                                   | 1,0475                     | 2,2221                                       | 451,64                                  | 5,9402                                      | 7,6032                                         |
| 1450                                  | 8162,4                                                   | 1,0423                     | 2,2111                                       | 451,38                                  | 5,9073                                      | 7,6410                                         |
| 1500                                  | 8153,0                                                   | 1,0362+1                   | 2,2001+25                                    | 451,12                                  | 5,8747+9                                    | 7,6790-8                                       |
| 1550                                  | 8143,6                                                   | 1,0320                     | 2,1892                                       | 450,85                                  | 5,8421                                      | 7,7172                                         |
| 1600                                  | 8134,3                                                   | 1,0269                     | 2,1783                                       | 450,59                                  | 5,8098                                      | 7,7557                                         |
| 1650                                  | 8124,9                                                   | 1,0217                     | 2,1675                                       | 450,32                                  | 5,7775                                      | 7,7944                                         |
| 1700                                  | 8115,5                                                   | 1,0166                     | 2,1567                                       | 450,06                                  | 5,7454                                      | 7,8334                                         |
| 1750                                  | 8106,1                                                   | 1,0116                     | 2,1460                                       | 449,80                                  | 5,7135                                      | 7,8726                                         |
| 1800                                  | 8096,7                                                   | 1,0065                     | 2,1353                                       | 449,53                                  | 5,6816                                      | 7,9120                                         |
| 1850                                  | 8087,3                                                   | 1,0015                     | 2,1247                                       | 449,27                                  | 5,6500                                      | 7,9517                                         |
| 1900                                  | 8077,9                                                   | 9,9645+0                   | 2,1140                                       | 449,00                                  | 5,6184                                      | 7,9917                                         |
| 1950                                  | 8068,6                                                   | 9,9145                     | 2,1035                                       | 448,74                                  | 5,5870                                      | 8,0318                                         |

| Геопотенциальная<br>высота<br>$H, м'$ | Величины в функции геопотенциальной высоты |                                    |                                       |                                           |                                           |                                                  |
|---------------------------------------|--------------------------------------------|------------------------------------|---------------------------------------|-------------------------------------------|-------------------------------------------|--------------------------------------------------|
|                                       | масштаб<br>высоты по<br>линейно<br>$H, м$  | удельный<br>вес<br>$\gamma, Н/м^3$ | концентрация<br>частиц<br>$n, м^{-3}$ | средняя<br>скорость<br>частиц<br>$v, м/с$ | частота<br>соударений<br>$\omega, с^{-1}$ | средняя длина<br>свободного<br>пробега<br>$l, м$ |
| 0                                     | 8434,5                                     | 1,2013+1                           | 2,5471+25                             | 458,94                                    | 6,9193+9                                  | 6,6328-8                                         |
| 50                                    | 8425,1                                     | 1,1955                             | 2,5349                                | 458,69                                    | 6,8823                                    | 6,6647                                           |
| 100                                   | 8415,7                                     | 1,1898                             | 2,5228                                | 458,43                                    | 6,8454                                    | 6,6968                                           |
| 150                                   | 8406,4                                     | 1,1841                             | 2,5107                                | 458,17                                    | 6,8087                                    | 6,7292                                           |
| 200                                   | 8397,0                                     | 1,1783                             | 2,4986                                | 457,91                                    | 6,7721                                    | 6,7617                                           |
| 250                                   | 8387,6                                     | 1,1727                             | 2,4866                                | 457,65                                    | 6,7357                                    | 6,7944                                           |
| 300                                   | 8378,2                                     | 1,1670                             | 2,4746                                | 457,39                                    | 6,6994                                    | 6,8273                                           |
| 350                                   | 8368,8                                     | 1,1613                             | 2,4626                                | 457,13                                    | 6,6633                                    | 6,8604                                           |
| 400                                   | 8359,5                                     | 1,1557                             | 2,4508                                | 456,87                                    | 6,6274                                    | 6,8937                                           |
| 450                                   | 8350,1                                     | 1,1501                             | 2,4389                                | 456,61                                    | 6,5916                                    | 6,9271                                           |
| 500                                   | 8340,7                                     | 1,1445+1                           | 2,4271+25                             | 456,35                                    | 6,5560+9                                  | 6,9608-8                                         |
| 550                                   | 8331,3                                     | 1,1390                             | 2,4153                                | 456,09                                    | 6,5205                                    | 6,9947                                           |
| 600                                   | 8321,9                                     | 1,1334                             | 2,4036                                | 455,83                                    | 6,4851*                                   | 7,0288                                           |
| 650                                   | 8312,5                                     | 1,1279                             | 2,3919                                | 455,57                                    | 6,4499                                    | 7,0631                                           |
| 700                                   | 8303,2                                     | 1,1224                             | 2,3803                                | 455,31                                    | 6,4149                                    | 7,0976                                           |
| 750                                   | 8293,8                                     | 1,1169                             | 2,3687                                | 455,05                                    | 6,3800                                    | 7,1324                                           |
| 800                                   | 8284,4                                     | 1,1114                             | 2,3572                                | 454,78                                    | 6,3453                                    | 7,1673                                           |
| 850                                   | 8275,0                                     | 1,1060                             | 2,3457                                | 454,52                                    | 6,3107                                    | 7,2024                                           |
| 900                                   | 8265,6                                     | 1,1006                             | 2,3342                                | 454,26                                    | 6,2762                                    | 7,2378                                           |
| 950                                   | 8256,2                                     | 1,0952                             | 2,3228                                | 454,00                                    | 6,2420                                    | 7,2734                                           |
| 1000                                  | 8246,8                                     | 1,0898+1                           | 2,3114+25                             | 453,74                                    | 6,2078+9                                  | 7,3092-8                                         |
| 1050                                  | 8237,5                                     | 1,0844                             | 2,3001                                | 453,48                                    | 6,1738                                    | 7,3452                                           |
| 1100                                  | 8228,1                                     | 1,0791                             | 2,2888                                | 453,21                                    | 6,1400                                    | 7,3814                                           |
| 1150                                  | 8218,7                                     | 1,0738                             | 2,2776                                | 452,95                                    | 6,1063                                    | 7,4178                                           |
| 1200                                  | 8209,3                                     | 1,0685                             | 2,2664                                | 452,69                                    | 6,0727                                    | 7,4545                                           |
| 1250                                  | 8199,9                                     | 1,0632                             | 2,2552                                | 452,43                                    | 6,0393                                    | 7,4914                                           |
| 1300                                  | 8190,5                                     | 1,0580                             | 2,2441                                | 452,17                                    | 6,0060                                    | 7,5285                                           |
| 1350                                  | 8181,1                                     | 1,0527                             | 2,2330                                | 451,90                                    | 5,9729                                    | 7,5658                                           |
| 1400                                  | 8171,7                                     | 1,0475                             | 2,2220                                | 451,64                                    | 5,9400                                    | 7,6034                                           |
| 1450                                  | 8162,4                                     | 1,0423                             | 2,2110                                | 451,38                                    | 5,9071                                    | 7,6412                                           |
| 1500                                  | 8153,0                                     | 1,0371+1                           | 2,2000+25                             | 451,11                                    | 5,8744+9                                  | 7,6793-8                                         |
| 1550                                  | 8143,6                                     | 1,0320                             | 2,1891                                | 450,85                                    | 5,8419                                    | 7,7175                                           |
| 1600                                  | 8134,2                                     | 1,0268                             | 2,1783                                | 450,59                                    | 5,8095                                    | 7,7560                                           |
| 1650                                  | 8124,8                                     | 1,0217                             | 2,1674                                | 450,32                                    | 5,7772                                    | 7,7948                                           |
| 1700                                  | 8115,4                                     | 1,0166                             | 2,1566                                | 450,06                                    | 5,7451                                    | 7,8338                                           |
| 1750                                  | 8106,0                                     | 1,0115                             | 2,1459                                | 449,79                                    | 5,7131                                    | 7,8730                                           |
| 1800                                  | 8096,6                                     | 1,0065                             | 2,1352                                | 449,53                                    | 5,6813                                    | 7,9124                                           |
| 1850                                  | 8087,2                                     | 1,0014                             | 2,1245                                | 449,27                                    | 5,6496                                    | 7,9522                                           |
| 1900                                  | 8077,8                                     | 9,9640+0                           | 2,1139                                | 449,00                                    | 5,6181                                    | 7,9921                                           |
| 1950                                  | 8068,4                                     | 9,9139                             | 2,1033                                | 448,74                                    | 5,5866                                    | 8,0323                                           |

От 2000 до 3950 м

| Геометри-<br>ческая<br>высота<br>А, м | Величины в функции геометрической высоты               |                            |                                              |                                         |                                             |                                                |          |
|---------------------------------------|--------------------------------------------------------|----------------------------|----------------------------------------------|-----------------------------------------|---------------------------------------------|------------------------------------------------|----------|
|                                       | масштаб<br>высоты по<br>давлению<br>Н <sub>p</sub> , м | удельный<br>вес<br>γ, Н/м³ | концентрация<br>частиц<br>n, м <sup>-3</sup> | средняя<br>скорость<br>частиц<br>v, м/с | частота<br>соударений<br>ω, с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>l, м |          |
| 2000                                  | 8059,2                                                 | 9,8647                     | 0                                            | 2,0929+25                               | 448,48                                      | 5,5558+9                                       | 8,0723-8 |
| 2050                                  | 8049,8                                                 | 9,8151                     |                                              | 2,0824                                  | 448,21                                      | 5,5246                                         | 8,1129   |
| 2100                                  | 8040,4                                                 | 9,7657                     |                                              | 2,0720                                  | 447,95                                      | 5,4937                                         | 8,1539   |
| 2150                                  | 8031,0                                                 | 9,7164                     |                                              | 2,0616                                  | 447,68                                      | 5,4628                                         | 8,1951   |
| 2200                                  | 8021,6                                                 | 9,6674                     |                                              | 2,0512                                  | 447,42                                      | 5,4321                                         | 8,2365   |
| 2250                                  | 8012,2                                                 | 9,6185                     |                                              | 2,0409                                  | 447,15                                      | 5,4015                                         | 8,2782   |
| 2300                                  | 8002,9                                                 | 9,5699                     |                                              | 2,0306                                  | 446,88                                      | 5,3711                                         | 8,3202   |
| 2350                                  | 7993,5                                                 | 9,5214                     |                                              | 2,0203                                  | 446,62                                      | 5,3408                                         | 8,3624   |
| 2400                                  | 7984,1                                                 | 9,4731                     |                                              | 2,0101                                  | 446,35                                      | 5,3106                                         | 8,4049   |
| 2450                                  | 7974,7                                                 | 9,4250                     |                                              | 1,9999                                  | 446,09                                      | 5,2806                                         | 8,4476   |
| 2500                                  | 7965,3                                                 | 9,3771                     | 0                                            | 1,9898+25                               | 445,82                                      | 5,2507+9                                       | 8,4907-8 |
| 2550                                  | 7955,9                                                 | 9,3294                     |                                              | 1,9797                                  | 445,55                                      | 5,2210                                         | 8,5339   |
| 2600                                  | 7946,5                                                 | 9,2819                     |                                              | 1,9696                                  | 445,29                                      | 5,1913                                         | 8,5775   |
| 2650                                  | 7937,1                                                 | 9,2346                     |                                              | 1,9596                                  | 445,02                                      | 5,1619                                         | 8,6213   |
| 2700                                  | 7927,7                                                 | 9,1874                     |                                              | 1,9497                                  | 444,76                                      | 5,1325                                         | 8,6655   |
| 2750                                  | 7918,4                                                 | 9,1404                     |                                              | 1,9397                                  | 444,49                                      | 5,1033                                         | 8,7099   |
| 2800                                  | 7909,0                                                 | 9,0936                     |                                              | 1,9298                                  | 444,22                                      | 5,0742                                         | 8,7545   |
| 2850                                  | 7899,6                                                 | 9,0470                     |                                              | 1,9200                                  | 443,95                                      | 5,0452                                         | 8,7995   |
| 2900                                  | 7890,2                                                 | 9,0006                     |                                              | 1,9101                                  | 443,69                                      | 5,0164                                         | 8,8447   |
| 2950                                  | 7880,8                                                 | 8,9544                     |                                              | 1,9004                                  | 443,42                                      | 4,9877                                         | 8,8903   |
| 3000                                  | 7871,4                                                 | 8,9083                     | 0                                            | 1,8906+25                               | 443,15                                      | 4,9591+9                                       | 8,9361-8 |
| 3050                                  | 7862,0                                                 | 8,8625                     |                                              | 1,8809                                  | 442,88                                      | 4,9307                                         | 8,9822   |
| 3100                                  | 7852,6                                                 | 8,8168                     |                                              | 1,8712                                  | 442,62                                      | 4,9024                                         | 9,0286   |
| 3150                                  | 7843,2                                                 | 8,7713                     |                                              | 1,8616                                  | 442,35                                      | 4,8742                                         | 9,0753   |
| 3200                                  | 7833,9                                                 | 8,7259                     |                                              | 1,8520                                  | 442,08                                      | 4,8461                                         | 9,1223   |
| 3250                                  | 7824,5                                                 | 8,6808                     |                                              | 1,8425                                  | 441,81                                      | 4,8182                                         | 9,1696   |
| 3300                                  | 7815,1                                                 | 8,6358                     |                                              | 1,8330                                  | 441,54                                      | 4,7904                                         | 9,2172   |
| 3350                                  | 7805,7                                                 | 8,5910                     |                                              | 1,8235                                  | 441,27                                      | 4,7628                                         | 9,2651   |
| 3400                                  | 7796,3                                                 | 8,5464                     |                                              | 1,8140                                  | 441,00                                      | 4,7352                                         | 9,3133   |
| 3450                                  | 7786,9                                                 | 8,5020                     |                                              | 1,8046                                  | 440,73                                      | 4,7078                                         | 9,3618   |
| 3500                                  | 7777,5                                                 | 8,4578                     | 0                                            | 1,7953+25                               | 440,47                                      | 4,6805+9                                       | 9,4106-8 |
| 3550                                  | 7768,1                                                 | 8,4137                     |                                              | 1,7859                                  | 440,20                                      | 4,6533                                         | 9,4598   |
| 3600                                  | 7758,7                                                 | 8,3698                     |                                              | 1,7767                                  | 439,93                                      | 4,6263                                         | 9,5093   |
| 3650                                  | 7749,3                                                 | 8,3261                     |                                              | 1,7674                                  | 439,66                                      | 4,5994                                         | 9,5590   |
| 3700                                  | 7739,9                                                 | 8,2825                     |                                              | 1,7582                                  | 439,39                                      | 4,5726                                         | 9,6091   |
| 3750                                  | 7730,6                                                 | 8,2392                     |                                              | 1,7490                                  | 439,12                                      | 4,5459                                         | 9,6596   |
| 3800                                  | 7721,2                                                 | 8,1960                     |                                              | 1,7399                                  | 438,85                                      | 4,5194                                         | 9,7103   |
| 3850                                  | 7711,8                                                 | 8,1530                     |                                              | 1,7308                                  | 438,58                                      | 4,4930                                         | 9,7614   |
| 3900                                  | 7702,4                                                 | 8,1101                     |                                              | 1,7217                                  | 438,31                                      | 4,4667                                         | 9,8128   |
| 3950                                  | 7693,0                                                 | 8,0674                     |                                              | 1,7127                                  | 438,03                                      | 4,4405                                         | 9,8646   |

| Геопотенциальная высота $H$ , м' | Величины в функции геопотенциальной высоты |                                          |                                              |                                   |                                               |                                          |
|----------------------------------|--------------------------------------------|------------------------------------------|----------------------------------------------|-----------------------------------|-----------------------------------------------|------------------------------------------|
|                                  | масштаб высоты по давлению $H_p$ , м       | удельный вес $\gamma$ , Н/м <sup>3</sup> | концентрация частиц $\rho$ , м <sup>-3</sup> | средняя скорость частиц $v$ , м/с | частота соударений $\omega$ , с <sup>-1</sup> | средняя длина свободного пробега $l$ , м |
| 2000                             | 8059,1                                     | 9,8641                                   | 2,0928+25                                    | 448,47                            | 5,5554+9                                      | 8,0728-8                                 |
| 2050                             | 8049,7                                     | 9,8144                                   | 2,0823                                       | 448,21                            | 5,5242                                        | 8,1135                                   |
| 2100                             | 8040,3                                     | 9,7650                                   | 2,0718                                       | 447,94                            | 5,4932                                        | 8,1544                                   |
| 2150                             | 8030,9                                     | 9,7157                                   | 2,0614                                       | 447,68                            | 5,4624                                        | 8,1957                                   |
| 2200                             | 8021,5                                     | 9,6667                                   | 2,0510                                       | 447,41                            | 5,4316                                        | 8,2371                                   |
| 2250                             | 8012,1                                     | 9,6178                                   | 2,0407                                       | 447,15                            | 5,4011                                        | 8,2789                                   |
| 2300                             | 8002,7                                     | 9,5691                                   | 2,0304                                       | 446,88                            | 5,3706                                        | 8,3209                                   |
| 2350                             | 7993,3                                     | 9,5206                                   | 2,0201                                       | 446,61                            | 5,3403                                        | 8,3631                                   |
| 2400                             | 7983,9                                     | 9,4723                                   | 2,0099                                       | 446,35                            | 5,3101                                        | 8,4056                                   |
| 2450                             | 7974,5                                     | 9,4241                                   | 1,9997                                       | 446,08                            | 5,2801                                        | 8,4484                                   |
| 2500                             | 7965,1                                     | 9,3762                                   | 1,9896+25                                    | 445,82                            | 5,2501+9                                      | 8,4915-8                                 |
| 2550                             | 7955,7                                     | 9,3284                                   | 1,9795                                       | 445,55                            | 5,2204                                        | 8,5348                                   |
| 2600                             | 7946,3                                     | 9,2809                                   | 1,9694                                       | 445,28                            | 5,1907                                        | 8,5784                                   |
| 2650                             | 7936,9                                     | 9,2335                                   | 1,9594                                       | 445,02                            | 5,1612                                        | 8,6223                                   |
| 2700                             | 7927,5                                     | 9,1863                                   | 1,9494                                       | 444,75                            | 5,1318                                        | 8,6665                                   |
| 2750                             | 7918,1                                     | 9,1393                                   | 1,9395                                       | 444,48                            | 5,1026                                        | 8,7109                                   |
| 2800                             | 7908,7                                     | 9,0925                                   | 1,9296                                       | 444,21                            | 5,0735                                        | 8,7556                                   |
| 2850                             | 7899,3                                     | 9,0458                                   | 1,9197                                       | 443,95                            | 5,0445                                        | 8,8006                                   |
| 2900                             | 7889,9                                     | 8,9994                                   | 1,9099                                       | 443,68                            | 5,0156                                        | 8,8459                                   |
| 2950                             | 7880,5                                     | 8,9531                                   | 1,9001                                       | 443,41                            | 4,9869                                        | 8,8915                                   |
| 3000                             | 7871,1                                     | 8,9070                                   | 1,8903+25                                    | 443,14                            | 4,9583+9                                      | 8,9374-8                                 |
| 3050                             | 7861,8                                     | 8,8611                                   | 1,8806                                       | 442,88                            | 4,9299                                        | 8,9835                                   |
| 3100                             | 7852,4                                     | 8,8154                                   | 1,8709                                       | 442,61                            | 4,9015                                        | 9,0300                                   |
| 3150                             | 7843,0                                     | 8,7698                                   | 1,8613                                       | 442,34                            | 4,8733                                        | 9,0768                                   |
| 3200                             | 7833,6                                     | 8,7245                                   | 1,8517                                       | 442,07                            | 4,8452                                        | 9,1238                                   |
| 3250                             | 7824,2                                     | 8,6793                                   | 1,8422                                       | 441,80                            | 4,8173                                        | 9,1712                                   |
| 3300                             | 7814,8                                     | 8,6343                                   | 1,8326                                       | 441,53                            | 4,7895                                        | 9,2188                                   |
| 3350                             | 7805,4                                     | 8,5895                                   | 1,8231                                       | 441,26                            | 4,7618                                        | 9,2668                                   |
| 3400                             | 7796,0                                     | 8,5448                                   | 1,8137                                       | 440,99                            | 4,7342                                        | 9,3151                                   |
| 3450                             | 7786,6                                     | 8,5004                                   | 1,8043                                       | 440,72                            | 4,7068                                        | 9,3636                                   |
| 3500                             | 7777,2                                     | 8,4561                                   | 1,7949+25                                    | 440,45                            | 4,6795+9                                      | 9,4125-8                                 |
| 3550                             | 7767,7                                     | 8,4119                                   | 1,7856                                       | 440,19                            | 4,6523                                        | 9,4617                                   |
| 3600                             | 7758,3                                     | 8,3680                                   | 1,7763                                       | 439,92                            | 4,6252                                        | 9,5113                                   |
| 3650                             | 7748,9                                     | 8,3242                                   | 1,7670                                       | 439,65                            | 4,5983                                        | 9,5611                                   |
| 3700                             | 7739,5                                     | 8,2807                                   | 1,7578                                       | 439,37                            | 4,5714                                        | 9,6113                                   |
| 3750                             | 7730,1                                     | 8,2373                                   | 1,7486                                       | 439,10                            | 4,5447                                        | 9,6618                                   |
| 3800                             | 7720,7                                     | 8,1940                                   | 1,7395                                       | 438,83                            | 4,5182                                        | 9,7120                                   |
| 3850                             | 7711,3                                     | 8,1510                                   | 1,7303                                       | 438,56                            | 4,4917                                        | 9,7638                                   |
| 3900                             | 7701,9                                     | 8,1081                                   | 1,7213                                       | 438,29                            | 4,4654                                        | 9,8153                                   |
| 3950                             | 7692,5                                     | 8,0653                                   | 1,7122                                       | 438,02                            | 4,4392                                        | 9,8671                                   |

От 4000 до 5950 м

| Геометри-<br>ческая<br>высота<br>h, м | Величины в функции геометрической высоты      |                                                |                                              |                                                  |                                                     |                                                |          |
|---------------------------------------|-----------------------------------------------|------------------------------------------------|----------------------------------------------|--------------------------------------------------|-----------------------------------------------------|------------------------------------------------|----------|
|                                       | масштаб<br>высоты по<br>давлению<br>$H_p$ , м | удельный<br>вес<br>$\gamma$ , Н/м <sup>3</sup> | концентрация<br>частиц<br>л, м <sup>-3</sup> | средняя<br>скорость<br>частиц<br>$\bar{v}$ , м/с | частота<br>создавания<br>$\omega$ , с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>l, м |          |
| 4000                                  | 7683,6                                        | 8,0249                                         | 0                                            | 1,7037+25                                        | 437,76                                              | 4,4144+9                                       | 9,9166-8 |
| 4050                                  | 7674,2                                        | 7,9826                                         |                                              | 1,6947                                           | 437,49                                              | 4,3885                                         | 9,9691   |
| 4100                                  | 7664,8                                        | 7,9405                                         |                                              | 1,6858                                           | 437,22                                              | 4,3627                                         | 1,0022-7 |
| 4150                                  | 7655,4                                        | 7,8985                                         |                                              | 1,6769                                           | 436,95                                              | 4,3370                                         | 1,0075   |
| 4200                                  | 7646,0                                        | 7,8567                                         |                                              | 1,6680                                           | 436,68                                              | 4,3114                                         | 1,0128   |
| 4250                                  | 7636,6                                        | 7,8150                                         |                                              | 1,6592                                           | 436,41                                              | 4,2860                                         | 1,0182   |
| 4300                                  | 7627,2                                        | 7,7736                                         |                                              | 1,6505                                           | 436,13                                              | 4,2606                                         | 1,0236   |
| 4350                                  | 7617,8                                        | 7,7323                                         |                                              | 1,6417                                           | 435,86                                              | 4,2354                                         | 1,0291   |
| 4400                                  | 7608,5                                        | 7,6911                                         |                                              | 1,6330                                           | 435,59                                              | 4,2103                                         | 1,0346   |
| 4450                                  | 7599,1                                        | 7,6502                                         |                                              | 1,6243                                           | 435,32                                              | 4,1854                                         | 1,0401   |
| 4500                                  | 7589,7                                        | 7,6094                                         | 0                                            | 1,6157+25                                        | 435,05                                              | 4,1605+9                                       | 1,0457-7 |
| 4550                                  | 7580,3                                        | 7,5687                                         |                                              | 1,6071                                           | 434,77                                              | 4,1357                                         | 1,0513   |
| 4600                                  | 7570,9                                        | 7,5283                                         |                                              | 1,5985                                           | 434,50                                              | 4,1111                                         | 1,0569   |
| 4650                                  | 7561,5                                        | 7,4880                                         |                                              | 1,5900                                           | 434,23                                              | 4,0866                                         | 1,0626   |
| 4700                                  | 7552,1                                        | 7,4479                                         |                                              | 1,5815                                           | 433,95                                              | 4,0622                                         | 1,0683   |
| 4750                                  | 7542,7                                        | 7,4079                                         |                                              | 1,5730                                           | 433,68                                              | 4,0379                                         | 1,0740   |
| 4800                                  | 7533,3                                        | 7,3681                                         |                                              | 1,5646                                           | 433,41                                              | 4,0138                                         | 1,0798   |
| 4850                                  | 7523,9                                        | 7,3285                                         |                                              | 1,5562                                           | 433,13                                              | 3,9897                                         | 1,0856   |
| 4900                                  | 7514,5                                        | 7,2890                                         |                                              | 1,5479                                           | 432,86                                              | 3,9658                                         | 1,0915   |
| 4950                                  | 7505,1                                        | 7,2497                                         |                                              | 1,5395                                           | 432,58                                              | 3,9420                                         | 1,0974   |
| 5000                                  | 7495,7                                        | 7,2105                                         | 0                                            | 1,5313+25                                        | 432,31                                              | 3,9183+9                                       | 1,1033-7 |
| 5050                                  | 7486,3                                        | 7,1716                                         |                                              | 1,5230                                           | 432,04                                              | 3,8947                                         | 1,1093   |
| 5100                                  | 7476,9                                        | 7,1328                                         |                                              | 1,5148                                           | 431,76                                              | 3,8712                                         | 1,1153   |
| 5150                                  | 7467,5                                        | 7,0941                                         |                                              | 1,5066                                           | 431,49                                              | 3,8478                                         | 1,1214   |
| 5200                                  | 7458,1                                        | 7,0556                                         |                                              | 1,4984                                           | 431,21                                              | 3,8246                                         | 1,1275   |
| 5250                                  | 7448,7                                        | 7,0173                                         |                                              | 1,4903                                           | 430,94                                              | 3,8014                                         | 1,1336   |
| 5300                                  | 7439,3                                        | 6,9791                                         |                                              | 1,4822                                           | 430,66                                              | 3,7784                                         | 1,1398   |
| 5350                                  | 7429,9                                        | 6,9411                                         |                                              | 1,4742                                           | 430,39                                              | 3,7555                                         | 1,1460   |
| 5400                                  | 7420,6                                        | 6,9032                                         |                                              | 1,4662                                           | 430,11                                              | 3,7326                                         | 1,1523   |
| 5450                                  | 7411,2                                        | 6,8655                                         |                                              | 1,4582                                           | 429,83                                              | 3,7099                                         | 1,1586   |
| 5500                                  | 7401,8                                        | 6,8280                                         | 0                                            | 1,4502+25                                        | 429,56                                              | 3,6874+9                                       | 1,1650-7 |
| 5550                                  | 7392,4                                        | 6,7906                                         |                                              | 1,4423                                           | 429,28                                              | 3,6649                                         | 1,1713   |
| 5600                                  | 7383,0                                        | 6,7534                                         |                                              | 1,4344                                           | 429,01                                              | 3,6425                                         | 1,1778   |
| 5650                                  | 7373,6                                        | 6,7164                                         |                                              | 1,4266                                           | 428,73                                              | 3,6202                                         | 1,1843   |
| 5700                                  | 7364,2                                        | 6,6794                                         |                                              | 1,4188                                           | 428,45                                              | 3,5981                                         | 1,1908   |
| 5750                                  | 7354,8                                        | 6,6427                                         |                                              | 1,4110                                           | 428,18                                              | 3,5760                                         | 1,1974   |
| 5800                                  | 7345,4                                        | 6,6061                                         |                                              | 1,4032                                           | 427,90                                              | 3,5541                                         | 1,2040   |
| 5850                                  | 7336,0                                        | 6,5697                                         |                                              | 1,3955                                           | 427,62                                              | 3,5322                                         | 1,2106   |
| 5900                                  | 7326,6                                        | 6,5334                                         |                                              | 1,3878                                           | 427,34                                              | 3,5105                                         | 1,2173   |
| 5950                                  | 7317,2                                        | 6,4973                                         |                                              | 1,3802                                           | 427,07                                              | 3,4889                                         | 1,2241   |

| Геопотенциальная<br>высота<br>$H$ , м' | Величины в функции геопотенциальной высоты    |                                    |                                                 |                                            |                                                     |                                                   |
|----------------------------------------|-----------------------------------------------|------------------------------------|-------------------------------------------------|--------------------------------------------|-----------------------------------------------------|---------------------------------------------------|
|                                        | масштаб<br>высоты по<br>давлению<br>$H_p$ , м | удельный<br>вес<br>$\gamma$ , Н/м³ | концентрация<br>частиц<br>$L$ , м <sup>-3</sup> | средняя<br>скорость<br>частиц<br>$v$ , м/с | частота<br>соударений<br>$\omega$ , с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>$l$ , м |
| 4000                                   | 7683,1                                        | 8,0228                             | 0 1,7032+25                                     | 437,75                                     | 4,4131+9                                            | 9,9193-8                                          |
| 4050                                   | 7673,7                                        | 7,9804                             | 1,6942                                          | 437,48                                     | 4,3872                                              | 9,9718                                            |
| 4100                                   | 7664,3                                        | 7,9382                             | 1,6853                                          | 437,21                                     | 4,3613                                              | 1,0025-7                                          |
| 4150                                   | 7654,9                                        | 7,8962                             | 1,6764                                          | 436,93                                     | 4,3356                                              | 1,0078                                            |
| 4200                                   | 7645,5                                        | 7,8544                             | 1,6676                                          | 436,66                                     | 4,3100                                              | 1,0131                                            |
| 4250                                   | 7636,1                                        | 7,8127                             | 1,6587                                          | 436,39                                     | 4,2845                                              | 1,0185                                            |
| 4300                                   | 7626,7                                        | 7,7712                             | 1,6499                                          | 436,12                                     | 4,2592                                              | 1,0240                                            |
| 4350                                   | 7617,3                                        | 7,7298                             | 1,6412                                          | 435,85                                     | 4,2339                                              | 1,0294                                            |
| 4400                                   | 7607,9                                        | 7,6886                             | 1,6325                                          | 435,57                                     | 4,2088                                              | 1,0349                                            |
| 4450                                   | 7598,5                                        | 7,6476                             | 1,6238                                          | 435,30                                     | 4,1838                                              | 1,0404                                            |
| 4500                                   | 7589,1                                        | 7,6068                             | 0 1,6151+25                                     | 435,03                                     | 4,1589+9                                            | 1,0460-7                                          |
| 4550                                   | 7579,7                                        | 7,5661                             | 1,6065                                          | 434,75                                     | 4,1341                                              | 1,0516                                            |
| 4600                                   | 7570,3                                        | 7,5256                             | 1,5980                                          | 434,48                                     | 4,1095                                              | 1,0573                                            |
| 4650                                   | 7560,8                                        | 7,4852                             | 1,5894                                          | 434,21                                     | 4,0849                                              | 1,0629                                            |
| 4700                                   | 7551,4                                        | 7,4451                             | 1,5809                                          | 433,93                                     | 4,0605                                              | 1,0687                                            |
| 4750                                   | 7542,0                                        | 7,4051                             | 1,5724                                          | 433,66                                     | 4,0362                                              | 1,0744                                            |
| 4800                                   | 7532,6                                        | 7,3652                             | 1,5640                                          | 433,39                                     | 4,0120                                              | 1,0802                                            |
| 4850                                   | 7523,2                                        | 7,3255                             | 1,5556                                          | 433,11                                     | 3,9880                                              | 1,0861                                            |
| 4900                                   | 7513,8                                        | 7,2860                             | 1,5472                                          | 432,84                                     | 3,9640                                              | 1,0919                                            |
| 4950                                   | 7504,4                                        | 7,2467                             | 1,5389                                          | 432,56                                     | 3,9401                                              | 1,0978                                            |
| 5000                                   | 7495,0                                        | 7,2075                             | 0 1,5306+25                                     | 432,29                                     | 3,9164+9                                            | 1,1038-7                                          |
| 5050                                   | 7485,6                                        | 7,1684                             | 1,5223                                          | 432,01                                     | 3,8928                                              | 1,1098                                            |
| 5100                                   | 7476,2                                        | 7,1296                             | 1,5141                                          | 431,74                                     | 3,8693                                              | 1,1158                                            |
| 5150                                   | 7466,7                                        | 7,0909                             | 1,5059                                          | 431,46                                     | 3,8459                                              | 1,1219                                            |
| 5200                                   | 7457,3                                        | 7,0523                             | 1,4978                                          | 431,19                                     | 3,8226                                              | 1,1280                                            |
| 5250                                   | 7447,9                                        | 7,0140                             | 1,4896                                          | 430,91                                     | 3,7994                                              | 1,1342                                            |
| 5300                                   | 7438,5                                        | 6,9757                             | 1,4815                                          | 430,64                                     | 3,7764                                              | 1,1404                                            |
| 5350                                   | 7429,1                                        | 6,9377                             | 1,4735                                          | 430,36                                     | 3,7534                                              | 1,1466                                            |
| 5400                                   | 7419,7                                        | 6,8998                             | 1,4654                                          | 430,08                                     | 3,7306                                              | 1,1529                                            |
| 5450                                   | 7410,3                                        | 6,8620                             | 1,4575                                          | 429,81                                     | 3,7078                                              | 1,1592                                            |
| 5500                                   | 7400,9                                        | 6,8244                             | 0 1,4495+25                                     | 429,53                                     | 3,6852+9                                            | 1,1656-7                                          |
| 5550                                   | 7391,5                                        | 6,7870                             | 1,4416                                          | 429,26                                     | 3,6627                                              | 1,1720                                            |
| 5600                                   | 7382,0                                        | 6,7497                             | 1,4337                                          | 428,98                                     | 3,6403                                              | 1,1784                                            |
| 5650                                   | 7372,6                                        | 6,7126                             | 1,4258                                          | 428,70                                     | 3,6180                                              | 1,1849                                            |
| 5700                                   | 7363,2                                        | 6,6757                             | 1,4180                                          | 428,42                                     | 3,5958                                              | 1,1915                                            |
| 5750                                   | 7353,8                                        | 6,6389                             | 1,4102                                          | 428,15                                     | 3,5737                                              | 1,1980                                            |
| 5800                                   | 7344,4                                        | 6,6022                             | 1,4024                                          | 427,87                                     | 3,5517                                              | 1,2047                                            |
| 5850                                   | 7335,0                                        | 6,5657                             | 1,3947                                          | 427,59                                     | 3,5299                                              | 1,2113                                            |
| 5900                                   | 7325,6                                        | 6,5294                             | 1,3870                                          | 427,31                                     | 3,5081                                              | 1,2181                                            |
| 5950                                   | 7316,1                                        | 6,4932                             | 1,3793                                          | 427,04                                     | 3,4865                                              | 1,2248                                            |

От 6000 до 7950 м

| Геометрическая высота $H$ , м | Величины в функции геометрической высоты |                                          |                                                 |                                   |                                               |                                          |
|-------------------------------|------------------------------------------|------------------------------------------|-------------------------------------------------|-----------------------------------|-----------------------------------------------|------------------------------------------|
|                               | масштаб высоты по давлению $H_p$ , м     | удельный вес $\gamma$ , Н/м <sup>3</sup> | концентрация частиц $\lambda$ , м <sup>-3</sup> | средняя скорость частиц $v$ , м/с | частота соударений $\omega$ , с <sup>-1</sup> | средняя длина свободного пробега $l$ , м |
| 6000                          | 7307,8                                   | 6,4613                                   | 0                                               | 1,3726+25                         | 426,79                                        | 3,4674+9                                 |
| 6050                          | 7298,4                                   | 6,4255                                   | 1,3650                                          | 426,51                            | 3,4459                                        | 1,2377                                   |
| 6100                          | 7289,0                                   | 6,3898                                   | 1,3574                                          | 426,23                            | 3,4246                                        | 1,2446                                   |
| 6150                          | 7279,6                                   | 6,3543                                   | 1,3499                                          | 425,96                            | 3,4034                                        | 1,2515                                   |
| 6200                          | 7270,2                                   | 6,3189                                   | 1,3424                                          | 425,68                            | 3,3823                                        | 1,2585                                   |
| 6250                          | 7260,8                                   | 6,2837                                   | 1,3349                                          | 425,40                            | 3,3613                                        | 1,2656                                   |
| 6300                          | 7251,4                                   | 6,2486                                   | 1,3275                                          | 425,12                            | 3,3404                                        | 1,2726                                   |
| 6350                          | 7242,0                                   | 6,2137                                   | 1,3201                                          | 424,84                            | 3,3196                                        | 1,2798                                   |
| 6400                          | 7232,6                                   | 6,1790                                   | 1,3128                                          | 424,56                            | 3,2990                                        | 1,2870                                   |
| 6450                          | 7223,2                                   | 6,1443                                   | 1,3054                                          | 424,28                            | 3,2784                                        | 1,2942                                   |
| 6500                          | 7213,8                                   | 6,1099                                   | 0                                               | 1,2981+25                         | 424,00                                        | 3,2579+9                                 |
| 6550                          | 7204,4                                   | 6,0756                                   | 1,2909                                          | 423,72                            | 3,2375                                        | 1,3088                                   |
| 6600                          | 7195,0                                   | 6,0414                                   | 1,2836                                          | 423,44                            | 3,2172                                        | 1,3162                                   |
| 6650                          | 7185,6                                   | 6,0074                                   | 1,2764                                          | 423,16                            | 3,1970                                        | 1,3236                                   |
| 6700                          | 7176,2                                   | 5,9735                                   | 1,2692                                          | 422,88                            | 3,1770                                        | 1,3311                                   |
| 6750                          | 7166,8                                   | 5,9398                                   | 1,2621                                          | 422,60                            | 3,1570                                        | 1,3386                                   |
| 6800                          | 7157,4                                   | 5,9062                                   | 1,2550                                          | 422,32                            | 3,1371                                        | 1,3462                                   |
| 6850                          | 7148,0                                   | 5,8728                                   | 1,2479                                          | 422,04                            | 3,1173                                        | 1,3539                                   |
| 6900                          | 7138,6                                   | 5,8395                                   | 1,2408                                          | 421,76                            | 3,0976                                        | 1,3616                                   |
| 6950                          | 7129,2                                   | 5,8064                                   | 1,2338                                          | 421,48                            | 3,0781                                        | 1,3693                                   |
| 7000                          | 7119,8                                   | 5,7734                                   | 0                                               | 1,2268+25                         | 421,20                                        | 3,0586+9                                 |
| 7050                          | 7110,4                                   | 5,7405                                   | 1,2199                                          | 420,92                            | 3,0392                                        | 1,3850                                   |
| 7100                          | 7101,0                                   | 5,7078                                   | 1,2199                                          | 420,63                            | 3,0199                                        | 1,3929                                   |
| 7150                          | 7091,6                                   | 5,6753                                   | 1,2060                                          | 420,35                            | 3,0007                                        | 1,4008                                   |
| 7200                          | 7082,2                                   | 5,6428                                   | 1,1992                                          | 420,07                            | 2,9816                                        | 1,4089                                   |
| 7250                          | 7072,8                                   | 5,6106                                   | 1,1923                                          | 419,79                            | 2,9626                                        | 1,4170                                   |
| 7300                          | 7063,4                                   | 5,5784                                   | 1,1855                                          | 419,51                            | 2,9437                                        | 1,4251                                   |
| 7350                          | 7054,0                                   | 5,5464                                   | 1,1787                                          | 419,22                            | 2,9249                                        | 1,4333                                   |
| 7400                          | 7044,6                                   | 5,5146                                   | 1,1720                                          | 418,94                            | 2,9062                                        | 1,4415                                   |
| 7450                          | 7035,2                                   | 5,4829                                   | 1,1653                                          | 418,66                            | 2,8876                                        | 1,4499                                   |
| 7500                          | 7025,8                                   | 5,4513                                   | 0                                               | 1,1586+25                         | 418,37                                        | 2,8690+9                                 |
| 7550                          | 7016,4                                   | 5,4199                                   | 1,1519                                          | 418,09                            | 2,8506                                        | 1,4667                                   |
| 7600                          | 7007,0                                   | 5,3886                                   | 1,1453                                          | 417,81                            | 2,8323                                        | 1,4752                                   |
| 7650                          | 6997,6                                   | 5,3574                                   | 1,1387                                          | 417,52                            | 2,8140                                        | 1,4837                                   |
| 7700                          | 6988,2                                   | 5,3264                                   | 1,1321                                          | 417,24                            | 2,7959                                        | 1,4923                                   |
| 7750                          | 6978,8                                   | 5,2956                                   | 1,1256                                          | 416,96                            | 2,7778                                        | 1,5010                                   |
| 7800                          | 6969,3                                   | 5,2648                                   | 1,1190                                          | 416,67                            | 2,7599                                        | 1,5097                                   |
| 7850                          | 6959,9                                   | 5,2342                                   | 1,1126                                          | 416,39                            | 2,7420                                        | 1,5185                                   |
| 7900                          | 6950,5                                   | 5,2038                                   | 1,1061                                          | 416,10                            | 2,7242                                        | 1,5274                                   |
| 7950                          | 6941,1                                   | 5,1734                                   | 1,0997                                          | 415,82                            | 2,7066                                        | 1,5363                                   |

| Геотепло-<br>циальная<br>высота<br>$H, \text{ м}$ | Величины и функции геотеплоциальной высоты           |                                            |                                                     |                                                         |                                                   |                                                          |
|---------------------------------------------------|------------------------------------------------------|--------------------------------------------|-----------------------------------------------------|---------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------|
|                                                   | масштаб<br>высоты по<br>давлению<br>$H_p, \text{ м}$ | удельный<br>вес<br>$\gamma, \text{ Н/м}^3$ | концентрация<br>частиц<br>$\lambda, \text{ м}^{-3}$ | средняя<br>скорость<br>частиц<br>$\bar{v}, \text{ м/с}$ | частота<br>соударений<br>$\omega, \text{ с}^{-1}$ | средняя длина<br>свободного<br>пробега<br>$l, \text{ м}$ |
| 6000                                              | 7306,7                                               | 6,4572                                     | 0,13717+25                                          | 426,76                                                  | 3,4649+9                                          | 1,2317-7                                                 |
| 6050                                              | 7297,3                                               | 6,4213                                     | 1,3641                                              | 426,48                                                  | 3,4435                                            | 1,2385                                                   |
| 6100                                              | 7287,9                                               | 6,3856                                     | 1,3565                                              | 426,20                                                  | 3,4221                                            | 1,2454                                                   |
| 6150                                              | 7278,5                                               | 6,3500                                     | 1,3490                                              | 425,92                                                  | 3,4009                                            | 1,2524                                                   |
| 6200                                              | 7269,1                                               | 6,3146                                     | 1,3415                                              | 425,64                                                  | 3,3798                                            | 1,2594                                                   |
| 6250                                              | 7259,6                                               | 6,2794                                     | 1,3340                                              | 425,36                                                  | 3,3588                                            | 1,2664                                                   |
| 6300                                              | 7250,2                                               | 6,2443                                     | 1,3266                                              | 425,08                                                  | 3,3378                                            | 1,2735                                                   |
| 6350                                              | 7240,8                                               | 6,2093                                     | 1,3192                                              | 424,80                                                  | 3,3170                                            | 1,2807                                                   |
| 6400                                              | 7231,4                                               | 6,1745                                     | 1,3118                                              | 424,53                                                  | 3,2963                                            | 1,2879                                                   |
| 6450                                              | 7222,0                                               | 6,1398                                     | 1,3045                                              | 424,25                                                  | 3,2757                                            | 1,2951                                                   |
| 6500                                              | 7212,5                                               | 6,1053                                     | 0,12972+25                                          | 423,97                                                  | 3,2552+9                                          | 1,3024-7                                                 |
| 6550                                              | 7203,1                                               | 6,0709                                     | 1,2899                                              | 423,69                                                  | 3,2348                                            | 1,3098                                                   |
| 6600                                              | 7193,7                                               | 6,0367                                     | 1,2826                                              | 423,40                                                  | 3,2145                                            | 1,3172                                                   |
| 6650                                              | 7184,3                                               | 6,0027                                     | 1,2754                                              | 423,12                                                  | 3,1942                                            | 1,3246                                                   |
| 6700                                              | 7174,9                                               | 5,9687                                     | 1,2682                                              | 422,84                                                  | 3,1741                                            | 1,3322                                                   |
| 6750                                              | 7165,4                                               | 5,9350                                     | 1,2611                                              | 422,56                                                  | 3,1541                                            | 1,3397                                                   |
| 6800                                              | 7156,0                                               | 5,9013                                     | 1,2539                                              | 422,28                                                  | 3,1342                                            | 1,3473                                                   |
| 6850                                              | 7146,6                                               | 5,8679                                     | 1,2468                                              | 422,00                                                  | 3,1144                                            | 1,3550                                                   |
| 6900                                              | 7137,2                                               | 5,8345                                     | 1,2398                                              | 421,72                                                  | 3,0947                                            | 1,3627                                                   |
| 6950                                              | 7127,8                                               | 5,8013                                     | 1,2328                                              | 421,44                                                  | 3,0751                                            | 1,3705                                                   |
| 7000                                              | 7118,3                                               | 5,7683                                     | 0,12257+25                                          | 421,15                                                  | 3,0556+9                                          | 1,3783-7                                                 |
| 7050                                              | 7108,9                                               | 5,7354                                     | 1,2188                                              | 420,87                                                  | 3,0362                                            | 1,3862                                                   |
| 7100                                              | 7099,5                                               | 5,7026                                     | 1,2118                                              | 420,59                                                  | 3,0168                                            | 1,3941                                                   |
| 7150                                              | 7090,1                                               | 5,6700                                     | 1,2049                                              | 420,31                                                  | 2,9976                                            | 1,4021                                                   |
| 7200                                              | 7080,6                                               | 5,6376                                     | 1,1980                                              | 420,02                                                  | 2,9785                                            | 1,4102                                                   |
| 7250                                              | 7071,2                                               | 5,6052                                     | 1,1912                                              | 419,74                                                  | 2,9595                                            | 1,4183                                                   |
| 7300                                              | 7061,8                                               | 5,5731                                     | 1,1844                                              | 419,46                                                  | 2,9405                                            | 1,4265                                                   |
| 7350                                              | 7052,4                                               | 5,5410                                     | 1,1776                                              | 419,18                                                  | 2,9217                                            | 1,4347                                                   |
| 7400                                              | 7043,0                                               | 5,5091                                     | 1,1708                                              | 418,89                                                  | 2,9030                                            | 1,4430                                                   |
| 7450                                              | 7033,5                                               | 5,4774                                     | 1,1641                                              | 418,61                                                  | 2,8843                                            | 1,4513                                                   |
| 7500                                              | 7024,1                                               | 5,4457                                     | 0,11574+25                                          | 418,32                                                  | 2,8658+9                                          | 1,4597-7                                                 |
| 7550                                              | 7014,7                                               | 5,4143                                     | 1,1507                                              | 418,04                                                  | 2,8473                                            | 1,4682                                                   |
| 7600                                              | 7005,3                                               | 5,3829                                     | 1,1441                                              | 417,76                                                  | 2,8290                                            | 1,4767                                                   |
| 7650                                              | 6995,8                                               | 5,3517                                     | 1,1375                                              | 417,47                                                  | 2,8107                                            | 1,4853                                                   |
| 7700                                              | 6986,4                                               | 5,3207                                     | 1,1309                                              | 417,19                                                  | 2,7925                                            | 1,4939                                                   |
| 7750                                              | 6977,0                                               | 5,2897                                     | 1,1243                                              | 416,90                                                  | 2,7744                                            | 1,5027                                                   |
| 7800                                              | 6967,5                                               | 5,2589                                     | 1,1178                                              | 416,62                                                  | 2,7564                                            | 1,5114                                                   |
| 7850                                              | 6958,1                                               | 5,2283                                     | 1,1113                                              | 416,33                                                  | 2,7385                                            | 1,5203                                                   |
| 7900                                              | 6948,7                                               | 5,1978                                     | 1,1048                                              | 416,05                                                  | 2,7207                                            | 1,5292                                                   |
| 7950                                              | 6939,3                                               | 5,1674                                     | 1,0984                                              | 415,76                                                  | 2,7030                                            | 1,5381                                                   |



От 8000 до 9950 м

| Геометрическая<br>высота<br>h, м | Величины в функции геометрической высоты |                            |                                              |                                         |                                           |                                                |
|----------------------------------|------------------------------------------|----------------------------|----------------------------------------------|-----------------------------------------|-------------------------------------------|------------------------------------------------|
|                                  | масштаб<br>высоты по<br>давлению<br>H, м | удельный<br>вес<br>γ, Н/м³ | концентрация<br>частиц<br>л. м <sup>-3</sup> | средняя<br>скорость<br>частиц<br>v, м/с | частота<br>сражений<br>ω, с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>L, м |
| 8000                             | 6931,7                                   | 5,1432                     | 0 1,0933+25                                  | 415,53                                  | 2,6889+9                                  | 1,5453-7                                       |
| 8050                             | 6922,3                                   | 5,1132                     | 1,0869                                       | 415,25                                  | 2,6714                                    | 1,5544                                         |
| 8100                             | 6912,9                                   | 5,0833                     | 1,0806                                       | 414,96                                  | 2,6540                                    | 1,5635                                         |
| 8150                             | 6903,5                                   | 5,0535                     | 1,0742                                       | 414,68                                  | 2,6367                                    | 1,5727                                         |
| 8200                             | 6894,1                                   | 5,0238                     | 1,0680                                       | 414,39                                  | 2,6195                                    | 1,5820                                         |
| 8250                             | 6884,7                                   | 4,9943                     | 1,0617                                       | 414,10                                  | 2,6023                                    | 1,5913                                         |
| 8300                             | 6875,3                                   | 4,9649                     | 1,0555                                       | 413,82                                  | 2,5853                                    | 1,6007                                         |
| 8350                             | 6865,9                                   | 4,9357                     | 1,0493                                       | 413,53                                  | 2,5683                                    | 1,6101                                         |
| 8400                             | 6856,5                                   | 4,9066                     | 1,0431                                       | 413,25                                  | 2,5514                                    | 1,6197                                         |
| 8450                             | 6847,1                                   | 4,8776                     | 1,0369                                       | 412,96                                  | 2,5346                                    | 1,6293                                         |
| 8500                             | 6837,7                                   | 4,8487                     | 0 1,0308+25                                  | 412,67                                  | 2,5179+9                                  | 1,6389-7                                       |
| 8550                             | 6828,3                                   | 4,8200                     | 1,0247                                       | 412,38                                  | 2,5013                                    | 1,6487                                         |
| 8600                             | 6818,9                                   | 4,7914                     | 1,0187                                       | 412,10                                  | 2,4848                                    | 1,6585                                         |
| 8650                             | 6809,5                                   | 4,7630                     | 1,0126                                       | 411,81                                  | 2,4683                                    | 1,6684                                         |
| 8700                             | 6800,1                                   | 4,7346                     | 1,0066                                       | 411,52                                  | 2,4520                                    | 1,6783                                         |
| 8750                             | 6790,7                                   | 4,7064                     | 1,0007                                       | 411,23                                  | 2,4357                                    | 1,6884                                         |
| 8800                             | 6781,2                                   | 4,6784                     | 9,9470+24                                    | 410,95                                  | 2,4195                                    | 1,6985                                         |
| 8850                             | 6771,8                                   | 4,6504                     | 9,8878                                       | 410,66                                  | 2,4034                                    | 1,7086                                         |
| 8900                             | 6762,4                                   | 4,6226                     | 9,8288                                       | 410,37                                  | 2,3874                                    | 1,7189                                         |
| 8950                             | 6753,0                                   | 4,5949                     | 9,7701                                       | 410,08                                  | 2,3715                                    | 1,7292                                         |
| 9000                             | 6743,6                                   | 4,5674                     | 0 9,7116+24                                  | 409,79                                  | 2,3556+9                                  | 1,7396-7                                       |
| 9050                             | 6734,2                                   | 4,5400                     | 9,6535                                       | 409,50                                  | 2,3399                                    | 1,7501                                         |
| 9100                             | 6724,8                                   | 4,5126                     | 9,5956                                       | 409,21                                  | 2,3242                                    | 1,7607                                         |
| 9150                             | 6715,4                                   | 4,4855                     | 9,5379                                       | 408,92                                  | 2,3086                                    | 1,7713                                         |
| 9200                             | 6706,0                                   | 4,4584                     | 9,4806                                       | 408,63                                  | 2,2931                                    | 1,7820                                         |
| 9250                             | 6696,6                                   | 4,4315                     | 9,4235                                       | 408,34                                  | 2,2776                                    | 1,7928                                         |
| 9300                             | 6687,2                                   | 4,4047                     | 9,3666                                       | 408,05                                  | 2,2623                                    | 1,8037                                         |
| 9350                             | 6677,8                                   | 4,3780                     | 9,3100                                       | 407,76                                  | 2,2470                                    | 1,8147                                         |
| 9400                             | 6668,4                                   | 4,3515                     | 9,2537                                       | 407,47                                  | 2,2318                                    | 1,8257                                         |
| 9450                             | 6658,9                                   | 4,3250                     | 9,1977                                       | 407,18                                  | 2,2167                                    | 1,8368                                         |
| 9500                             | 6649,5                                   | 4,2987                     | 0 9,1419+24                                  | 406,89                                  | 2,2017+9                                  | 1,8481-7                                       |
| 9550                             | 6640,1                                   | 4,2726                     | 9,0863                                       | 406,60                                  | 2,1868                                    | 1,8593                                         |
| 9600                             | 6630,7                                   | 4,2465                     | 9,0311                                       | 406,31                                  | 2,1719                                    | 1,8707                                         |
| 9650                             | 6621,3                                   | 4,2206                     | 8,9761                                       | 406,02                                  | 2,1571                                    | 1,8822                                         |
| 9700                             | 6611,9                                   | 4,1948                     | 8,9213                                       | 405,72                                  | 2,1424                                    | 1,8937                                         |
| 9750                             | 6602,5                                   | 4,1691                     | 8,8668                                       | 405,43                                  | 2,1278                                    | 1,9054                                         |
| 9800                             | 6593,1                                   | 4,1435                     | 8,8126                                       | 405,14                                  | 2,1133                                    | 1,9171                                         |
| 9850                             | 6583,7                                   | 4,1181                     | 8,7586                                       | 404,85                                  | 2,0988                                    | 1,9289                                         |
| 9900                             | 6574,3                                   | 4,0927                     | 8,7048                                       | 404,56                                  | 2,0844                                    | 1,9408                                         |
| 9950                             | 6564,9                                   | 4,0675                     | 8,6513                                       | 404,26                                  | 2,0701                                    | 1,9528                                         |

| Геопотенциальная высота<br>$H, \text{ м}$ | Величины в функции геопотенциальной высоты           |                                            |                                                  |                                                   |                                                 |                                                          |
|-------------------------------------------|------------------------------------------------------|--------------------------------------------|--------------------------------------------------|---------------------------------------------------|-------------------------------------------------|----------------------------------------------------------|
|                                           | масштаб<br>высоты по<br>давлению<br>$H_p, \text{ м}$ | удельный<br>вес<br>$\gamma, \text{ Н/м}^3$ | концентрация<br>частиц<br>$\rho, \text{ м}^{-3}$ | средняя<br>скорость<br>частиц<br>$v, \text{ м/с}$ | частота<br>созвучий<br>$\omega, \text{ с}^{-1}$ | средняя длина<br>свободного<br>пробега<br>$l, \text{ м}$ |
| 8000                                      | 6929,8                                               | 5,1372                                     | 0 1,0920+25                                      | 415,48                                            | 2,6854+9                                        | 1,5472-7                                                 |
| 8050                                      | 6920,4                                               | 5,1071                                     | 1,0856                                           | 415,19                                            | 2,6679                                          | 1,5563                                                   |
| 8100                                      | 6911,0                                               | 5,0771                                     | 1,0792                                           | 414,90                                            | 2,6504                                          | 1,5654                                                   |
| 8150                                      | 6901,6                                               | 5,0473                                     | 1,0729                                           | 414,62                                            | 2,6331                                          | 1,5746                                                   |
| 8200                                      | 6892,1                                               | 5,0176                                     | 1,0666                                           | 414,33                                            | 2,6158                                          | 1,5839                                                   |
| 8250                                      | 6882,7                                               | 4,9880                                     | 1,0604                                           | 414,04                                            | 2,5987                                          | 1,5933                                                   |
| 8300                                      | 6873,3                                               | 4,9586                                     | 1,0541                                           | 413,76                                            | 2,5816                                          | 1,6027                                                   |
| 8350                                      | 6863,8                                               | 4,9293                                     | 1,0479                                           | 413,47                                            | 2,5646                                          | 1,6122                                                   |
| 8400                                      | 6854,4                                               | 4,9001                                     | 1,0417                                           | 413,18                                            | 2,5477                                          | 1,6218                                                   |
| 8450                                      | 6845,0                                               | 4,8711                                     | 1,0356                                           | 412,89                                            | 2,5309                                          | 1,6314                                                   |
| 8500                                      | 6835,5                                               | 4,8422                                     | 0 1,0294+25                                      | 412,61                                            | 2,5141+9                                        | 1,6412-7                                                 |
| 8550                                      | 6826,1                                               | 4,8134                                     | 1,0233                                           | 412,32                                            | 2,4975                                          | 1,6509                                                   |
| 8600                                      | 6816,7                                               | 4,7848                                     | 1,0173                                           | 412,03                                            | 2,4809                                          | 1,6608                                                   |
| 8650                                      | 6807,2                                               | 4,7563                                     | 1,0112                                           | 411,74                                            | 2,4645                                          | 1,6707                                                   |
| 8700                                      | 6797,8                                               | 4,7279                                     | 1,0052                                           | 411,45                                            | 2,4481                                          | 1,6807                                                   |
| 8750                                      | 6788,4                                               | 4,6997                                     | 9,9922+24                                        | 411,16                                            | 2,4318                                          | 1,6908                                                   |
| 8800                                      | 6779,0                                               | 4,6715                                     | 9,9325                                           | 410,88                                            | 2,4156                                          | 1,7009                                                   |
| 8850                                      | 6769,5                                               | 4,6436                                     | 9,8732                                           | 410,59                                            | 2,3995                                          | 1,7112                                                   |
| 8900                                      | 6760,1                                               | 4,6157                                     | 9,8141                                           | 410,30                                            | 2,3834                                          | 1,7215                                                   |
| 8950                                      | 6750,7                                               | 4,5880                                     | 9,7553                                           | 410,01                                            | 2,3675                                          | 1,7318                                                   |
| 9000                                      | 6741,2                                               | 4,5604                                     | 0 9,6968+24                                      | 409,72                                            | 2,3516+9                                        | 1,7423-7                                                 |
| 9050                                      | 6731,8                                               | 4,5329                                     | 9,6385                                           | 409,43                                            | 2,3358                                          | 1,7528                                                   |
| 9100                                      | 6722,3                                               | 4,5055                                     | 9,5805                                           | 409,14                                            | 2,3201                                          | 1,7634                                                   |
| 9150                                      | 6712,9                                               | 4,4783                                     | 9,5228                                           | 408,85                                            | 2,3045                                          | 1,7741                                                   |
| 9200                                      | 6703,5                                               | 4,4512                                     | 9,4653                                           | 408,56                                            | 2,2890                                          | 1,7849                                                   |
| 9250                                      | 6694,0                                               | 4,4243                                     | 9,4081                                           | 408,27                                            | 2,2735                                          | 1,7958                                                   |
| 9300                                      | 6684,6                                               | 4,3974                                     | 9,3512                                           | 407,97                                            | 2,2581                                          | 1,8067                                                   |
| 9350                                      | 6675,2                                               | 4,3707                                     | 9,2945                                           | 407,68                                            | 2,2428                                          | 1,8177                                                   |
| 9400                                      | 6665,7                                               | 4,3441                                     | 9,2381                                           | 407,39                                            | 2,2276                                          | 1,8288                                                   |
| 9450                                      | 6656,3                                               | 4,3176                                     | 9,1819                                           | 407,10                                            | 2,2125                                          | 1,8400                                                   |
| 9500                                      | 6646,9                                               | 4,2913                                     | 0 9,1261+24                                      | 406,81                                            | 2,1975+9                                        | 1,8513-7                                                 |
| 9550                                      | 6637,4                                               | 4,2651                                     | 9,0704                                           | 406,52                                            | 2,1825                                          | 1,8626                                                   |
| 9600                                      | 6628,0                                               | 4,2390                                     | 9,0151                                           | 406,22                                            | 2,1676                                          | 1,8740                                                   |
| 9650                                      | 6618,6                                               | 4,2130                                     | 8,9600                                           | 405,93                                            | 2,1528                                          | 1,8856                                                   |
| 9700                                      | 6609,1                                               | 4,1871                                     | 8,9051                                           | 405,64                                            | 2,1381                                          | 1,8972                                                   |
| 9750                                      | 6599,7                                               | 4,1614                                     | 8,8505                                           | 405,35                                            | 2,1235                                          | 1,9089                                                   |
| 9800                                      | 6590,2                                               | 4,1358                                     | 8,7962                                           | 405,05                                            | 2,1089                                          | 1,9207                                                   |
| 9850                                      | 6580,8                                               | 4,1103                                     | 8,7421                                           | 404,76                                            | 2,0944                                          | 1,9326                                                   |
| 9900                                      | 6571,4                                               | 4,0849                                     | 8,6883                                           | 404,47                                            | 2,0800                                          | 1,9445                                                   |
| 9950                                      | 6561,9                                               | 4,0597                                     | 8,6347                                           | 404,17                                            | 2,0657                                          | 1,9566                                                   |

От 10000 до 11950 м

| Геометрическая высота $h$ , м | Величины в функции геометрической высоты |                                          |                                                 |                                         |                                               |                                          |
|-------------------------------|------------------------------------------|------------------------------------------|-------------------------------------------------|-----------------------------------------|-----------------------------------------------|------------------------------------------|
|                               | масштаб высоты по дальности $H_p$ , м    | удельный вес $\gamma$ , Н/м <sup>3</sup> | концентрация частиц $\lambda$ , м <sup>-3</sup> | средняя скорость частиц $\bar{v}$ , м/с | частота соударений $\omega$ , с <sup>-1</sup> | средняя длина свободного пробега $l$ , м |
| 10000                         | 6555,4                                   | 4,0424                                   | 0 8,5981+24                                     | 403,97                                  | 2,0559+9                                      | 1,9649-7                                 |
| 10050                         | 6546,0                                   | 4,0175                                   | 8,5451                                          | 403,68                                  | 2,0418                                        | 1,9771                                   |
| 10100                         | 6536,6                                   | 3,9926                                   | 8,4924                                          | 403,38                                  | 2,0277                                        | 1,9894                                   |
| 10150                         | 6527,2                                   | 3,9679                                   | 8,4399                                          | 403,09                                  | 2,0137                                        | 2,0017                                   |
| 10200                         | 6517,8                                   | 3,9433                                   | 8,3877                                          | 402,80                                  | 1,9998                                        | 2,0142                                   |
| 10250                         | 6508,4                                   | 3,9188                                   | 8,3357                                          | 402,50                                  | 1,9859                                        | 2,0268                                   |
| 10300                         | 6499,0                                   | 3,8944                                   | 8,2840                                          | 402,21                                  | 1,9722                                        | 2,0394                                   |
| 10350                         | 6489,6                                   | 3,8701                                   | 8,2325                                          | 401,91                                  | 1,9585                                        | 2,0522                                   |
| 10400                         | 6480,2                                   | 3,8460                                   | 8,1813                                          | 401,62                                  | 1,9448                                        | 2,0650                                   |
| 10450                         | 6470,7                                   | 3,8219                                   | 8,1303                                          | 401,32                                  | 1,9313                                        | 2,0780                                   |
| 10500                         | 6461,3                                   | 3,7980                                   | 0 8,0795+24                                     | 401,03                                  | 1,9178+9                                      | 2,0910-7                                 |
| 10550                         | 6451,9                                   | 3,7742                                   | 8,0290                                          | 400,73                                  | 1,9044                                        | 2,1042                                   |
| 10600                         | 6442,5                                   | 3,7505                                   | 7,9788                                          | 400,44                                  | 1,8911                                        | 2,1174                                   |
| 10650                         | 6433,1                                   | 3,7270                                   | 7,9288                                          | 400,14                                  | 1,8779                                        | 2,1308                                   |
| 10700                         | 6423,7                                   | 3,7035                                   | 7,8790                                          | 399,85                                  | 1,8647                                        | 2,1443                                   |
| 10750                         | 6414,3                                   | 3,6802                                   | 7,8294                                          | 399,55                                  | 1,8516                                        | 2,1578                                   |
| 10800                         | 6404,9                                   | 3,6569                                   | 7,7801                                          | 399,25                                  | 1,8386                                        | 2,1715                                   |
| 10850                         | 6395,4                                   | 3,6338                                   | 7,7311                                          | 398,96                                  | 1,8256                                        | 2,1853                                   |
| 10900                         | 6386,0                                   | 3,6108                                   | 7,6823                                          | 398,66                                  | 1,8128                                        | 2,1992                                   |
| 10950                         | 6376,6                                   | 3,5879                                   | 7,6337                                          | 398,36                                  | 1,8000                                        | 2,2132                                   |
| 11000                         | 6367,2                                   | 3,5651                                   | 0 7,5853+24                                     | 398,07                                  | 1,7872+9                                      | 2,2273-7                                 |
| 11050                         | 6363,7                                   | 3,5392                                   | 7,5302                                          | 397,95                                  | 1,7737                                        | 2,2436                                   |
| 11100                         | 6363,8                                   | 3,5114                                   | 7,4713                                          | 397,95                                  | 1,7599                                        | 2,2613                                   |
| 11150                         | 6363,9                                   | 3,4839                                   | 7,4128                                          | 397,95                                  | 1,7461                                        | 2,2791                                   |
| 11200                         | 6364,0                                   | 3,4566                                   | 7,3548                                          | 397,95                                  | 1,7324                                        | 2,2971                                   |
| 11250                         | 6364,1                                   | 3,4295                                   | 7,2973                                          | 397,95                                  | 1,7189                                        | 2,3152                                   |
| 11300                         | 6364,2                                   | 3,4026                                   | 7,2402                                          | 397,95                                  | 1,7054                                        | 2,3335                                   |
| 11350                         | 6364,3                                   | 3,3759                                   | 7,1835                                          | 397,95                                  | 1,6921                                        | 2,3519                                   |
| 11400                         | 6364,4                                   | 3,3494                                   | 7,1273                                          | 397,95                                  | 1,6788                                        | 2,3704                                   |
| 11450                         | 6364,5                                   | 3,3232                                   | 7,0715                                          | 397,95                                  | 1,6657                                        | 2,3891                                   |
| 11500                         | 6364,6                                   | 3,2971                                   | 0 7,0162+24                                     | 397,95                                  | 1,6527+9                                      | 2,4080-7                                 |
| 11550                         | 6364,7                                   | 3,2713                                   | 6,9613                                          | 397,95                                  | 1,6397                                        | 2,4270                                   |
| 11600                         | 6364,8                                   | 3,2456                                   | 6,9068                                          | 397,95                                  | 1,6269                                        | 2,4461                                   |
| 11650                         | 6364,9                                   | 3,2202                                   | 6,8527                                          | 397,95                                  | 1,6142                                        | 2,4654                                   |
| 11700                         | 6365,0                                   | 3,1949                                   | 6,7991                                          | 397,95                                  | 1,6015                                        | 2,4848                                   |
| 11750                         | 6365,1                                   | 3,1699                                   | 6,7459                                          | 397,95                                  | 1,5890                                        | 2,5044                                   |
| 11800                         | 6365,2                                   | 3,1450                                   | 6,6931                                          | 397,95                                  | 1,5766                                        | 2,5242                                   |
| 11850                         | 6365,3                                   | 3,1204                                   | 6,6408                                          | 397,95                                  | 1,5642                                        | 2,5441                                   |
| 11900                         | 6365,4                                   | 3,0959                                   | 6,5888                                          | 397,95                                  | 1,5520                                        | 2,5641                                   |
| 11950                         | 6365,5                                   | 3,0716                                   | 6,5373                                          | 397,95                                  | 1,5398                                        | 2,5844                                   |

| Геопотенциальная<br>высота<br>$H, м'$ | Величины в функции геопотенциальной высоты    |                                    |                                       |                                           |                                           |                                                  |          |
|---------------------------------------|-----------------------------------------------|------------------------------------|---------------------------------------|-------------------------------------------|-------------------------------------------|--------------------------------------------------|----------|
|                                       | массовый<br>высоты по<br>давлению<br>$H_p, м$ | удельный<br>вес<br>$\gamma, Н/м^3$ | концентрация<br>частиц<br>$л, м^{-3}$ | средняя<br>скорость<br>частиц<br>$v, м/с$ | частота<br>соударений<br>$\omega, с^{-1}$ | средняя длина<br>свободного<br>пробега<br>$l, м$ |          |
| 10000                                 | 6552,5                                        | 4,0345                             | 0                                     | 8,5814+24                                 | 403,88                                    | 2,0514+9                                         | 1,9688-7 |
| 10050                                 | 6543,0                                        | 4,0095                             | 8,5283                                | 403,58                                    | 2,0373                                    |                                                  | 1,9810   |
| 10100                                 | 6533,6                                        | 3,9846                             | 8,4755                                | 403,29                                    | 2,0232                                    |                                                  | 1,9933   |
| 10150                                 | 6524,2                                        | 3,9599                             | 8,4230                                | 402,99                                    | 2,0092                                    |                                                  | 2,0058   |
| 10200                                 | 6514,7                                        | 3,9352                             | 8,3706                                | 402,70                                    | 1,9952                                    |                                                  | 2,0183   |
| 10250                                 | 6505,3                                        | 3,9107                             | 8,3186                                | 402,40                                    | 1,9814                                    |                                                  | 2,0310   |
| 10300                                 | 6495,8                                        | 3,8862                             | 8,2668                                | 402,11                                    | 1,9676                                    |                                                  | 2,0437   |
| 10350                                 | 6486,4                                        | 3,8619                             | 8,2152                                | 401,81                                    | 1,9539                                    |                                                  | 2,0565   |
| 10400                                 | 6477,0                                        | 3,8378                             | 8,1639                                | 401,52                                    | 1,9402                                    |                                                  | 2,0694   |
| 10450                                 | 6467,5                                        | 3,8137                             | 8,1128                                | 401,22                                    | 1,9267                                    |                                                  | 2,0825   |
| 10500                                 | 6458,1                                        | 3,7897                             | 0                                     | 8,0620+24                                 | 400,93                                    | 1,9132+9                                         | 2,0956-7 |
| 10550                                 | 6448,6                                        | 3,7659                             | 8,0114                                | 400,63                                    | 1,8998                                    |                                                  | 2,1088   |
| 10600                                 | 6439,2                                        | 3,7422                             | 7,9610                                | 400,33                                    | 1,8864                                    |                                                  | 2,1222   |
| 10650                                 | 6429,7                                        | 3,7186                             | 7,9109                                | 400,04                                    | 1,8732                                    |                                                  | 2,1356   |
| 10700                                 | 6420,3                                        | 3,6951                             | 7,8611                                | 399,74                                    | 1,8600                                    |                                                  | 2,1492   |
| 10750                                 | 6410,8                                        | 3,6717                             | 7,8115                                | 399,44                                    | 1,8469                                    |                                                  | 2,1628   |
| 10800                                 | 6401,4                                        | 3,6484                             | 7,7621                                | 399,14                                    | 1,8338                                    |                                                  | 2,1766   |
| 10850                                 | 6392,0                                        | 3,6253                             | 7,7129                                | 398,85                                    | 1,8209                                    |                                                  | 2,1904   |
| 10900                                 | 6382,5                                        | 3,6022                             | 7,6640                                | 398,55                                    | 1,8080                                    |                                                  | 2,2044   |
| 10950                                 | 6373,1                                        | 3,5793                             | 7,6151                                | 398,25                                    | 1,7951                                    |                                                  | 2,2185   |
| 11000                                 | 6363,6                                        | 3,5565                             | 0                                     | 7,5669+24                                 | 397,95                                    | 1,7824+9                                         | 2,2327-7 |
| 11050                                 | 6353,7                                        | 3,5285                             | 7,5075                                | 397,95                                    | 1,7684                                    |                                                  | 2,2504   |
| 11100                                 | 6353,8                                        | 3,5007                             | 7,4485                                | 397,95                                    | 1,7545                                    |                                                  | 2,2682   |
| 11150                                 | 6353,9                                        | 3,4732                             | 7,3900                                | 397,95                                    | 1,7407                                    |                                                  | 2,2861   |
| 11200                                 | 6354,0                                        | 3,4458                             | 7,3320                                | 397,95                                    | 1,7270                                    |                                                  | 2,3042   |
| 11250                                 | 6354,1                                        | 3,4187                             | 7,2744                                | 397,95                                    | 1,7135                                    |                                                  | 2,3225   |
| 11300                                 | 6354,2                                        | 3,3918                             | 7,2173                                | 397,95                                    | 1,7000                                    |                                                  | 2,3409   |
| 11350                                 | 6354,3                                        | 3,3651                             | 7,1606                                | 397,95                                    | 1,6867                                    |                                                  | 2,3594   |
| 11400                                 | 6354,4                                        | 3,3386                             | 7,1044                                | 397,95                                    | 1,6734                                    |                                                  | 2,3781   |
| 11450                                 | 6354,5                                        | 3,3124                             | 7,0486                                | 397,95                                    | 1,6603                                    |                                                  | 2,3969   |
| 11500                                 | 6354,6                                        | 3,2863                             | 0                                     | 6,9932+24                                 | 397,95                                    | 1,6472+9                                         | 2,4159-7 |
| 11550                                 | 6354,7                                        | 3,2604                             | 6,9383                                | 397,95                                    | 1,6343                                    |                                                  | 2,4350   |
| 11600                                 | 6354,8                                        | 3,2348                             | 6,8838                                | 397,95                                    | 1,6215                                    |                                                  | 2,4543   |
| 11650                                 | 6354,9                                        | 3,2093                             | 6,8298                                | 397,95                                    | 1,6087                                    |                                                  | 2,4737   |
| 11700                                 | 6355,0                                        | 3,1841                             | 6,7761                                | 397,95                                    | 1,5961                                    |                                                  | 2,4933   |
| 11750                                 | 6355,1                                        | 3,1590                             | 6,7229                                | 397,95                                    | 1,5836                                    |                                                  | 2,5130   |
| 11800                                 | 6355,2                                        | 3,1342                             | 6,6701                                | 397,95                                    | 1,5711                                    |                                                  | 2,5329   |
| 11850                                 | 6355,3                                        | 3,1095                             | 6,6177                                | 397,95                                    | 1,5588                                    |                                                  | 2,5529   |
| 11900                                 | 6355,4                                        | 3,0850                             | 6,5658                                | 397,95                                    | 1,5466                                    |                                                  | 2,5731   |
| 11950                                 | 6355,5                                        | 3,0608                             | 6,5142                                | 397,95                                    | 1,5344                                    |                                                  | 2,5935   |

От 12000 до 13950 м

| Геометрическая<br>высота<br>h, м | Величины в функции геометрической высоты      |                                                |                                                    |                                                  |                                                  |                                                         |
|----------------------------------|-----------------------------------------------|------------------------------------------------|----------------------------------------------------|--------------------------------------------------|--------------------------------------------------|---------------------------------------------------------|
|                                  | масштаб<br>высоты по<br>давлению<br>$H_p$ , м | удельный<br>вес<br>$\gamma$ , Н/м <sup>3</sup> | концентрация<br>частиц<br>$\rho$ , м <sup>-3</sup> | средняя<br>скорость<br>частиц<br>$\bar{v}$ , м/с | частота<br>соударений<br>$\nu$ , с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>$\bar{l}$ , м |
| 12000                            | 6365,6                                        | 3,0475                                         | 0,64861+24                                         | 397,95                                           | 1,5278+9                                         | 2,6047-7                                                |
| 12050                            | 6365,7                                        | 3,0237                                         | 6,4354                                             | 397,95                                           | 1,5158                                           | 2,6253                                                  |
| 12100                            | 6365,8                                        | 2,9999                                         | 6,3850                                             | 397,95                                           | 1,5040                                           | 2,6460                                                  |
| 12150                            | 6365,9                                        | 2,9764                                         | 6,3351                                             | 397,95                                           | 1,4922                                           | 2,6668                                                  |
| 12200                            | 6366,0                                        | 2,9531                                         | 6,2855                                             | 397,95                                           | 1,4805                                           | 2,6879                                                  |
| 12250                            | 6366,1                                        | 2,9300                                         | 6,2363                                             | 397,95                                           | 1,4690                                           | 2,7091                                                  |
| 12300                            | 6366,2                                        | 2,9070                                         | 6,1875                                             | 397,95                                           | 1,4575                                           | 2,7304                                                  |
| 12350                            | 6366,3                                        | 2,8842                                         | 6,1391                                             | 397,95                                           | 1,4461                                           | 2,7520                                                  |
| 12400                            | 6366,4                                        | 2,8616                                         | 6,0911                                             | 397,95                                           | 1,4348                                           | 2,7737                                                  |
| 12450                            | 6366,5                                        | 2,8392                                         | 6,0435                                             | 397,95                                           | 1,4235                                           | 2,7955                                                  |
| 12500                            | 6366,6                                        | 2,8169                                         | 0,59962+24                                         | 397,95                                           | 1,4124+9                                         | 2,8176-7                                                |
| 12550                            | 6366,7                                        | 2,7948                                         | 5,9493                                             | 397,95                                           | 1,4013                                           | 2,8398                                                  |
| 12600                            | 6366,8                                        | 2,7729                                         | 5,9027                                             | 397,95                                           | 1,3904                                           | 2,8622                                                  |
| 12650                            | 6366,9                                        | 2,7512                                         | 5,8566                                             | 397,95                                           | 1,3795                                           | 2,8847                                                  |
| 12700                            | 6367,0                                        | 2,7296                                         | 5,8107                                             | 397,95                                           | 1,3687                                           | 2,9075                                                  |
| 12750                            | 6367,1                                        | 2,7082                                         | 5,7653                                             | 397,95                                           | 1,3580                                           | 2,9304                                                  |
| 12800                            | 6367,2                                        | 2,6870                                         | 5,7202                                             | 397,95                                           | 1,3474                                           | 2,9535                                                  |
| 12850                            | 6367,3                                        | 2,6659                                         | 5,6755                                             | 397,95                                           | 1,3368                                           | 2,9768                                                  |
| 12900                            | 6367,4                                        | 2,6450                                         | 5,6311                                             | 397,95                                           | 1,3264                                           | 3,0003                                                  |
| 12950                            | 6367,5                                        | 2,6243                                         | 5,5870                                             | 397,95                                           | 1,3160                                           | 3,0239                                                  |
| 13000                            | 6367,6                                        | 2,6037                                         | 0,55433+24                                         | 397,95                                           | 1,3057+9                                         | 3,0478-7                                                |
| 13050                            | 6367,7                                        | 2,5833                                         | 5,5000                                             | 397,95                                           | 1,2955                                           | 3,0718                                                  |
| 13100                            | 6367,8                                        | 2,5631                                         | 5,4569                                             | 397,95                                           | 1,2854                                           | 3,0960                                                  |
| 13150                            | 6367,9                                        | 2,5430                                         | 5,4143                                             | 397,95                                           | 1,2753                                           | 3,1204                                                  |
| 13200                            | 6368,0                                        | 2,5231                                         | 5,3719                                             | 397,95                                           | 1,2653                                           | 3,1450                                                  |
| 13250                            | 6368,1                                        | 2,5033                                         | 5,3299                                             | 397,95                                           | 1,2555                                           | 3,1698                                                  |
| 13300                            | 6368,2                                        | 2,4837                                         | 5,2882                                             | 397,95                                           | 1,2456                                           | 3,1948                                                  |
| 13350                            | 6368,3                                        | 2,4642                                         | 5,2469                                             | 397,95                                           | 1,2359                                           | 3,2200                                                  |
| 13400                            | 6368,4                                        | 2,4449                                         | 5,2058                                             | 397,95                                           | 1,2262                                           | 3,2453                                                  |
| 13450                            | 6368,5                                        | 2,4258                                         | 5,1651                                             | 397,95                                           | 1,2166                                           | 3,2709                                                  |
| 13500                            | 6368,6                                        | 2,4068                                         | 0,51247+24                                         | 397,95                                           | 1,2071+9                                         | 3,2967-7                                                |
| 13550                            | 6368,7                                        | 2,3879                                         | 5,0846                                             | 397,95                                           | 1,1977                                           | 3,3227                                                  |
| 13600                            | 6368,8                                        | 2,3692                                         | 5,0449                                             | 397,95                                           | 1,1883                                           | 3,3489                                                  |
| 13650                            | 6368,9                                        | 2,3506                                         | 5,0054                                             | 397,95                                           | 1,1790                                           | 3,3753                                                  |
| 13700                            | 6369,0                                        | 2,3322                                         | 4,9663                                             | 397,95                                           | 1,1698                                           | 3,4019                                                  |
| 13750                            | 6369,1                                        | 2,3139                                         | 4,9275                                             | 397,95                                           | 1,1607                                           | 3,4287                                                  |
| 13800                            | 6369,2                                        | 2,2958                                         | 4,8889                                             | 397,95                                           | 1,1516                                           | 3,4557                                                  |
| 13850                            | 6369,3                                        | 2,2778                                         | 4,8507                                             | 397,95                                           | 1,1426                                           | 3,4829                                                  |
| 13900                            | 6369,4                                        | 2,2600                                         | 4,8128                                             | 397,95                                           | 1,1336                                           | 3,5104                                                  |
| 13950                            | 6369,5                                        | 2,2423                                         | 4,7751                                             | 397,95                                           | 1,1248                                           | 3,5380                                                  |

| Геопотенциальная высота $H$ , м | Величины в функции геопотенциальной высоты |                                          |                                                 |                                         |                                               |                                          |
|---------------------------------|--------------------------------------------|------------------------------------------|-------------------------------------------------|-----------------------------------------|-----------------------------------------------|------------------------------------------|
|                                 | масштаб высоты по длине $H_p$ , м          | удельный вес $\gamma$ , Н/м <sup>3</sup> | концентрация частиц $\lambda$ , м <sup>-3</sup> | средняя скорость частиц $\bar{v}$ , м/с | частота соударений $\omega$ , с <sup>-1</sup> | средняя длина свободного пробега $l$ , м |
| 12000                           | 6365,6                                     | 3,0367                                   | 0 6,4630+24                                     | 397,95                                  | 1,5224+9                                      | 2,6140-7                                 |
| 12050                           | 6365,7                                     | 3,0128                                   | 6,4123                                          | 397,95                                  | 1,5104                                        | 2,6347                                   |
| 12100                           | 6365,8                                     | 2,9891                                   | 6,3619                                          | 397,95                                  | 1,4985                                        | 2,6556                                   |
| 12150                           | 6365,9                                     | 2,9656                                   | 6,3120                                          | 397,95                                  | 1,4868                                        | 2,6766                                   |
| 12200                           | 6366,0                                     | 2,9422                                   | 6,2624                                          | 397,95                                  | 1,4751                                        | 2,6978                                   |
| 12250                           | 6366,1                                     | 2,9191                                   | 6,2132                                          | 397,95                                  | 1,4635                                        | 2,7192                                   |
| 12300                           | 6366,2                                     | 2,8961                                   | 6,1644                                          | 397,95                                  | 1,4520                                        | 2,7407                                   |
| 12350                           | 6366,3                                     | 2,8733                                   | 6,1160                                          | 397,95                                  | 1,4406                                        | 2,7624                                   |
| 12400                           | 6366,4                                     | 2,8507                                   | 6,0680                                          | 397,95                                  | 1,4293                                        | 2,7842                                   |
| 12450                           | 6366,5                                     | 2,8283                                   | 6,0203                                          | 397,95                                  | 1,4181                                        | 2,8063                                   |
| 12500                           | 6366,6                                     | 2,8060                                   | 0 5,9730+24                                     | 397,95                                  | 1,4069+9                                      | 2,8285-7                                 |
| 12550                           | 6366,7                                     | 2,7839                                   | 5,9261                                          | 397,95                                  | 1,3959                                        | 2,8509                                   |
| 12600                           | 6366,8                                     | 2,7620                                   | 5,8796                                          | 397,95                                  | 1,3849                                        | 2,8734                                   |
| 12650                           | 6366,9                                     | 2,7403                                   | 5,8334                                          | 397,95                                  | 1,3741                                        | 2,8962                                   |
| 12700                           | 6367,0                                     | 2,7187                                   | 5,7876                                          | 397,95                                  | 1,3633                                        | 2,9191                                   |
| 12750                           | 6367,1                                     | 2,6973                                   | 5,7421                                          | 397,95                                  | 1,3526                                        | 2,9422                                   |
| 12800                           | 6367,2                                     | 2,6761                                   | 5,6970                                          | 397,95                                  | 1,3419                                        | 2,9655                                   |
| 12850                           | 6367,3                                     | 2,6550                                   | 5,6523                                          | 397,95                                  | 1,3314                                        | 2,9890                                   |
| 12900                           | 6367,4                                     | 2,6341                                   | 5,6079                                          | 397,95                                  | 1,3209                                        | 3,0126                                   |
| 12950                           | 6367,5                                     | 2,6134                                   | 5,5639                                          | 397,95                                  | 1,3106                                        | 3,0365                                   |
| 13000                           | 6367,6                                     | 2,5929                                   | 0 5,5202+24                                     | 397,95                                  | 1,3003+9                                      | 3,0605-7                                 |
| 13050                           | 6367,7                                     | 2,5725                                   | 5,4768                                          | 397,95                                  | 1,2901                                        | 3,0848                                   |
| 13100                           | 6367,8                                     | 2,5522                                   | 5,4338                                          | 397,95                                  | 1,2799                                        | 3,1092                                   |
| 13150                           | 6367,9                                     | 2,5321                                   | 5,3911                                          | 397,95                                  | 1,2699                                        | 3,1338                                   |
| 13200                           | 6368,0                                     | 2,5122                                   | 5,3488                                          | 397,95                                  | 1,2599                                        | 3,1586                                   |
| 13250                           | 6368,1                                     | 2,4924                                   | 5,3068                                          | 397,95                                  | 1,2500                                        | 3,1836                                   |
| 13300                           | 6368,2                                     | 2,4728                                   | 5,2651                                          | 397,95                                  | 1,2402                                        | 3,2088                                   |
| 13350                           | 6368,3                                     | 2,4534                                   | 5,2238                                          | 397,95                                  | 1,2305                                        | 3,2342                                   |
| 13400                           | 6368,4                                     | 2,4341                                   | 5,1827                                          | 397,95                                  | 1,2208                                        | 3,2598                                   |
| 13450                           | 6368,5                                     | 2,4149                                   | 5,1420                                          | 397,95                                  | 1,2112                                        | 3,2856                                   |
| 13500                           | 6368,6                                     | 2,3959                                   | 0 5,1017+24                                     | 397,95                                  | 1,2017+9                                      | 3,3116-7                                 |
| 13550                           | 6368,7                                     | 2,3770                                   | 5,0616                                          | 397,95                                  | 1,1923                                        | 3,3378                                   |
| 13600                           | 6368,8                                     | 2,3583                                   | 5,0218                                          | 397,95                                  | 1,1829                                        | 3,3642                                   |
| 13650                           | 6368,9                                     | 2,3398                                   | 4,9824                                          | 397,95                                  | 1,1736                                        | 3,3909                                   |
| 13700                           | 6369,0                                     | 2,3214                                   | 4,9433                                          | 397,95                                  | 1,1644                                        | 3,4177                                   |
| 13750                           | 6369,1                                     | 2,3031                                   | 4,9045                                          | 397,95                                  | 1,1552                                        | 3,4448                                   |
| 13800                           | 6369,2                                     | 2,2850                                   | 4,8659                                          | 397,95                                  | 1,1462                                        | 3,4720                                   |
| 13850                           | 6369,3                                     | 2,2670                                   | 4,8272                                          | 397,95                                  | 1,1372                                        | 3,4995                                   |
| 13900                           | 6369,4                                     | 2,2492                                   | 4,7888                                          | 397,95                                  | 1,1282                                        | 3,5272                                   |
| 13950                           | 6369,5                                     | 2,2315                                   | 4,7522                                          | 397,95                                  | 1,1194                                        | 3,5551                                   |

От 14000 до 15950 м

| Геометрическая<br>высота<br>$h$ , м | Величины в функции геометрической высоты      |                                                |                                                 |                                                  |                                                     |                                                   |
|-------------------------------------|-----------------------------------------------|------------------------------------------------|-------------------------------------------------|--------------------------------------------------|-----------------------------------------------------|---------------------------------------------------|
|                                     | масштаб<br>высоты по<br>давлению<br>$H_p$ , м | удельный<br>вес<br>$\gamma$ , Н/м <sup>3</sup> | концентрация<br>частиц<br>$n$ , м <sup>-3</sup> | средняя<br>скорость<br>частиц<br>$\bar{v}$ , м/с | частота<br>соударений<br>$\alpha$ , с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>$l$ , м |
| 14000                               | 6369,6                                        | 2,2247                                         | 0 4,7378+24                                     | 397,95                                           | 1,1160+9                                            | 3,5659-7                                          |
| 14050                               | 6369,7                                        | 2,2073                                         | 4,7008                                          | 397,95                                           | 1,1073                                              | 3,5940                                            |
| 14100                               | 6369,8                                        | 2,1900                                         | 4,6640                                          | 397,95                                           | 1,0986                                              | 3,6224                                            |
| 14150                               | 6369,9                                        | 2,1728                                         | 4,6275                                          | 397,95                                           | 1,0900                                              | 3,6509                                            |
| 14200                               | 6370,0                                        | 2,1558                                         | 4,5914                                          | 397,95                                           | 1,0815                                              | 3,6797                                            |
| 14250                               | 6370,1                                        | 2,1389                                         | 4,5555                                          | 397,95                                           | 1,0730                                              | 3,7087                                            |
| 14300                               | 6370,2                                        | 2,1221                                         | 4,5198                                          | 397,95                                           | 1,0646                                              | 3,7379                                            |
| 14350                               | 6370,3                                        | 2,1055                                         | 4,4845                                          | 397,95                                           | 1,0563                                              | 3,7673                                            |
| 14400                               | 6370,4                                        | 2,0890                                         | 4,4494                                          | 397,95                                           | 1,0481                                              | 3,7970                                            |
| 14450                               | 6370,5                                        | 2,0727                                         | 4,4147                                          | 397,95                                           | 1,0399                                              | 3,8269                                            |
| 14500                               | 6370,6                                        | 2,0564                                         | 0 4,3801+24                                     | 397,95                                           | 1,0317+9                                            | 3,8571-7                                          |
| 14550                               | 6370,7                                        | 2,0403                                         | 4,3459                                          | 397,95                                           | 1,0237                                              | 3,8875                                            |
| 14600                               | 6370,8                                        | 2,0243                                         | 4,3119                                          | 397,95                                           | 1,0157                                              | 3,9181                                            |
| 14650                               | 6370,9                                        | 2,0085                                         | 4,2782                                          | 397,95                                           | 1,0077                                              | 3,9490                                            |
| 14700                               | 6371,0                                        | 1,9927                                         | 4,2448                                          | 397,95                                           | 9,9985+8                                            | 3,9801                                            |
| 14750                               | 6371,1                                        | 1,9771                                         | 4,2116                                          | 397,95                                           | 9,9203                                              | 4,0115                                            |
| 14800                               | 6371,2                                        | 1,9616                                         | 4,1787                                          | 397,95                                           | 9,8428                                              | 4,0431                                            |
| 14850                               | 6371,3                                        | 1,9463                                         | 4,1460                                          | 397,95                                           | 9,7659                                              | 4,0749                                            |
| 14900                               | 6371,4                                        | 1,9310                                         | 4,1136                                          | 397,95                                           | 9,6895                                              | 4,1070                                            |
| 14950                               | 6371,5                                        | 1,9159                                         | 4,0814                                          | 397,95                                           | 9,6138                                              | 4,1394                                            |
| 15000                               | 6371,6                                        | 1,9009                                         | 0 4,0495+24                                     | 397,95                                           | 9,5386+8                                            | 4,1720-7                                          |
| 15050                               | 6371,7                                        | 1,8860                                         | 4,0179                                          | 397,95                                           | 9,4641                                              | 4,2049                                            |
| 15100                               | 6371,8                                        | 1,8712                                         | 3,9865                                          | 397,95                                           | 9,3901                                              | 4,2380                                            |
| 15150                               | 6371,9                                        | 1,8566                                         | 3,9553                                          | 397,95                                           | 9,3167                                              | 4,2714                                            |
| 15200                               | 6372,0                                        | 1,8421                                         | 3,9244                                          | 397,95                                           | 9,2439                                              | 4,3050                                            |
| 15250                               | 6372,1                                        | 1,8276                                         | 3,8937                                          | 397,95                                           | 9,1716                                              | 4,3389                                            |
| 15300                               | 6372,2                                        | 1,8133                                         | 3,8633                                          | 397,95                                           | 9,0999                                              | 4,3731                                            |
| 15350                               | 6372,3                                        | 1,7991                                         | 3,8331                                          | 397,95                                           | 9,0288                                              | 4,4076                                            |
| 15400                               | 6372,4                                        | 1,7850                                         | 3,8031                                          | 397,95                                           | 8,9582                                              | 4,4423                                            |
| 15450                               | 6372,5                                        | 1,7710                                         | 3,7734                                          | 397,95                                           | 8,8882                                              | 4,4773                                            |
| 15500                               | 6372,6                                        | 1,7572                                         | 0 3,7439+24                                     | 397,95                                           | 8,8188+8                                            | 4,5126-7                                          |
| 15550                               | 6372,7                                        | 1,7434                                         | 3,7147                                          | 397,95                                           | 8,7498                                              | 4,5481                                            |
| 15600                               | 6372,8                                        | 1,7298                                         | 3,6856                                          | 397,95                                           | 8,6815                                              | 4,5839                                            |
| 15650                               | 6372,9                                        | 1,7162                                         | 3,6568                                          | 397,95                                           | 8,6136                                              | 4,6200                                            |
| 15700                               | 6373,0                                        | 1,7028                                         | 3,6282                                          | 397,95                                           | 8,5463                                              | 4,6564                                            |
| 15750                               | 6373,1                                        | 1,6894                                         | 3,5999                                          | 397,95                                           | 8,4795                                              | 4,6931                                            |
| 15800                               | 6373,2                                        | 1,6762                                         | 3,5718                                          | 397,95                                           | 8,4132                                              | 4,7301                                            |
| 15850                               | 6373,3                                        | 1,6631                                         | 3,5438                                          | 397,95                                           | 8,3475                                              | 4,7673                                            |
| 15900                               | 6373,4                                        | 1,6501                                         | 3,5162                                          | 397,95                                           | 8,2823                                              | 4,8049                                            |
| 15950                               | 6373,5                                        | 1,6371                                         | 3,4887                                          | 397,95                                           | 8,2175                                              | 4,8427                                            |

| Геопотенциальная<br>высота<br>$H$ , м | Величины в функции геопотенциальной высоты    |                                                |                                                       |                                                  |                                                  |                                                   |          |
|---------------------------------------|-----------------------------------------------|------------------------------------------------|-------------------------------------------------------|--------------------------------------------------|--------------------------------------------------|---------------------------------------------------|----------|
|                                       | масштаб<br>высоты по<br>давлению<br>$H_p$ , м | удельный<br>вес<br>$\gamma$ , Н/м <sup>3</sup> | концентрация<br>частиц<br>$\lambda$ , м <sup>-3</sup> | средняя<br>скорость<br>частиц<br>$\bar{v}$ , м/с | частота<br>соударений<br>$\nu$ , с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>$l$ , м |          |
| 14000                                 | 6369,6                                        | 2,2139                                         | 0                                                     | 4,7149+24                                        | 397,95                                           | 1,1106+9                                          | 3,5833—7 |
| 14050                                 | 6369,7                                        | 2,1965                                         |                                                       | 4,6778                                           | 397,95                                           | 1,1019                                            | 3,6116   |
| 14100                                 | 6369,8                                        | 2,1792                                         |                                                       | 4,6411                                           | 397,95                                           | 1,0932                                            | 3,6402   |
| 14150                                 | 6369,9                                        | 2,1620                                         |                                                       | 4,6047                                           | 397,95                                           | 1,0843                                            | 3,6690   |
| 14200                                 | 6370,0                                        | 2,1450                                         |                                                       | 4,5685                                           | 397,95                                           | 1,0761                                            | 3,6981   |
| 14250                                 | 6370,1                                        | 2,1282                                         |                                                       | 4,5326                                           | 397,95                                           | 1,0677                                            | 3,7274   |
| 14300                                 | 6370,2                                        | 2,1114                                         |                                                       | 4,4970                                           | 397,95                                           | 1,0593                                            | 3,7569   |
| 14350                                 | 6370,3                                        | 2,0948                                         |                                                       | 4,4617                                           | 397,95                                           | 1,0509                                            | 3,7866   |
| 14400                                 | 6370,4                                        | 2,0783                                         |                                                       | 4,4267                                           | 397,95                                           | 1,0427                                            | 3,8166   |
| 14450                                 | 6370,5                                        | 2,0620                                         |                                                       | 4,3919                                           | 397,95                                           | 1,0345                                            | 3,8468   |
| 14500                                 | 6370,6                                        | 2,0457                                         | 0                                                     | 4,3574+24                                        | 397,95                                           | 1,0261+9                                          | 3,8772—7 |
| 14550                                 | 6370,7                                        | 2,0296                                         |                                                       | 4,3232                                           | 397,95                                           | 1,0183                                            | 3,9079   |
| 14600                                 | 6370,8                                        | 2,0137                                         |                                                       | 4,2892                                           | 397,95                                           | 1,0103                                            | 3,9389   |
| 14650                                 | 6370,9                                        | 1,9978                                         |                                                       | 4,2555                                           | 397,95                                           | 1,0024                                            | 3,9700   |
| 14700                                 | 6371,0                                        | 1,9821                                         |                                                       | 4,2221                                           | 397,95                                           | 9,9452+8                                          | 4,0015   |
| 14750                                 | 6371,1                                        | 1,9665                                         |                                                       | 4,1890                                           | 397,95                                           | 9,8671                                            | 4,0331   |
| 14800                                 | 6371,2                                        | 1,9510                                         |                                                       | 4,1561                                           | 397,95                                           | 9,7896                                            | 4,0651   |
| 14850                                 | 6371,3                                        | 1,9357                                         |                                                       | 4,1234                                           | 397,95                                           | 9,7127                                            | 4,0972   |
| 14900                                 | 6371,4                                        | 1,9204                                         |                                                       | 4,0910                                           | 397,95                                           | 9,6364                                            | 4,1297   |
| 14950                                 | 6371,6                                        | 1,9053                                         |                                                       | 4,0589                                           | 397,95                                           | 9,5607                                            | 4,1624   |
| 15000                                 | 6371,7                                        | 1,8903                                         | 0                                                     | 4,0270+24                                        | 397,95                                           | 9,4857+8                                          | 4,1953—7 |
| 15050                                 | 6371,8                                        | 1,8755                                         |                                                       | 3,9954                                           | 397,95                                           | 9,4112                                            | 4,2285   |
| 15100                                 | 6371,9                                        | 1,8607                                         |                                                       | 3,9640                                           | 397,95                                           | 9,3373                                            | 4,2620   |
| 15150                                 | 6372,0                                        | 1,8461                                         |                                                       | 3,9329                                           | 397,95                                           | 9,2639                                            | 4,2957   |
| 15200                                 | 6372,1                                        | 1,8315                                         |                                                       | 3,9020                                           | 397,95                                           | 9,1912                                            | 4,3297   |
| 15250                                 | 6372,2                                        | 1,8171                                         |                                                       | 3,8714                                           | 397,95                                           | 9,1190                                            | 4,3640   |
| 15300                                 | 6372,3                                        | 1,8028                                         |                                                       | 3,8410                                           | 397,95                                           | 9,0474                                            | 4,3985   |
| 15350                                 | 6372,4                                        | 1,7886                                         |                                                       | 3,8108                                           | 397,95                                           | 8,9763                                            | 4,4334   |
| 15400                                 | 6372,5                                        | 1,7746                                         |                                                       | 3,7809                                           | 397,95                                           | 8,9058                                            | 4,4684   |
| 15450                                 | 6372,6                                        | 1,7606                                         |                                                       | 3,7512                                           | 397,95                                           | 8,8359                                            | 4,5038   |
| 15500                                 | 6372,7                                        | 1,7467                                         | 0                                                     | 3,7217+24                                        | 397,95                                           | 8,7665+8                                          | 4,5395—7 |
| 15550                                 | 6372,8                                        | 1,7330                                         |                                                       | 3,6925                                           | 397,95                                           | 8,6976                                            | 4,5754   |
| 15600                                 | 6372,9                                        | 1,7194                                         |                                                       | 3,6635                                           | 397,95                                           | 8,6293                                            | 4,6116   |
| 15650                                 | 6373,0                                        | 1,7058                                         |                                                       | 3,6347                                           | 397,95                                           | 8,5616                                            | 4,6481   |
| 15700                                 | 6373,1                                        | 1,6924                                         |                                                       | 3,6072                                           | 397,95                                           | 8,4943                                            | 4,6849   |
| 15750                                 | 6373,2                                        | 1,6791                                         |                                                       | 3,5779                                           | 397,95                                           | 8,4276                                            | 4,7220   |
| 15800                                 | 6373,3                                        | 1,6659                                         |                                                       | 3,5498                                           | 397,95                                           | 8,3614                                            | 4,7594   |
| 15850                                 | 6373,4                                        | 1,6528                                         |                                                       | 3,5219                                           | 397,95                                           | 8,2958                                            | 4,7970   |
| 15900                                 | 6373,5                                        | 1,6398                                         |                                                       | 3,4942                                           | 397,95                                           | 8,2306                                            | 4,8350   |
| 15950                                 | 6373,6                                        | 1,6269                                         |                                                       | 3,4668                                           | 397,95                                           | 8,1660                                            | 4,8733   |



От 16000 до 17950 м

| Геометрическая<br>высота<br>h, м | Величины в функции геометрической высоты               |                            |                                              |                                         |                                             |                                                |
|----------------------------------|--------------------------------------------------------|----------------------------|----------------------------------------------|-----------------------------------------|---------------------------------------------|------------------------------------------------|
|                                  | масштаб<br>высоты по<br>давлению<br>H <sub>p</sub> , м | удельный<br>вес<br>γ, Н/м³ | концентрация<br>частиц<br>n, м <sup>-3</sup> | средняя<br>скорость<br>частиц<br>v, м/с | частота<br>соударений<br>z, с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>l, м |
| 16000                            | 6373,6                                                 | 1,6243                     | 0 3,4614+24                                  | 397,95                                  | 8,1533+8                                    | 4,8808-7                                       |
| 16050                            | 6373,7                                                 | 1,6116                     | 3,4344                                       | 397,95                                  | 8,0896                                      | 4,9193                                         |
| 16100                            | 6373,8                                                 | 1,5990                     | 3,4075                                       | 397,95                                  | 8,0264                                      | 4,9580                                         |
| 16150                            | 6373,9                                                 | 1,5865                     | 3,3809                                       | 397,95                                  | 7,9637                                      | 4,9971                                         |
| 16200                            | 6374,0                                                 | 1,5741                     | 3,3545                                       | 397,95                                  | 7,9015                                      | 5,0364                                         |
| 16250                            | 6374,1                                                 | 1,5617                     | 3,3283                                       | 397,95                                  | 7,8397                                      | 5,0761                                         |
| 16300                            | 6374,2                                                 | 1,5495                     | 3,3023                                       | 397,95                                  | 7,7785                                      | 5,1161                                         |
| 16350                            | 6374,3                                                 | 1,5374                     | 3,2765                                       | 397,95                                  | 7,7177                                      | 5,1564                                         |
| 16400                            | 6374,4                                                 | 1,5253                     | 3,2509                                       | 397,95                                  | 7,6574                                      | 5,1970                                         |
| 16450                            | 6374,5                                                 | 1,5134                     | 3,2255                                       | 397,95                                  | 7,5976                                      | 5,2379                                         |
| 16500                            | 6374,6                                                 | 1,5015                     | 0 3,2003+24                                  | 397,95                                  | 7,5382+8                                    | 5,2791-7                                       |
| 16550                            | 6374,7                                                 | 1,4898                     | 3,1753                                       | 397,95                                  | 7,4793                                      | 5,3207                                         |
| 16600                            | 6374,8                                                 | 1,4781                     | 3,1505                                       | 397,95                                  | 7,4209                                      | 5,3626                                         |
| 16650                            | 6374,9                                                 | 1,4666                     | 3,1258                                       | 397,95                                  | 7,3629                                      | 5,4048                                         |
| 16700                            | 6375,0                                                 | 1,4551                     | 3,1014                                       | 397,95                                  | 7,3054                                      | 5,4474                                         |
| 16750                            | 6375,1                                                 | 1,4437                     | 3,0772                                       | 397,95                                  | 7,2483                                      | 5,4903                                         |
| 16800                            | 6375,2                                                 | 1,4324                     | 3,0532                                       | 397,95                                  | 7,1917                                      | 5,5335                                         |
| 16850                            | 6375,3                                                 | 1,4212                     | 3,0293                                       | 397,95                                  | 7,1355                                      | 5,5771                                         |
| 16900                            | 6375,4                                                 | 1,4100                     | 3,0056                                       | 397,95                                  | 7,0798                                      | 5,6210                                         |
| 16950                            | 6375,5                                                 | 1,3990                     | 2,9822                                       | 397,95                                  | 7,0244                                      | 5,6652                                         |
| 17000                            | 6375,6                                                 | 1,3881                     | 0 2,9589+24                                  | 397,95                                  | 6,9696+8                                    | 5,7098-7                                       |
| 17050                            | 6375,7                                                 | 1,3772                     | 2,9358                                       | 397,95                                  | 6,9151                                      | 5,7548                                         |
| 17100                            | 6375,8                                                 | 1,3664                     | 2,9128                                       | 397,95                                  | 6,8611                                      | 5,8001                                         |
| 17150                            | 6375,9                                                 | 1,3557                     | 2,8901                                       | 397,95                                  | 6,8075                                      | 5,8458                                         |
| 17200                            | 6376,0                                                 | 1,3451                     | 2,8675                                       | 397,95                                  | 6,7543                                      | 5,8918                                         |
| 17250                            | 6376,1                                                 | 1,3346                     | 2,8451                                       | 397,95                                  | 6,7016                                      | 5,9382                                         |
| 17300                            | 6376,2                                                 | 1,3241                     | 2,8229                                       | 397,95                                  | 6,6492                                      | 5,9849                                         |
| 17350                            | 6376,3                                                 | 1,3136                     | 2,8008                                       | 397,95                                  | 6,5973                                      | 6,0320                                         |
| 17400                            | 6376,4                                                 | 1,3035                     | 2,7789                                       | 397,95                                  | 6,5458                                      | 6,0795                                         |
| 17450                            | 6376,5                                                 | 1,2933                     | 2,7572                                       | 397,95                                  | 6,4946                                      | 6,1274                                         |
| 17500                            | 6376,6                                                 | 1,2832                     | 0 2,7357+24                                  | 397,95                                  | 6,4439+8                                    | 6,1756-7                                       |
| 17550                            | 6376,7                                                 | 1,2731                     | 2,7143                                       | 397,95                                  | 6,3936                                      | 6,2242                                         |
| 17600                            | 6376,8                                                 | 1,2632                     | 2,6931                                       | 397,95                                  | 6,3436                                      | 6,2732                                         |
| 17650                            | 6376,9                                                 | 1,2533                     | 2,6721                                       | 397,95                                  | 6,2941                                      | 6,3226                                         |
| 17700                            | 6377,0                                                 | 1,2435                     | 2,6512                                       | 397,95                                  | 6,2449                                      | 6,3724                                         |
| 17750                            | 6377,1                                                 | 1,2337                     | 2,6305                                       | 397,95                                  | 6,1962                                      | 6,4225                                         |
| 17800                            | 6377,2                                                 | 1,2241                     | 2,6100                                       | 397,95                                  | 6,1478                                      | 6,4731                                         |
| 17850                            | 6377,3                                                 | 1,2145                     | 2,5896                                       | 397,95                                  | 6,0998                                      | 6,5240                                         |
| 17900                            | 6377,4                                                 | 1,2050                     | 2,5694                                       | 397,95                                  | 6,0521                                      | 6,5754                                         |
| 17950                            | 6377,5                                                 | 1,1956                     | 2,5493                                       | 397,95                                  | 6,0049                                      | 6,6272                                         |

Продолжение табл. 3

| Геопотенциальная<br>высота<br>$H$ , м' | Величины в функции геопотенциальной высоты    |                                                |                                                 |                                                  |                                                     |                                                   |          |
|----------------------------------------|-----------------------------------------------|------------------------------------------------|-------------------------------------------------|--------------------------------------------------|-----------------------------------------------------|---------------------------------------------------|----------|
|                                        | масштаб<br>высоты по<br>давлению<br>$H_p$ , м | удельный<br>вес<br>$\gamma$ , Н/м <sup>3</sup> | концентрация<br>частиц<br>$n$ , м <sup>-3</sup> | средняя<br>скорость<br>частиц<br>$\bar{v}$ , м/с | частота<br>соударений<br>$\omega$ , с <sup>-1</sup> | средняя длина<br>снобожного<br>пробега<br>$l$ , м |          |
| 16000                                  | 6373,7                                        | 1,6141                                         | 0                                               | 3,4396+24                                        | 397,95                                              | 8,1018+8                                          | 4,9119-7 |
| 16050                                  | 6373,8                                        | 1,6014                                         |                                                 | 3,4125                                           | 397,95                                              | 8,0382                                            | 4,9507   |
| 16100                                  | 6373,9                                        | 1,5888                                         |                                                 | 3,3857                                           | 397,95                                              | 7,9751                                            | 4,9899   |
| 16150                                  | 6374,0                                        | 1,5762                                         |                                                 | 3,3592                                           | 397,95                                              | 7,9125                                            | 5,0294   |
| 16200                                  | 6374,1                                        | 1,5638                                         |                                                 | 3,3328                                           | 397,95                                              | 7,8503                                            | 5,0692   |
| 16250                                  | 6374,2                                        | 1,5515                                         |                                                 | 3,3066                                           | 397,95                                              | 7,7887                                            | 5,1094   |
| 16300                                  | 6374,3                                        | 1,5393                                         |                                                 | 3,2806                                           | 397,95                                              | 7,7275                                            | 5,1493   |
| 16350                                  | 6374,4                                        | 1,5272                                         |                                                 | 3,2549                                           | 397,95                                              | 7,6668                                            | 5,1906   |
| 16400                                  | 6374,5                                        | 1,5152                                         |                                                 | 3,2293                                           | 397,95                                              | 7,6066                                            | 5,2317   |
| 16450                                  | 6374,6                                        | 1,5033                                         |                                                 | 3,2039                                           | 397,95                                              | 7,5469                                            | 5,2731   |
| 16500                                  | 6374,7                                        | 1,4914                                         | 0                                               | 3,1788+24                                        | 397,95                                              | 7,4876+8                                          | 5,3148-7 |
| 16550                                  | 6374,8                                        | 1,4797                                         |                                                 | 3,1538                                           | 397,95                                              | 7,4288                                            | 5,3569   |
| 16600                                  | 6374,9                                        | 1,4681                                         |                                                 | 3,1291                                           | 397,95                                              | 7,3705                                            | 5,3993   |
| 16650                                  | 6375,0                                        | 1,4565                                         |                                                 | 3,1045                                           | 397,95                                              | 7,3126                                            | 5,4420   |
| 16700                                  | 6375,1                                        | 1,4451                                         |                                                 | 3,0801                                           | 397,95                                              | 7,2551                                            | 5,4851   |
| 16750                                  | 6375,2                                        | 1,4337                                         |                                                 | 3,0559                                           | 397,95                                              | 7,1982                                            | 5,5285   |
| 16800                                  | 6375,3                                        | 1,4224                                         |                                                 | 3,0319                                           | 397,95                                              | 7,1416                                            | 5,5723   |
| 16850                                  | 6375,4                                        | 1,4112                                         |                                                 | 3,0081                                           | 397,95                                              | 7,0855                                            | 5,6164   |
| 16900                                  | 6375,5                                        | 1,4001                                         |                                                 | 2,9845                                           | 397,95                                              | 7,0299                                            | 5,6608   |
| 16950                                  | 6375,6                                        | 1,3891                                         |                                                 | 2,9610                                           | 397,95                                              | 6,9747                                            | 5,7057   |
| 17000                                  | 6375,7                                        | 1,3782                                         | 0                                               | 2,9378+24                                        | 397,95                                              | 6,9199+8                                          | 5,7508-7 |
| 17050                                  | 6375,8                                        | 1,3673                                         |                                                 | 2,9147                                           | 397,95                                              | 6,8656                                            | 5,7963   |
| 17100                                  | 6375,9                                        | 1,3565                                         |                                                 | 2,8918                                           | 397,95                                              | 6,8117                                            | 5,8422   |
| 17150                                  | 6376,0                                        | 1,3459                                         |                                                 | 2,8691                                           | 397,95                                              | 6,7582                                            | 5,8885   |
| 17200                                  | 6376,1                                        | 1,3353                                         |                                                 | 2,8466                                           | 397,95                                              | 6,7051                                            | 5,9351   |
| 17250                                  | 6376,2                                        | 1,3248                                         |                                                 | 2,8242                                           | 397,95                                              | 6,6524                                            | 5,9821   |
| 17300                                  | 6376,3                                        | 1,3144                                         |                                                 | 2,8020                                           | 397,95                                              | 6,6002                                            | 6,0294   |
| 17350                                  | 6376,4                                        | 1,3040                                         |                                                 | 2,7800                                           | 397,95                                              | 6,5483                                            | 6,0771   |
| 17400                                  | 6376,5                                        | 1,2937                                         |                                                 | 2,7582                                           | 397,95                                              | 6,4969                                            | 6,1252   |
| 17450                                  | 6376,6                                        | 1,2836                                         |                                                 | 2,7365                                           | 397,95                                              | 6,4459                                            | 6,1737   |
| 17500                                  | 6376,7                                        | 1,2735                                         | 0                                               | 2,7151+24                                        | 397,95                                              | 6,3953+8                                          | 6,2226-7 |
| 17550                                  | 6376,8                                        | 1,2634                                         |                                                 | 2,6937                                           | 397,95                                              | 6,3451                                            | 6,2718   |
| 17600                                  | 6376,9                                        | 1,2535                                         |                                                 | 2,6726                                           | 397,95                                              | 6,2952                                            | 6,3215   |
| 17650                                  | 6377,0                                        | 1,2436                                         |                                                 | 2,6516                                           | 397,95                                              | 6,2458                                            | 6,3715   |
| 17700                                  | 6377,1                                        | 1,2339                                         |                                                 | 2,6308                                           | 397,95                                              | 6,1967                                            | 6,4220   |
| 17750                                  | 6377,2                                        | 1,2241                                         |                                                 | 2,6101                                           | 397,95                                              | 6,1481                                            | 6,4728   |
| 17800                                  | 6377,3                                        | 1,2145                                         |                                                 | 2,5896                                           | 397,95                                              | 6,0998                                            | 6,5240   |
| 17850                                  | 6377,4                                        | 1,2050                                         |                                                 | 2,5693                                           | 397,95                                              | 6,0519                                            | 6,5757   |
| 17900                                  | 6377,5                                        | 1,1955                                         |                                                 | 2,5491                                           | 397,95                                              | 6,0043                                            | 6,6277   |
| 17950                                  | 6377,6                                        | 1,1861                                         |                                                 | 2,5291                                           | 397,95                                              | 5,9572                                            | 6,6802   |

От 18000 до 19950 м

| Геометрическая<br>высота<br>h, м | Величины в функции геометрической высоты               |                            |                                              |                                         |                                             |                                                |          |
|----------------------------------|--------------------------------------------------------|----------------------------|----------------------------------------------|-----------------------------------------|---------------------------------------------|------------------------------------------------|----------|
|                                  | масштаб<br>высоты по<br>давлению<br>H <sub>p</sub> , м | удельный<br>вес<br>γ, Н/м³ | концентрация<br>частиц<br>л, м <sup>-3</sup> | средняя<br>скорость<br>частиц<br>v, м/с | частота<br>соударений<br>n, с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>l, м |          |
| 18000                            | 6377,6                                                 | 1,1862                     | 0                                            | 2,5294+24                               | 397,95                                      | 5,9580+8                                       | 6,6793-7 |
| 18050                            | 6377,7                                                 | 1,1769                     | 2,5096                                       | 397,95                                  | 5,9114                                      | 6,7319                                         | 6,7319   |
| 18100                            | 6377,8                                                 | 1,1677                     | 2,4900                                       | 397,95                                  | 5,8653                                      | 6,7849                                         | 6,7849   |
| 18150                            | 6377,9                                                 | 1,1586                     | 2,4706                                       | 397,95                                  | 5,8195                                      | 6,8383                                         | 6,8383   |
| 18200                            | 6378,0                                                 | 1,1495                     | 2,4513                                       | 397,95                                  | 5,7740                                      | 6,8921                                         | 6,8921   |
| 18250                            | 6378,1                                                 | 1,1405                     | 2,4322                                       | 397,95                                  | 5,7289                                      | 6,9463                                         | 6,9463   |
| 18300                            | 6378,2                                                 | 1,1316                     | 2,4132                                       | 397,95                                  | 5,6842                                      | 7,0010                                         | 7,0010   |
| 18350                            | 6378,3                                                 | 1,1228                     | 2,3943                                       | 397,95                                  | 5,6398                                      | 7,0561                                         | 7,0561   |
| 18400                            | 6378,4                                                 | 1,1140                     | 2,3756                                       | 397,95                                  | 5,5958                                      | 7,1116                                         | 7,1116   |
| 18450                            | 6378,5                                                 | 1,1053                     | 2,3571                                       | 397,95                                  | 5,5521                                      | 7,1676                                         | 7,1676   |
| 18500                            | 6378,6                                                 | 1,0966                     | 0                                            | 2,3387+24                               | 397,95                                      | 5,5087+8                                       | 7,2240-7 |
| 18550                            | 6378,7                                                 | 1,0880                     | 2,3204                                       | 397,95                                  | 5,4657                                      | 7,2809                                         | 7,2809   |
| 18600                            | 6378,8                                                 | 1,0795                     | 2,3023                                       | 397,95                                  | 5,4231                                      | 7,3381                                         | 7,3381   |
| 18650                            | 6378,9                                                 | 1,0711                     | 2,2843                                       | 397,95                                  | 5,3807                                      | 7,3959                                         | 7,3959   |
| 18700                            | 6379,0                                                 | 1,0627                     | 2,2665                                       | 397,95                                  | 5,3387                                      | 7,4541                                         | 7,4541   |
| 18750                            | 6379,1                                                 | 1,0544                     | 2,2488                                       | 397,95                                  | 5,2970                                      | 7,5127                                         | 7,5127   |
| 18800                            | 6379,2                                                 | 1,0461                     | 2,2312                                       | 397,95                                  | 5,2557                                      | 7,5719                                         | 7,5719   |
| 18850                            | 6379,3                                                 | 1,0379                     | 2,2138                                       | 397,95                                  | 5,2146                                      | 7,6314                                         | 7,6314   |
| 18900                            | 6379,4                                                 | 1,0298                     | 2,1965                                       | 397,95                                  | 5,1733                                      | 7,6915                                         | 7,6915   |
| 18950                            | 6379,5                                                 | 1,0218                     | 2,1794                                       | 397,95                                  | 5,1335                                      | 7,7520                                         | 7,7520   |
| 19000                            | 6379,6                                                 | 1,0138                     | 0                                            | 2,1624+24                               | 397,95                                      | 5,0934+8                                       | 7,8130-7 |
| 19050                            | 6379,7                                                 | 1,0058                     | 2,1455                                       | 397,95                                  | 5,0537                                      | 7,8745                                         | 7,8745   |
| 19100                            | 6379,8                                                 | 9,9798-1                   | 2,1287                                       | 397,95                                  | 5,0142                                      | 7,9364                                         | 7,9364   |
| 19150                            | 6379,9                                                 | 9,9017                     | 2,1121                                       | 397,95                                  | 4,9751                                      | 7,9989                                         | 7,9989   |
| 19200                            | 6380,0                                                 | 9,8243                     | 2,0956                                       | 397,95                                  | 4,9363                                      | 8,0618                                         | 8,0618   |
| 19250                            | 6380,1                                                 | 9,7474                     | 2,0793                                       | 397,95                                  | 4,8977                                      | 8,1252                                         | 8,1252   |
| 19300                            | 6380,2                                                 | 9,6712                     | 2,0630                                       | 397,95                                  | 4,8595                                      | 8,1892                                         | 8,1892   |
| 19350                            | 6380,3                                                 | 9,5955                     | 2,0469                                       | 397,95                                  | 4,8216                                      | 8,2536                                         | 8,2536   |
| 19400                            | 6380,4                                                 | 9,5205                     | 2,0310                                       | 397,95                                  | 4,7839                                      | 8,3185                                         | 8,3185   |
| 19450                            | 6380,5                                                 | 9,4460                     | 2,0151                                       | 397,95                                  | 4,7466                                      | 8,3840                                         | 8,3840   |
| 19500                            | 6380,6                                                 | 9,3721-1                   | 1,9994+24                                    | 397,95                                  | 4,7095+8                                    | 8,4499-7                                       | 8,4499-7 |
| 19550                            | 6380,7                                                 | 9,2988                     | 1,9838                                       | 397,95                                  | 4,6728                                      | 8,5164                                         | 8,5164   |
| 19600                            | 6380,8                                                 | 9,2261                     | 1,9683                                       | 397,95                                  | 4,6363                                      | 8,5834                                         | 8,5834   |
| 19650                            | 6380,9                                                 | 9,1540                     | 1,9529                                       | 397,95                                  | 4,6001                                      | 8,6509                                         | 8,6509   |
| 19700                            | 6381,0                                                 | 9,0824                     | 1,9377                                       | 397,95                                  | 4,5642                                      | 8,7190                                         | 8,7190   |
| 19750                            | 6381,1                                                 | 9,0113                     | 1,9226                                       | 397,95                                  | 4,5286                                      | 8,7876                                         | 8,7876   |
| 19800                            | 6381,2                                                 | 8,9409                     | 1,9076                                       | 397,95                                  | 4,4932                                      | 8,8567                                         | 8,8567   |
| 19850                            | 6381,3                                                 | 8,8709                     | 1,8927                                       | 397,95                                  | 4,4582                                      | 8,9264                                         | 8,9264   |
| 19900                            | 6381,4                                                 | 8,8016                     | 1,8779                                       | 397,95                                  | 4,4234                                      | 8,9966                                         | 8,9966   |
| 19950                            | 6381,5                                                 | 8,7327                     | 1,8632                                       | 397,95                                  | 4,3888                                      | 9,0674                                         | 9,0674   |

| Геопотенциальная<br>высота<br>$H, \text{ м}$ | Величины в функции геопотенциальной высоты           |                                            |                                                 |                                                   |                                                |                                                          |          |
|----------------------------------------------|------------------------------------------------------|--------------------------------------------|-------------------------------------------------|---------------------------------------------------|------------------------------------------------|----------------------------------------------------------|----------|
|                                              | масштаб<br>высоты по<br>давлению<br>$H_p, \text{ м}$ | удельный<br>вес<br>$\gamma, \text{ Н/м}^3$ | концентрация<br>частиц<br>$\rho, \text{ г/м}^3$ | средняя<br>скорость<br>частиц<br>$v, \text{ м/с}$ | частота<br>соударений<br>$\nu, \text{ с}^{-1}$ | средняя длина<br>свободного<br>пробега<br>$l, \text{ м}$ |          |
| 18000                                        | 6377,7                                               | 1,1767                                     | 0                                               | 2,5092+24                                         | 397,95                                         | 5,9104+8                                                 | 6,7331—7 |
| 18050                                        | 6377,8                                               | 1,1675                                     |                                                 | 2,4895                                            | 397,95                                         | 5,8640                                                   | 6,7864   |
| 18100                                        | 6377,9                                               | 1,1583                                     |                                                 | 2,4700                                            | 397,95                                         | 5,8179                                                   | 6,8401   |
| 18150                                        | 6378,0                                               | 1,1492                                     |                                                 | 2,4506                                            | 397,95                                         | 5,7723                                                   | 6,8942   |
| 18200                                        | 6378,1                                               | 1,1401                                     |                                                 | 2,4313                                            | 397,95                                         | 5,7269                                                   | 6,9488   |
| 18250                                        | 6378,2                                               | 1,1312                                     |                                                 | 2,4122                                            | 397,95                                         | 5,6819                                                   | 7,0038   |
| 18300                                        | 6378,3                                               | 1,1223                                     |                                                 | 2,3933                                            | 397,95                                         | 5,6373                                                   | 7,0592   |
| 18350                                        | 6378,4                                               | 1,1134                                     |                                                 | 2,3745                                            | 397,95                                         | 5,5930                                                   | 7,1151   |
| 18400                                        | 6378,5                                               | 1,1047                                     |                                                 | 2,3558                                            | 397,95                                         | 5,5491                                                   | 7,1714   |
| 18450                                        | 6378,6                                               | 1,0960                                     |                                                 | 2,3373                                            | 397,95                                         | 5,5055                                                   | 7,2282   |
| 18500                                        | 6378,7                                               | 1,0873                                     | 0                                               | 2,3190+24                                         | 397,95                                         | 5,4623+8                                                 | 7,2854—7 |
| 18550                                        | 6378,8                                               | 1,0788                                     |                                                 | 2,3008                                            | 397,95                                         | 5,4194                                                   | 7,3431   |
| 18600                                        | 6378,9                                               | 1,0703                                     |                                                 | 2,2827                                            | 397,95                                         | 5,3768                                                   | 7,4012   |
| 18650                                        | 6379,0                                               | 1,0619                                     |                                                 | 2,2648                                            | 397,95                                         | 5,3346                                                   | 7,4598   |
| 18700                                        | 6379,1                                               | 1,0535                                     |                                                 | 2,2470                                            | 397,95                                         | 5,2927                                                   | 7,5185   |
| 18750                                        | 6379,2                                               | 1,0452                                     |                                                 | 2,2293                                            | 397,95                                         | 5,2512                                                   | 7,5784   |
| 18800                                        | 6379,3                                               | 1,0370                                     |                                                 | 2,2118                                            | 397,95                                         | 5,2099                                                   | 7,6383   |
| 18850                                        | 6379,4                                               | 1,0288                                     |                                                 | 2,1945                                            | 397,95                                         | 5,1690                                                   | 7,6988   |
| 18900                                        | 6379,5                                               | 1,0207                                     |                                                 | 2,1772                                            | 397,95                                         | 5,1284                                                   | 7,7597   |
| 18950                                        | 6379,6                                               | 1,0127                                     |                                                 | 2,1601                                            | 397,95                                         | 5,0881                                                   | 7,8212   |
| 19000                                        | 6379,7                                               | 1,0047                                     | 0                                               | 2,1432+24                                         | 397,95                                         | 5,0482+8                                                 | 7,8831—7 |
| 19050                                        | 6379,8                                               | 9,9684—1                                   |                                                 | 2,1263                                            | 397,95                                         | 5,0085                                                   | 7,9455   |
| 19100                                        | 6379,9                                               | 9,8900                                     |                                                 | 2,1096                                            | 397,95                                         | 4,9692                                                   | 8,0081   |
| 19150                                        | 6380,0                                               | 9,8121                                     |                                                 | 2,0931                                            | 397,95                                         | 4,9302                                                   | 8,0718   |
| 19200                                        | 6380,1                                               | 9,7349                                     |                                                 | 2,0766                                            | 397,95                                         | 4,8915                                                   | 8,1357   |
| 19250                                        | 6380,2                                               | 9,6583                                     |                                                 | 2,0603                                            | 397,95                                         | 4,8530                                                   | 8,2001   |
| 19300                                        | 6380,3                                               | 9,5823                                     |                                                 | 2,0441                                            | 397,95                                         | 4,8149                                                   | 8,2650   |
| 19350                                        | 6380,4                                               | 9,5069                                     |                                                 | 2,0281                                            | 397,95                                         | 4,7771                                                   | 8,3304   |
| 19400                                        | 6380,5                                               | 9,4321                                     |                                                 | 2,0121                                            | 397,95                                         | 4,7396                                                   | 8,3963   |
| 19450                                        | 6380,6                                               | 9,3579                                     |                                                 | 1,9963                                            | 397,95                                         | 4,7024                                                   | 8,4628   |
| 19500                                        | 6380,7                                               | 9,2842—1                                   |                                                 | 1,9807+24                                         | 397,95                                         | 4,6654+8                                                 | 8,5298—7 |
| 19550                                        | 6380,8                                               | 9,2112                                     |                                                 | 1,9651                                            | 397,95                                         | 4,6288                                                   | 8,5973   |
| 19600                                        | 6380,9                                               | 9,1387                                     |                                                 | 1,9497                                            | 397,95                                         | 4,5924                                                   | 8,6653   |
| 19650                                        | 6381,0                                               | 9,0668                                     |                                                 | 1,9344                                            | 397,95                                         | 4,5564                                                   | 8,7339   |
| 19700                                        | 6381,1                                               | 8,9954                                     |                                                 | 1,9192                                            | 397,95                                         | 4,5206                                                   | 8,8031   |
| 19750                                        | 6381,2                                               | 8,9247                                     |                                                 | 1,9041                                            | 397,95                                         | 4,4851                                                   | 8,8728   |
| 19800                                        | 6381,3                                               | 8,8544                                     |                                                 | 1,8892                                            | 397,95                                         | 4,4499                                                   | 8,9430   |
| 19850                                        | 6381,4                                               | 8,7848                                     |                                                 | 1,8743                                            | 397,95                                         | 4,4149                                                   | 9,0138   |
| 19900                                        | 6381,5                                               | 8,7156                                     |                                                 | 1,8596                                            | 397,95                                         | 4,3803                                                   | 9,0851   |
| 19950                                        | 6381,6                                               | 8,6470                                     |                                                 | 1,8450                                            | 397,95                                         | 4,3459                                                   | 9,1570   |

От 20000 до 21950 м

| Геометри-<br>ческая<br>высота<br>h, м | Величины в функции геометрической высоты   |                            |                                  |                                         |                                 |                                                |
|---------------------------------------|--------------------------------------------|----------------------------|----------------------------------|-----------------------------------------|---------------------------------|------------------------------------------------|
|                                       | масштаб<br>высоты по<br>дальномеру<br>H, м | удельный<br>вес<br>γ, Н/м³ | концентрация<br>частиц<br>n, м⁻³ | средняя<br>скорость<br>частиц<br>v, м/с | частота<br>соударений<br>z, с⁻¹ | средняя длина<br>свободного<br>пробега<br>l, м |
| 20000                                 | 6381,6                                     | 8,6645-1                   | 1,8487+24                        | 397,95                                  | 4,3546+8                        | 9,1387-7                                       |
| 20050                                 | 6381,7                                     | 8,5967                     | 1,8343                           | 397,95                                  | 4,3206                          | 9,2106                                         |
| 20100                                 | 6382,9                                     | 8,5280                     | 1,8196                           | 397,99                                  | 4,2865                          | 9,2846                                         |
| 20150                                 | 6384,4                                     | 8,4594                     | 1,8050                           | 398,03                                  | 4,2526                          | 9,3597                                         |
| 20200                                 | 6386,0                                     | 8,3914                     | 1,7905                           | 398,08                                  | 4,2189                          | 9,4355                                         |
| 20250                                 | 6387,6                                     | 8,3239                     | 1,7762                           | 398,12                                  | 4,1856                          | 9,5118                                         |
| 20300                                 | 6389,1                                     | 8,2570                     | 1,7619                           | 398,17                                  | 4,1524                          | 9,5887                                         |
| 20350                                 | 6390,7                                     | 8,1906                     | 1,7478                           | 398,21                                  | 4,1196                          | 9,6653                                         |
| 20400                                 | 6392,2                                     | 8,1248                     | 1,7338                           | 398,26                                  | 4,0870                          | 9,7444                                         |
| 20450                                 | 6393,8                                     | 8,0595                     | 1,7199                           | 398,30                                  | 4,0547                          | 9,8232                                         |
| 20500                                 | 6395,4                                     | 7,9948-1                   | 1,7061+24                        | 398,35                                  | 4,0227+8                        | 9,9025-7                                       |
| 20550                                 | 6396,9                                     | 7,9306                     | 1,6924                           | 398,40                                  | 3,9909                          | 9,9826                                         |
| 20600                                 | 6398,5                                     | 7,8670                     | 1,6789                           | 398,44                                  | 3,9594                          | 1,0053-6                                       |
| 20650                                 | 6400,1                                     | 7,8038                     | 1,6654                           | 398,49                                  | 3,9281                          | 1,0144                                         |
| 20700                                 | 6401,6                                     | 7,7412                     | 1,6521                           | 398,53                                  | 3,8971                          | 1,0226                                         |
| 20750                                 | 6403,2                                     | 7,6791                     | 1,6388                           | 398,58                                  | 3,8664                          | 1,0309                                         |
| 20800                                 | 6404,8                                     | 7,6175                     | 1,6257                           | 398,62                                  | 3,8359                          | 1,0392                                         |
| 20850                                 | 6406,3                                     | 7,5565                     | 1,6127                           | 398,67                                  | 3,8056                          | 1,0476                                         |
| 20900                                 | 6407,9                                     | 7,4959                     | 1,5998                           | 398,71                                  | 3,7756                          | 1,0560                                         |
| 20950                                 | 6409,4                                     | 7,4358                     | 1,5870                           | 398,76                                  | 3,7458                          | 1,0645                                         |
| 21000                                 | 6411,0                                     | 7,3763-1                   | 1,5743+24                        | 398,81                                  | 3,7163+8                        | 1,0731-6                                       |
| 21050                                 | 6412,6                                     | 7,3172                     | 1,5617                           | 398,85                                  | 3,6870                          | 1,0818                                         |
| 21100                                 | 6414,1                                     | 7,2586                     | 1,5493                           | 398,90                                  | 3,6579                          | 1,0905                                         |
| 21150                                 | 6415,7                                     | 7,2005                     | 1,5369                           | 398,94                                  | 3,6291                          | 1,0993                                         |
| 21200                                 | 6417,3                                     | 7,1428                     | 1,5246                           | 398,99                                  | 3,6005                          | 1,1081                                         |
| 21250                                 | 6418,8                                     | 7,0857                     | 1,5124                           | 399,03                                  | 3,5722                          | 1,1171                                         |
| 21300                                 | 6420,4                                     | 7,0290                     | 1,5004                           | 399,08                                  | 3,5441                          | 1,1260                                         |
| 21350                                 | 6422,0                                     | 6,9728                     | 1,4884                           | 399,12                                  | 3,5162                          | 1,1351                                         |
| 21400                                 | 6423,5                                     | 6,9170                     | 1,4765                           | 399,17                                  | 3,4885                          | 1,1442                                         |
| 21450                                 | 6425,1                                     | 6,8617                     | 1,4647                           | 399,22                                  | 3,4611                          | 1,1534                                         |
| 21500                                 | 6426,7                                     | 6,8069-1                   | 1,4530+24                        | 399,26                                  | 3,4339+8                        | 1,1627-6                                       |
| 21550                                 | 6428,2                                     | 6,7525                     | 1,4415                           | 399,31                                  | 3,4069                          | 1,1721                                         |
| 21600                                 | 6429,8                                     | 6,6985                     | 1,4300                           | 399,35                                  | 3,3801                          | 1,1815                                         |
| 21650                                 | 6431,3                                     | 6,6450                     | 1,4186                           | 399,40                                  | 3,3535                          | 1,1910                                         |
| 21700                                 | 6432,9                                     | 6,5920                     | 1,4073                           | 399,44                                  | 3,3272                          | 1,2005                                         |
| 21750                                 | 6434,5                                     | 6,5394                     | 1,3960                           | 399,49                                  | 3,3011                          | 1,2102                                         |
| 21800                                 | 6436,0                                     | 6,4872                     | 1,3849                           | 399,53                                  | 3,2751                          | 1,2199                                         |
| 21850                                 | 6437,6                                     | 6,4354                     | 1,3739                           | 399,58                                  | 3,2494                          | 1,2297                                         |
| 21900                                 | 6439,2                                     | 6,3841                     | 1,3630                           | 399,62                                  | 3,2239                          | 1,2396                                         |
| 21950                                 | 6440,7                                     | 6,3332                     | 1,3521                           | 399,67                                  | 3,1986                          | 1,2495                                         |

| Геопотенциальная<br>высота<br>$H, м'$ | Величины и функции геопотенциальной высоты |                                    |                                            |                                                 |                                        |                                                  |
|---------------------------------------|--------------------------------------------|------------------------------------|--------------------------------------------|-------------------------------------------------|----------------------------------------|--------------------------------------------------|
|                                       | масштаб<br>высоты по<br>длинам<br>$H_p, м$ | удельный<br>вес<br>$\gamma, Н/м^3$ | концентрация<br>частиц<br>$\kappa, м^{-3}$ | средняя<br>скорость<br>частиц<br>$\bar{v}, м/с$ | частота<br>соударений<br>$\nu, с^{-1}$ | средняя длина<br>свободного<br>пробега<br>$l, м$ |
| 20000                                 | 6381,7                                     | 8,5790—1                           | 1,8305+24                                  | 397,95                                          | 4,3117+8                               | 9,2295—7                                         |
| 20050                                 | 6383,3                                     | 8,5095                             | 1,8157                                     | 398,00                                          | 4,2774                                 | 9,3047                                           |
| 20100                                 | 6384,9                                     | 8,4406                             | 1,8010                                     | 398,04                                          | 4,2433                                 | 9,3805                                           |
| 20150                                 | 6386,4                                     | 8,3723                             | 1,7865                                     | 398,09                                          | 4,2095                                 | 9,4569                                           |
| 20200                                 | 6388,0                                     | 8,3046                             | 1,7721                                     | 398,14                                          | 4,1760                                 | 9,5339                                           |
| 20250                                 | 6389,6                                     | 8,2374                             | 1,7578                                     | 398,18                                          | 4,1428                                 | 9,6115                                           |
| 20300                                 | 6391,2                                     | 8,1708                             | 1,7436                                     | 398,23                                          | 4,1098                                 | 9,6897                                           |
| 20350                                 | 6392,7                                     | 8,1047                             | 1,7295                                     | 398,27                                          | 4,0771                                 | 9,7686                                           |
| 20400                                 | 6394,3                                     | 8,0392                             | 1,7155                                     | 398,32                                          | 4,0447                                 | 9,8480                                           |
| 20450                                 | 6395,9                                     | 7,9742                             | 1,7017                                     | 398,36                                          | 4,0125                                 | 9,9281                                           |
| 20500                                 | 6397,4                                     | 7,9098—1                           | 1,6880+24                                  | 398,41                                          | 3,9806+8                               | 1,0009—6                                         |
| 20550                                 | 6399,0                                     | 7,8459                             | 1,6744                                     | 398,46                                          | 3,9490                                 | 1,0090                                           |
| 20600                                 | 6400,6                                     | 7,7825                             | 1,6609                                     | 398,50                                          | 3,9176                                 | 1,0172                                           |
| 20650                                 | 6402,2                                     | 7,7197                             | 1,6475                                     | 398,55                                          | 3,8861                                 | 1,0255                                           |
| 20700                                 | 6403,7                                     | 7,6574                             | 1,6342                                     | 398,59                                          | 3,8556                                 | 1,0338                                           |
| 20750                                 | 6405,3                                     | 7,5955                             | 1,6210                                     | 398,64                                          | 3,8250                                 | 1,0422                                           |
| 20800                                 | 6406,9                                     | 7,5343                             | 1,6080                                     | 398,69                                          | 3,7946                                 | 1,0507                                           |
| 20850                                 | 6408,5                                     | 7,4735                             | 1,5950                                     | 398,73                                          | 3,7645                                 | 1,0592                                           |
| 20900                                 | 6410,0                                     | 7,4132                             | 1,5822                                     | 398,78                                          | 3,7346                                 | 1,0678                                           |
| 20950                                 | 6411,6                                     | 7,3534                             | 1,5695                                     | 398,82                                          | 3,7050                                 | 1,0765                                           |
| 21000                                 | 6413,2                                     | 7,2941—1                           | 1,5568+24                                  | 398,87                                          | 3,6756+8                               | 1,0852—6                                         |
| 21050                                 | 6414,8                                     | 7,2353                             | 1,5443                                     | 398,91                                          | 3,6464                                 | 1,0940                                           |
| 21100                                 | 6416,3                                     | 7,1770                             | 1,5319                                     | 398,96                                          | 3,6175                                 | 1,1029                                           |
| 21150                                 | 6417,9                                     | 7,1192                             | 1,5196                                     | 399,01                                          | 3,5888                                 | 1,1118                                           |
| 21200                                 | 6419,5                                     | 7,0619                             | 1,5074                                     | 399,05                                          | 3,5604                                 | 1,1208                                           |
| 21250                                 | 6421,1                                     | 7,0050                             | 1,4952                                     | 399,10                                          | 3,5322                                 | 1,1299                                           |
| 21300                                 | 6422,6                                     | 6,9486                             | 1,4832                                     | 399,14                                          | 3,5042                                 | 1,1390                                           |
| 21350                                 | 6424,2                                     | 6,8927                             | 1,4713                                     | 399,19                                          | 3,4765                                 | 1,1483                                           |
| 21400                                 | 6425,8                                     | 6,8372                             | 1,4595                                     | 399,24                                          | 3,4489                                 | 1,1576                                           |
| 21450                                 | 6427,4                                     | 6,7822                             | 1,4478                                     | 399,28                                          | 3,4216                                 | 1,1669                                           |
| 21500                                 | 6428,9                                     | 6,7277—1                           | 1,4362+24                                  | 399,33                                          | 3,3945+8                               | 1,1764—6                                         |
| 21550                                 | 6430,5                                     | 6,6735                             | 1,4245                                     | 399,37                                          | 3,3677                                 | 1,1859                                           |
| 21600                                 | 6432,1                                     | 6,6199                             | 1,4132                                     | 399,42                                          | 3,3410                                 | 1,1953                                           |
| 21650                                 | 6433,7                                     | 6,5667                             | 1,4019                                     | 399,46                                          | 3,3146                                 | 1,2052                                           |
| 21700                                 | 6435,2                                     | 6,5139                             | 1,3906                                     | 399,51                                          | 3,2884                                 | 1,2149                                           |
| 21750                                 | 6436,8                                     | 6,4616                             | 1,3795                                     | 399,56                                          | 3,2624                                 | 1,2247                                           |
| 21800                                 | 6438,4                                     | 6,4097                             | 1,3684                                     | 399,60                                          | 3,2366                                 | 1,2346                                           |
| 21850                                 | 6440,0                                     | 6,3582                             | 1,3574                                     | 399,65                                          | 3,2111                                 | 1,2446                                           |
| 21900                                 | 6441,5                                     | 6,3071                             | 1,3466                                     | 399,69                                          | 3,1857                                 | 1,2546                                           |
| 21950                                 | 6443,1                                     | 6,2565                             | 1,3358                                     | 399,74                                          | 3,1605                                 | 1,2648                                           |

От 22000 до 23950 м

| Геометрическая высота<br>h, м | Величины в функции геометрической высоты |                                    |                                  |                                         |                                 |                                                |
|-------------------------------|------------------------------------------|------------------------------------|----------------------------------|-----------------------------------------|---------------------------------|------------------------------------------------|
|                               | масштаб<br>высоты по<br>давлению<br>H, м | удельный<br>вес<br>$\gamma$ , Н/м³ | концентрация<br>частиц<br>n, м⁻³ | средняя<br>скорость<br>частиц<br>v, м/с | частота<br>соударений<br>w, с⁻¹ | средняя длина<br>свободного<br>пробега<br>l, м |
| 22000                         | 6442,3                                   | 6,2827-1                           | 1,3413+24                        | 399,71                                  | 3,1735+8                        | 1,2595-6                                       |
| 22050                         | 6443,9                                   | 6,2326                             | 1,3307                           | 399,76                                  | 3,1486                          | 1,2696                                         |
| 22100                         | 6445,4                                   | 6,1829                             | 1,3201                           | 399,81                                  | 3,1240                          | 1,2798                                         |
| 22150                         | 6447,0                                   | 6,1337                             | 1,3096                           | 399,85                                  | 3,0995                          | 1,2901                                         |
| 22200                         | 6448,5                                   | 6,0848                             | 1,2992                           | 399,90                                  | 3,0752                          | 1,3004                                         |
| 22250                         | 6450,1                                   | 6,0363                             | 1,2889                           | 399,94                                  | 3,0511                          | 1,3108                                         |
| 22300                         | 6451,7                                   | 5,9883                             | 1,2786                           | 399,99                                  | 3,0272                          | 1,3213                                         |
| 22350                         | 6453,3                                   | 5,9406                             | 1,2685                           | 400,03                                  | 3,0035                          | 1,3319                                         |
| 22400                         | 6454,8                                   | 5,8933                             | 1,2584                           | 400,08                                  | 2,9800                          | 1,3426                                         |
| 22450                         | 6456,4                                   | 5,8465                             | 1,2484                           | 400,12                                  | 2,9566                          | 1,3533                                         |
| 22500                         | 6457,9                                   | 5,8000-1                           | 1,2385+24                        | 400,17                                  | 2,9335+8                        | 1,3641-6                                       |
| 22550                         | 6459,5                                   | 5,7538                             | 1,2287                           | 400,21                                  | 2,9105                          | 1,3751                                         |
| 22600                         | 6461,1                                   | 5,7081                             | 1,2189                           | 400,26                                  | 2,8878                          | 1,3860                                         |
| 22650                         | 6462,6                                   | 5,6627                             | 1,2092                           | 400,30                                  | 2,8652                          | 1,3971                                         |
| 22700                         | 6464,2                                   | 5,6177                             | 1,1996                           | 400,35                                  | 2,8428                          | 1,4083                                         |
| 22750                         | 6465,8                                   | 5,5731                             | 1,1901                           | 400,40                                  | 2,8206                          | 1,4196                                         |
| 22800                         | 6467,3                                   | 5,5288                             | 1,1807                           | 400,44                                  | 2,7985                          | 1,4309                                         |
| 22850                         | 6468,9                                   | 5,4849                             | 1,1713                           | 400,49                                  | 2,7767                          | 1,4423                                         |
| 22900                         | 6470,5                                   | 5,4414                             | 1,1621                           | 400,53                                  | 2,7550                          | 1,4538                                         |
| 22950                         | 6472,0                                   | 5,3982                             | 1,1529                           | 400,58                                  | 2,7335                          | 1,4655                                         |
| 23000                         | 6473,6                                   | 5,3554-1                           | 1,1437+24                        | 400,62                                  | 2,7121+8                        | 1,4772-6                                       |
| 23050                         | 6475,2                                   | 5,3129                             | 1,1347                           | 400,67                                  | 2,6909                          | 1,4889                                         |
| 23100                         | 6476,7                                   | 5,2708                             | 1,1257                           | 400,71                                  | 2,6700                          | 1,5008                                         |
| 23150                         | 6478,3                                   | 5,2290                             | 1,1168                           | 400,76                                  | 2,6491                          | 1,5128                                         |
| 23200                         | 6479,9                                   | 5,1875                             | 1,1079                           | 400,80                                  | 2,6285                          | 1,5249                                         |
| 23250                         | 6481,4                                   | 5,1464                             | 1,0992                           | 400,85                                  | 2,6080                          | 1,5370                                         |
| 23300                         | 6483,0                                   | 5,1056                             | 1,0905                           | 400,89                                  | 2,5876                          | 1,5493                                         |
| 23350                         | 6484,6                                   | 5,0652                             | 1,0819                           | 400,94                                  | 2,5675                          | 1,5616                                         |
| 23400                         | 6486,1                                   | 5,0251                             | 1,0733                           | 400,98                                  | 2,5475                          | 1,5741                                         |
| 23450                         | 6487,7                                   | 4,9853                             | 1,0648                           | 401,03                                  | 2,5276                          | 1,5866                                         |
| 23500                         | 6489,2                                   | 4,9458-1                           | 1,0564+24                        | 401,07                                  | 2,5079+8                        | 1,5992-6                                       |
| 23550                         | 6490,8                                   | 4,9067                             | 1,0481                           | 401,12                                  | 2,4884                          | 1,6120                                         |
| 23600                         | 6492,4                                   | 4,8679                             | 1,0398                           | 401,16                                  | 2,4690                          | 1,6248                                         |
| 23650                         | 6493,9                                   | 4,8294                             | 1,0316                           | 401,21                                  | 2,4498                          | 1,6377                                         |
| 23700                         | 6495,5                                   | 4,7912                             | 1,0235                           | 401,26                                  | 2,4308                          | 1,6507                                         |
| 23750                         | 6497,1                                   | 4,7533                             | 1,0154                           | 401,30                                  | 2,4118                          | 1,6639                                         |
| 23800                         | 6498,6                                   | 4,7157                             | 1,0074                           | 401,35                                  | 2,3931                          | 1,6771                                         |
| 23850                         | 6500,2                                   | 4,6784                             | 9,9943+23                        | 401,39                                  | 2,3745                          | 1,6904                                         |
| 23900                         | 6501,8                                   | 4,6415                             | 9,9154                           | 401,44                                  | 2,3560                          | 1,7039                                         |
| 23950                         | 6503,3                                   | 4,6048                             | 9,8373                           | 401,48                                  | 2,3377                          | 1,7174                                         |

| Геопотенциальная<br>высота<br>$H, м$ | Величины в функции геопотенциальной высоты   |                                    |                                       |                                                 |                                           |                                                  |
|--------------------------------------|----------------------------------------------|------------------------------------|---------------------------------------|-------------------------------------------------|-------------------------------------------|--------------------------------------------------|
|                                      | масштаб<br>высоты по<br>давлению<br>$H_p, м$ | удельный<br>вес<br>$\gamma, Н/м^3$ | концентрация<br>частиц<br>$n, м^{-3}$ | средняя<br>скорость<br>частиц<br>$\bar{v}, м/с$ | частота<br>соударений<br>$\omega, с^{-1}$ | средняя длина<br>свободного<br>пробега<br>$l, м$ |
| 22000                                | 6444,7                                       | 6,2063-1                           | 1,3251+24                             | 399,78                                          | 3,1356+8                                  | 1,2750-6                                         |
| 22050                                | 6446,3                                       | 6,1565                             | 1,3145                                | 399,83                                          | 3,1108                                    | 1,2853                                           |
| 22100                                | 6447,8                                       | 6,1071                             | 1,3039                                | 399,88                                          | 3,0863                                    | 1,2957                                           |
| 22150                                | 6449,4                                       | 6,0581                             | 1,2935                                | 399,92                                          | 3,0619                                    | 1,3061                                           |
| 22200                                | 6451,0                                       | 6,0096                             | 1,2832                                | 399,97                                          | 3,0378                                    | 1,3167                                           |
| 22250                                | 6452,6                                       | 5,9614                             | 1,2729                                | 400,01                                          | 3,0138                                    | 1,3273                                           |
| 22300                                | 6454,1                                       | 5,9136                             | 1,2627                                | 400,06                                          | 2,9900                                    | 1,3380                                           |
| 22350                                | 6455,7                                       | 5,8662                             | 1,2526                                | 400,10                                          | 2,9665                                    | 1,3488                                           |
| 22400                                | 6457,3                                       | 5,8192                             | 1,2426                                | 400,15                                          | 2,9431                                    | 1,3596                                           |
| 22450                                | 6458,9                                       | 5,7726                             | 1,2327                                | 400,20                                          | 2,9199                                    | 1,3706                                           |
| 22500                                | 6460,4                                       | 5,7264-1                           | 1,2228+24                             | 400,24                                          | 2,8969+8                                  | 1,3816-6                                         |
| 22550                                | 6462,0                                       | 5,6806                             | 1,2130                                | 400,29                                          | 2,8741                                    | 1,3928                                           |
| 22600                                | 6463,6                                       | 5,6351                             | 1,2034                                | 400,33                                          | 2,8514                                    | 1,4040                                           |
| 22650                                | 6465,2                                       | 5,5900                             | 1,1937                                | 400,38                                          | 2,8290                                    | 1,4153                                           |
| 22700                                | 6466,8                                       | 5,5453                             | 1,1842                                | 400,42                                          | 2,8067                                    | 1,4267                                           |
| 22750                                | 6468,3                                       | 5,5010                             | 1,1748                                | 400,47                                          | 2,7846                                    | 1,4381                                           |
| 22800                                | 6469,9                                       | 5,4570                             | 1,1654                                | 400,52                                          | 2,7627                                    | 1,4497                                           |
| 22850                                | 6471,5                                       | 5,4133                             | 1,1561                                | 400,56                                          | 2,7410                                    | 1,4614                                           |
| 22900                                | 6473,1                                       | 5,3701                             | 1,1469                                | 400,61                                          | 2,7194                                    | 1,4731                                           |
| 22950                                | 6474,6                                       | 5,3272                             | 1,1377                                | 400,65                                          | 2,6981                                    | 1,4850                                           |
| 23000                                | 6476,2                                       | 5,2846-1                           | 1,1286+24                             | 400,70                                          | 2,6769+8                                  | 1,4969-6                                         |
| 23050                                | 6477,8                                       | 5,2424                             | 1,1196                                | 400,74                                          | 2,6558                                    | 1,5089                                           |
| 23100                                | 6479,4                                       | 5,2005                             | 1,1107                                | 400,79                                          | 2,6349                                    | 1,5210                                           |
| 23150                                | 6480,9                                       | 5,1590                             | 1,1019                                | 400,83                                          | 2,6143                                    | 1,5333                                           |
| 23200                                | 6482,5                                       | 5,1178                             | 1,0931                                | 400,88                                          | 2,5937                                    | 1,5456                                           |
| 23250                                | 6484,1                                       | 5,0770                             | 1,0844                                | 400,93                                          | 2,5734                                    | 1,5580                                           |
| 23300                                | 6485,7                                       | 5,0365                             | 1,0758                                | 400,97                                          | 2,5532                                    | 1,5705                                           |
| 23350                                | 6487,2                                       | 4,9963                             | 1,0672                                | 401,02                                          | 2,5331                                    | 1,5831                                           |
| 23400                                | 6488,8                                       | 4,9565                             | 1,0587                                | 401,06                                          | 2,5132                                    | 1,5958                                           |
| 23450                                | 6490,4                                       | 4,9170                             | 1,0503                                | 401,11                                          | 2,4935                                    | 1,6086                                           |
| 23500                                | 6492,0                                       | 4,8778-1                           | 1,0419+24                             | 401,15                                          | 2,4740+8                                  | 1,6215-6                                         |
| 23550                                | 6493,6                                       | 4,8389                             | 1,0336                                | 401,20                                          | 2,4546                                    | 1,6345                                           |
| 23600                                | 6495,1                                       | 4,8003                             | 1,0254                                | 401,24                                          | 2,4353                                    | 1,6476                                           |
| 23650                                | 6496,7                                       | 4,7621                             | 1,0173                                | 401,29                                          | 2,4162                                    | 1,6608                                           |
| 23700                                | 6498,3                                       | 4,7242                             | 1,0092                                | 401,34                                          | 2,3973                                    | 1,6741                                           |
| 23750                                | 6499,9                                       | 4,6866                             | 1,0012                                | 401,38                                          | 2,3785                                    | 1,6875                                           |
| 23800                                | 6501,4                                       | 4,6493                             | 9,9320+23                             | 401,43                                          | 2,3599                                    | 1,7010                                           |
| 23850                                | 6503,0                                       | 4,6123                             | 9,8531                                | 401,47                                          | 2,3414                                    | 1,7146                                           |
| 23900                                | 6504,6                                       | 4,5756                             | 9,7749                                | 401,52                                          | 2,3231                                    | 1,7284                                           |
| 23950                                | 6506,2                                       | 4,5392                             | 9,6973                                | 401,56                                          | 2,3049                                    | 1,7422                                           |



От 24000 до 25950 м

| Геометри-<br>ческая<br>высота<br>h, м | Величины в функции геометрической высоты       |                                                 |                                                 |                                                  |                                                     |                                                         |
|---------------------------------------|------------------------------------------------|-------------------------------------------------|-------------------------------------------------|--------------------------------------------------|-----------------------------------------------------|---------------------------------------------------------|
|                                       | массово-<br>высота по<br>давлению<br>$H_p$ , м | указанный<br>вес<br>$\gamma$ , Н/м <sup>3</sup> | концентрация<br>частиц<br>$n$ , м <sup>-3</sup> | средняя<br>скорость<br>частиц<br>$\bar{v}$ , м/с | частота<br>соударений<br>$\alpha$ , с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>$\bar{l}$ , м |
| 24000                                 | 6504,9                                         | 4,5685-1                                        | 9,7598+23                                       | 401,53                                           | 2,3195+8                                            | 1,7311-6                                                |
| 24050                                 | 6506,5                                         | 4,5324                                          | 9,6829                                          | 401,57                                           | 2,3015                                              | 1,7448                                                  |
| 24100                                 | 6508,0                                         | 4,4966                                          | 9,6066                                          | 401,62                                           | 2,2837                                              | 1,7587                                                  |
| 24150                                 | 6509,6                                         | 4,4611                                          | 9,5309                                          | 401,66                                           | 2,2659                                              | 1,7726                                                  |
| 24200                                 | 6511,2                                         | 4,4259                                          | 9,4559                                          | 401,71                                           | 2,2483                                              | 1,7867                                                  |
| 24250                                 | 6512,7                                         | 4,3910                                          | 9,3814                                          | 401,75                                           | 2,2309                                              | 1,8009                                                  |
| 24300                                 | 6514,3                                         | 4,3564                                          | 9,3076                                          | 401,80                                           | 2,2136                                              | 1,8151                                                  |
| 24350                                 | 6515,9                                         | 4,3221                                          | 9,2344                                          | 401,84                                           | 2,1964                                              | 1,8295                                                  |
| 24400                                 | 6517,4                                         | 4,2880                                          | 9,1617                                          | 401,89                                           | 2,1794                                              | 1,8440                                                  |
| 24450                                 | 6519,0                                         | 4,2542                                          | 9,0897                                          | 401,93                                           | 2,1625                                              | 1,8587                                                  |
| 24500                                 | 6520,6                                         | 4,2207-1                                        | 9,0182+23                                       | 401,98                                           | 2,1457+8                                            | 1,8734-6                                                |
| 24550                                 | 6522,1                                         | 4,1874                                          | 8,9473                                          | 402,02                                           | 2,1291                                              | 1,8882                                                  |
| 24600                                 | 6523,7                                         | 4,1545                                          | 8,8770                                          | 402,07                                           | 2,1126                                              | 1,9032                                                  |
| 24650                                 | 6525,3                                         | 4,1218                                          | 8,8073                                          | 402,11                                           | 2,0962                                              | 1,9183                                                  |
| 24700                                 | 6526,8                                         | 4,0893                                          | 8,7381                                          | 402,16                                           | 2,0800                                              | 1,9334                                                  |
| 24750                                 | 6528,4                                         | 4,0571                                          | 8,6695                                          | 402,20                                           | 2,0639                                              | 1,9488                                                  |
| 24800                                 | 6530,0                                         | 4,0252                                          | 8,6014                                          | 402,25                                           | 2,0479                                              | 1,9642                                                  |
| 24850                                 | 6531,5                                         | 3,9936                                          | 8,5339                                          | 402,29                                           | 2,0321                                              | 1,9797                                                  |
| 24900                                 | 6533,1                                         | 3,9622                                          | 8,4669                                          | 402,34                                           | 2,0164                                              | 1,9954                                                  |
| 24950                                 | 6534,6                                         | 3,9310                                          | 8,4005                                          | 402,38                                           | 2,0008                                              | 2,0111                                                  |
| 25000                                 | 6536,2                                         | 3,9001-1                                        | 8,3346+23                                       | 402,43                                           | 1,9853+8                                            | 2,0270-6                                                |
| 25050                                 | 6537,8                                         | 3,8695                                          | 8,2693                                          | 402,47                                           | 1,9699                                              | 2,0431                                                  |
| 25100                                 | 6539,3                                         | 3,8391                                          | 8,2044                                          | 402,52                                           | 1,9547                                              | 2,0592                                                  |
| 25150                                 | 6540,9                                         | 3,8089                                          | 8,1401                                          | 402,56                                           | 1,9396                                              | 2,0755                                                  |
| 25200                                 | 6542,5                                         | 3,7790                                          | 8,0763                                          | 402,61                                           | 1,9246                                              | 2,0919                                                  |
| 25250                                 | 6544,0                                         | 3,7494                                          | 8,0131                                          | 402,65                                           | 1,9098                                              | 2,1084                                                  |
| 25300                                 | 6545,6                                         | 3,7199                                          | 7,9503                                          | 402,70                                           | 1,8950                                              | 2,1250                                                  |
| 25350                                 | 6547,2                                         | 3,6908                                          | 7,8880                                          | 402,74                                           | 1,8804                                              | 2,1418                                                  |
| 25400                                 | 6548,7                                         | 3,6618                                          | 7,8263                                          | 402,79                                           | 1,8659                                              | 2,1587                                                  |
| 25450                                 | 6550,3                                         | 3,6331                                          | 7,7650                                          | 402,83                                           | 1,8515                                              | 2,1757                                                  |
| 25500                                 | 6551,9                                         | 3,6046-1                                        | 7,7043+23                                       | 402,88                                           | 1,8372+8                                            | 2,1929-6                                                |
| 25550                                 | 6553,4                                         | 3,5764                                          | 7,6440                                          | 402,92                                           | 1,8230                                              | 2,2102                                                  |
| 25600                                 | 6555,0                                         | 3,5483                                          | 7,5842                                          | 402,97                                           | 1,8090                                              | 2,2276                                                  |
| 25650                                 | 6556,6                                         | 3,5205                                          | 7,5249                                          | 403,01                                           | 1,7950                                              | 2,2452                                                  |
| 25700                                 | 6558,1                                         | 3,4929                                          | 7,4661                                          | 403,06                                           | 1,7812                                              | 2,2629                                                  |
| 25750                                 | 6559,7                                         | 3,4656                                          | 7,4077                                          | 403,10                                           | 1,7675                                              | 2,2807                                                  |
| 25800                                 | 6561,3                                         | 3,4385                                          | 7,3498                                          | 403,15                                           | 1,7539                                              | 2,2986                                                  |
| 25850                                 | 6562,8                                         | 3,4115                                          | 7,2924                                          | 403,19                                           | 1,7404                                              | 2,3167                                                  |
| 25900                                 | 6564,4                                         | 3,3848                                          | 7,2355                                          | 403,24                                           | 1,7270                                              | 2,3350                                                  |
| 25950                                 | 6566,0                                         | 3,3581                                          | 7,1790                                          | 403,28                                           | 1,7137                                              | 2,3533                                                  |

| Геопотенциальная<br>высота<br>$H$ , м | Величины в функции геопотенциальной высоты |                                                |                                      |                                            |                                                     |                                                   |
|---------------------------------------|--------------------------------------------|------------------------------------------------|--------------------------------------|--------------------------------------------|-----------------------------------------------------|---------------------------------------------------|
|                                       | масштаб<br>высоты по<br>длини<br>$H_p$ , м | удельный<br>вес<br>$\gamma$ , Н/м <sup>3</sup> | концентрация<br>частиц<br>л. м<br>-3 | средняя<br>скорость<br>частиц<br>$v$ , м/с | частота<br>соударений<br>$\omega$ , с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>$l$ , м |
| 24000                                 | 6507,7                                     | 4,5031-1                                       | 9,6203+23                            | 401,61                                     | 2,2869+8                                            | 1,7561-6                                          |
| 24050                                 | 6509,3                                     | 4,4673                                         | 9,5440                               | 401,65                                     | 2,2690                                              | 1,7702                                            |
| 24100                                 | 6510,9                                     | 4,4317                                         | 9,4683                               | 401,70                                     | 2,2512                                              | 1,7843                                            |
| 24150                                 | 6512,5                                     | 4,3965                                         | 9,3932                               | 401,75                                     | 2,2336                                              | 1,7986                                            |
| 24200                                 | 6514,1                                     | 4,3616                                         | 9,3187                               | 401,79                                     | 2,2162                                              | 1,8130                                            |
| 24250                                 | 6515,6                                     | 4,3269                                         | 9,2448                               | 401,81                                     | 2,1989                                              | 1,8275                                            |
| 24300                                 | 6517,2                                     | 4,2926                                         | 9,1715                               | 401,88                                     | 2,1817                                              | 1,8421                                            |
| 24350                                 | 6518,8                                     | 4,2585                                         | 9,0988                               | 401,93                                     | 2,1646                                              | 1,8568                                            |
| 24400                                 | 6520,4                                     | 4,2247                                         | 9,0267                               | 401,97                                     | 2,1477                                              | 1,8716                                            |
| 24450                                 | 6521,9                                     | 4,1912                                         | 8,9552                               | 402,02                                     | 2,1309                                              | 1,8866                                            |
| 24500                                 | 6523,5                                     | 4,1579-1                                       | 8,8843+23                            | 402,06                                     | 2,1143+8                                            | 1,9016-6                                          |
| 24550                                 | 6525,1                                     | 4,1249                                         | 8,8140                               | 402,11                                     | 2,0978                                              | 1,9168                                            |
| 24600                                 | 6526,7                                     | 4,0922                                         | 8,7442                               | 402,15                                     | 2,0814                                              | 1,9321                                            |
| 24650                                 | 6528,3                                     | 4,0597                                         | 8,6750                               | 402,20                                     | 2,0652                                              | 1,9475                                            |
| 24700                                 | 6529,8                                     | 4,0276                                         | 8,6064                               | 402,25                                     | 2,0491                                              | 1,9630                                            |
| 24750                                 | 6531,4                                     | 3,9956                                         | 8,5383                               | 402,29                                     | 2,0331                                              | 1,9787                                            |
| 24800                                 | 6533,0                                     | 3,9640                                         | 8,4708                               | 402,34                                     | 2,0173                                              | 1,9945                                            |
| 24850                                 | 6534,6                                     | 3,9326                                         | 8,4038                               | 402,38                                     | 2,0015                                              | 2,0104                                            |
| 24900                                 | 6536,2                                     | 3,9014                                         | 8,3373                               | 402,43                                     | 1,9859                                              | 2,0264                                            |
| 24950                                 | 6537,7                                     | 3,8705                                         | 8,2714                               | 402,47                                     | 1,9705                                              | 2,0425                                            |
| 25000                                 | 6539,3                                     | 3,8399-1                                       | 8,2061+23                            | 402,52                                     | 1,9551+8                                            | 2,0588-6                                          |
| 25050                                 | 6540,9                                     | 3,8095                                         | 8,1413                               | 402,56                                     | 1,9399                                              | 2,0752                                            |
| 25100                                 | 6542,5                                     | 3,7793                                         | 8,0770                               | 402,61                                     | 1,9248                                              | 2,0917                                            |
| 25150                                 | 6544,0                                     | 3,7494                                         | 8,0132                               | 402,65                                     | 1,9098                                              | 2,1084                                            |
| 25200                                 | 6545,6                                     | 3,7198                                         | 7,9499                               | 402,70                                     | 1,8949                                              | 2,1251                                            |
| 25250                                 | 6547,2                                     | 3,6904                                         | 7,8872                               | 402,74                                     | 1,8802                                              | 2,1420                                            |
| 25300                                 | 6548,8                                     | 3,6612                                         | 7,8249                               | 402,79                                     | 1,8656                                              | 2,1591                                            |
| 25350                                 | 6550,4                                     | 3,6322                                         | 7,7632                               | 402,84                                     | 1,8511                                              | 2,1762                                            |
| 25400                                 | 6551,9                                     | 3,6035                                         | 7,7020                               | 402,88                                     | 1,8367                                              | 2,1935                                            |
| 25450                                 | 6553,5                                     | 3,5751                                         | 7,6412                               | 402,93                                     | 1,8224                                              | 2,2110                                            |
| 25500                                 | 6555,1                                     | 3,5468-1                                       | 7,5810+23                            | 402,97                                     | 1,8082+8                                            | 2,2286-6                                          |
| 25550                                 | 6556,7                                     | 3,5188                                         | 7,5212                               | 403,02                                     | 1,7942                                              | 2,2463                                            |
| 25600                                 | 6558,3                                     | 3,4910                                         | 7,4620                               | 403,06                                     | 1,7802                                              | 2,2641                                            |
| 25650                                 | 6559,8                                     | 3,4635                                         | 7,4032                               | 403,11                                     | 1,7664                                              | 2,2821                                            |
| 25700                                 | 6561,4                                     | 3,4361                                         | 7,3449                               | 403,15                                     | 1,7527                                              | 2,3002                                            |
| 25750                                 | 6563,0                                     | 3,4090                                         | 7,2870                               | 403,20                                     | 1,7391                                              | 2,3185                                            |
| 25800                                 | 6564,6                                     | 3,3821                                         | 7,2296                               | 403,24                                     | 1,7256                                              | 2,3369                                            |
| 25850                                 | 6566,1                                     | 3,3554                                         | 7,1727                               | 403,29                                     | 1,7122                                              | 2,3554                                            |
| 25900                                 | 6567,7                                     | 3,3290                                         | 7,1163                               | 403,33                                     | 1,6989                                              | 2,3741                                            |
| 25950                                 | 6569,3                                     | 3,3027                                         | 7,0603                               | 403,38                                     | 1,6857                                              | 2,3929                                            |

От 26000 до 27950 м

| Геометри-<br>ческая<br>высота<br>h, м | Величины в функции геометрической высоты             |                            |                                              |                                         |                                             |                                                |
|---------------------------------------|------------------------------------------------------|----------------------------|----------------------------------------------|-----------------------------------------|---------------------------------------------|------------------------------------------------|
|                                       | масштаб<br>высоты по<br>длинию<br>H <sub>p</sub> , м | удельный<br>вес<br>γ, Н/м³ | концентрация<br>частиц<br>л, м <sup>-3</sup> | средняя<br>скорость<br>частец<br>σ, м/с | частота<br>соударений<br>ω, с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>l, м |
| 26000                                 | 6567,5                                               | 3,3321-1                   | 7,1229+23                                    | 403,33                                  | 1,7005+8                                    | 2,3719-6                                       |
| 26050                                 | 6569,1                                               | 3,3060                     | 7,0674                                       | 403,37                                  | 1,6874                                      | 2,3905                                         |
| 26100                                 | 6570,7                                               | 3,2802                     | 7,0122                                       | 403,42                                  | 1,6744                                      | 2,4093                                         |
| 26150                                 | 6572,2                                               | 3,2546                     | 6,9575                                       | 403,46                                  | 1,6615                                      | 2,4283                                         |
| 26200                                 | 6573,8                                               | 3,2291                     | 6,9032                                       | 403,51                                  | 1,6488                                      | 2,4474                                         |
| 26250                                 | 6575,4                                               | 3,2039                     | 6,8494                                       | 403,55                                  | 1,6361                                      | 2,4666                                         |
| 26300                                 | 6576,9                                               | 3,1789                     | 6,7960                                       | 403,60                                  | 1,6235                                      | 2,4860                                         |
| 26350                                 | 6578,5                                               | 3,1540                     | 6,7431                                       | 403,64                                  | 1,6110                                      | 2,5055                                         |
| 26400                                 | 6580,1                                               | 3,1294                     | 6,6905                                       | 403,69                                  | 1,5987                                      | 2,5252                                         |
| 26450                                 | 6581,6                                               | 3,1050                     | 6,6384                                       | 403,73                                  | 1,5864                                      | 2,5450                                         |
| 26500                                 | 6583,2                                               | 3,0808-1                   | 6,5867+23                                    | 403,78                                  | 1,5742+8                                    | 2,5650-6                                       |
| 26550                                 | 6584,8                                               | 3,0567                     | 6,5354                                       | 403,82                                  | 1,5621                                      | 2,5851                                         |
| 26600                                 | 6 88,3                                               | 3,0329                     | 6,4846                                       | 403,87                                  | 1,5501                                      | 2,6053                                         |
| 26650                                 | 6587,9                                               | 3,0092                     | 6,4341                                       | 403,91                                  | 1,5382                                      | 2,6258                                         |
| 26700                                 | 6589,5                                               | 2,9858                     | 6,3840                                       | 403,96                                  | 1,5264                                      | 2,6464                                         |
| 26750                                 | 6591,0                                               | 2,9625                     | 6,3344                                       | 404,00                                  | 1,5147                                      | 2,6671                                         |
| 26800                                 | 6592,6                                               | 2,9394                     | 6,2851                                       | 404,05                                  | 1,5031                                      | 2,6880                                         |
| 26850                                 | 6594,2                                               | 2,9165                     | 6,2362                                       | 404,09                                  | 1,4916                                      | 2,7091                                         |
| 26900                                 | 6595,7                                               | 2,8938                     | 6,1878                                       | 404,14                                  | 1,4802                                      | 2,7303                                         |
| 26950                                 | 6597,3                                               | 2,8713                     | 6,1397                                       | 404,18                                  | 1,4688                                      | 2,7517                                         |
| 27000                                 | 6598,9                                               | 2,8489-1                   | 6,0920+23                                    | 404,23                                  | 1,4576+8                                    | 2,7733-6                                       |
| 27050                                 | 6600,4                                               | 2,8267                     | 6,0447                                       | 404,27                                  | 1,4464                                      | 2,7950                                         |
| 27100                                 | 6602,0                                               | 2,8048                     | 5,9977                                       | 404,32                                  | 1,4353                                      | 2,8168                                         |
| 27150                                 | 6603,6                                               | 2,7829                     | 5,9511                                       | 404,36                                  | 1,4244                                      | 2,8389                                         |
| 27200                                 | 6605,1                                               | 2,7613                     | 5,9050                                       | 404,41                                  | 1,4135                                      | 2,8611                                         |
| 27250                                 | 6606,7                                               | 2,7398                     | 5,8591                                       | 404,45                                  | 1,4026                                      | 2,8835                                         |
| 27300                                 | 6608,3                                               | 2,7185                     | 5,8137                                       | 404,50                                  | 1,3919                                      | 2,9060                                         |
| 27350                                 | 6609,8                                               | 2,6974                     | 5,7686                                       | 404,54                                  | 1,3813                                      | 2,9287                                         |
| 27400                                 | 6611,4                                               | 2,6764                     | 5,7238                                       | 404,58                                  | 1,3707                                      | 2,9516                                         |
| 27450                                 | 6613,0                                               | 2,6556                     | 5,6795                                       | 404,63                                  | 1,3602                                      | 2,9747                                         |
| 27500                                 | 6614,5                                               | 2,6350-1                   | 5,6354+23                                    | 404,67                                  | 1,3498+8                                    | 2,9979-6                                       |
| 27550                                 | 6616,1                                               | 2,6146                     | 5,5918                                       | 404,72                                  | 1,3395                                      | 3,0213                                         |
| 27600                                 | 6617,7                                               | 2,5943                     | 5,5485                                       | 404,76                                  | 1,3293                                      | 3,0449                                         |
| 27650                                 | 6619,2                                               | 2,5741                     | 5,5055                                       | 404,81                                  | 1,3192                                      | 3,0687                                         |
| 27700                                 | 6620,8                                               | 2,5541                     | 5,4628                                       | 404,85                                  | 1,3091                                      | 3,0926                                         |
| 27750                                 | 6622,4                                               | 2,5343                     | 5,4206                                       | 404,90                                  | 1,2991                                      | 3,1168                                         |
| 27800                                 | 6623,9                                               | 2,5147                     | 5,3786                                       | 404,94                                  | 1,2892                                      | 3,1411                                         |
| 27850                                 | 6625,5                                               | 2,4952                     | 5,3370                                       | 404,99                                  | 1,2793                                      | 3,1656                                         |
| 27900                                 | 6627,1                                               | 2,4758                     | 5,2957                                       | 405,03                                  | 1,2696                                      | 3,1903                                         |
| 27950                                 | 6628,6                                               | 2,4566                     | 5,2547                                       | 405,08                                  | 1,2599                                      | 3,2151                                         |

| Геопотенциальная<br>высота<br>$H$ , м | Величины в функции геопотенциальной высоты    |                                                |                                                    |                                            |                                                     |                                                   |
|---------------------------------------|-----------------------------------------------|------------------------------------------------|----------------------------------------------------|--------------------------------------------|-----------------------------------------------------|---------------------------------------------------|
|                                       | масштаб<br>высоты по<br>давлению<br>$H_p$ , м | удельный<br>вес<br>$\gamma$ , Н/м <sup>3</sup> | концентрация<br>частиц<br>$\rho$ , м <sup>-3</sup> | средняя<br>скорость<br>частиц<br>$u$ , м/с | частота<br>соударений<br>$\omega$ , с <sup>-1</sup> | средняя длина<br>свободного<br>прохода<br>$l$ , м |
| 26000                                 | 6570,9                                        | 3,2767-1                                       | 7,0048+23                                          | 403,42                                     | 1,6727+8                                            | 2,4119-6                                          |
| 26050                                 | 6572,5                                        | 3,2509                                         | 6,9497                                             | 403,47                                     | 1,6597                                              | 2,4310                                            |
| 26100                                 | 6574,0                                        | 3,2253                                         | 6,8950                                             | 403,52                                     | 1,6468                                              | 2,4503                                            |
| 26150                                 | 6575,6                                        | 3,1999                                         | 6,8408                                             | 403,56                                     | 1,6341                                              | 2,4697                                            |
| 26200                                 | 6577,2                                        | 3,1747                                         | 6,7871                                             | 403,61                                     | 1,6214                                              | 2,4892                                            |
| 26250                                 | 6578,8                                        | 3,1497                                         | 6,7337                                             | 403,65                                     | 1,6088                                              | 2,5090                                            |
| 26300                                 | 6580,4                                        | 3,1249                                         | 6,6808                                             | 403,70                                     | 1,5964                                              | 2,5288                                            |
| 26350                                 | 6581,9                                        | 3,1003                                         | 6,6284                                             | 403,74                                     | 1,5840                                              | 2,5488                                            |
| 26400                                 | 6583,5                                        | 3,0759                                         | 6,5763                                             | 403,79                                     | 1,5718                                              | 2,5690                                            |
| 26450                                 | 6585,1                                        | 3,0517                                         | 6,5247                                             | 403,83                                     | 1,5596                                              | 2,5893                                            |
| 26500                                 | 6586,7                                        | 3,0277-1                                       | 6,4735+23                                          | 403,88                                     | 1,5475+8                                            | 2,6098-6                                          |
| 26550                                 | 6588,3                                        | 3,0039                                         | 6,4227                                             | 403,92                                     | 1,5356                                              | 2,6305                                            |
| 26600                                 | 6589,8                                        | 2,9803                                         | 6,3723                                             | 403,97                                     | 1,5237                                              | 2,6513                                            |
| 26650                                 | 6591,4                                        | 2,9569                                         | 6,3223                                             | 404,01                                     | 1,5119                                              | 2,6722                                            |
| 26700                                 | 6593,0                                        | 2,9336                                         | 6,2727                                             | 404,06                                     | 1,5002                                              | 2,6933                                            |
| 26750                                 | 6594,6                                        | 2,9106                                         | 6,2236                                             | 404,10                                     | 1,4886                                              | 2,7146                                            |
| 26800                                 | 6596,2                                        | 2,8877                                         | 6,1748                                             | 404,15                                     | 1,4771                                              | 2,7361                                            |
| 26850                                 | 6597,7                                        | 2,8650                                         | 6,1264                                             | 404,19                                     | 1,4657                                              | 2,7577                                            |
| 26900                                 | 6599,3                                        | 2,8426                                         | 6,0784                                             | 404,24                                     | 1,4544                                              | 2,7795                                            |
| 26950                                 | 6600,9                                        | 2,8202                                         | 6,0308                                             | 404,28                                     | 1,4431                                              | 2,8014                                            |
| 27000                                 | 6602,5                                        | 2,7981-1                                       | 5,9835+23                                          | 404,33                                     | 1,4320+8                                            | 2,8235-6                                          |
| 27050                                 | 6604,1                                        | 2,7762                                         | 5,9367                                             | 404,37                                     | 1,4210                                              | 2,8458                                            |
| 27100                                 | 6605,6                                        | 2,7544                                         | 5,8902                                             | 404,42                                     | 1,4100                                              | 2,8683                                            |
| 27150                                 | 6607,2                                        | 2,7328                                         | 5,8441                                             | 404,47                                     | 1,3991                                              | 2,8909                                            |
| 27200                                 | 6608,8                                        | 2,7114                                         | 5,7984                                             | 404,51                                     | 1,3883                                              | 2,9137                                            |
| 27250                                 | 6610,4                                        | 2,6901                                         | 5,7530                                             | 404,56                                     | 1,3776                                              | 2,9366                                            |
| 27300                                 | 6612,0                                        | 2,6690                                         | 5,7081                                             | 404,60                                     | 1,3670                                              | 2,9598                                            |
| 27350                                 | 6613,5                                        | 2,6481                                         | 5,6634                                             | 404,65                                     | 1,3565                                              | 2,9831                                            |
| 27400                                 | 6615,1                                        | 2,6274                                         | 5,6191                                             | 404,69                                     | 1,3460                                              | 3,0066                                            |
| 27450                                 | 6616,7                                        | 2,6068                                         | 5,5752                                             | 404,74                                     | 1,3356                                              | 3,0303                                            |
| 27500                                 | 6618,3                                        | 2,5864-1                                       | 5,5317+23                                          | 404,78                                     | 1,3253+8                                            | 3,0542-6                                          |
| 27550                                 | 6619,9                                        | 2,5661                                         | 5,4884                                             | 404,83                                     | 1,3151                                              | 3,0782                                            |
| 27600                                 | 6621,5                                        | 2,5461                                         | 5,4456                                             | 404,87                                     | 1,3050                                              | 3,1024                                            |
| 27650                                 | 6623,0                                        | 2,5261                                         | 5,4031                                             | 404,92                                     | 1,2950                                              | 3,1269                                            |
| 27700                                 | 6624,6                                        | 2,5064                                         | 5,3609                                             | 404,96                                     | 1,2850                                              | 3,1515                                            |
| 27750                                 | 6626,2                                        | 2,4868                                         | 5,3190                                             | 405,01                                     | 1,2751                                              | 3,1763                                            |
| 27800                                 | 6627,8                                        | 2,4673                                         | 5,2775                                             | 405,05                                     | 1,2653                                              | 3,2012                                            |
| 27850                                 | 6629,4                                        | 2,4480                                         | 5,2364                                             | 405,10                                     | 1,2556                                              | 3,2264                                            |
| 27900                                 | 6630,9                                        | 2,4289                                         | 5,1955                                             | 405,14                                     | 1,2459                                              | 3,2518                                            |
| 27950                                 | 6632,5                                        | 2,4099                                         | 5,1550                                             | 405,19                                     | 1,2363                                              | 3,2773                                            |

От 28000 до 29950 м

| Геометри-<br>ческая<br>высота<br>h, м | Величины в функции геометрической высоты            |                                           |                                                   |                                                        |                                             |                                                         |
|---------------------------------------|-----------------------------------------------------|-------------------------------------------|---------------------------------------------------|--------------------------------------------------------|---------------------------------------------|---------------------------------------------------------|
|                                       | масштаб<br>высоты по<br>давлению<br>$H_p, \text{м}$ | удельный<br>вес<br>$\gamma, \text{Н/м}^3$ | концентрация<br>частиц<br>$\kappa, \text{м}^{-3}$ | средняя<br>скорость<br>частиц<br>$\bar{v}, \text{м/с}$ | частота<br>соударений<br>$n, \text{с}^{-1}$ | средняя длина<br>свободного<br>пробега<br>$l, \text{м}$ |
| 28000                                 | 6630,2                                              | 2,4376-1                                  | 5,2141+23                                         | 405,12                                                 | 1,2503+8                                    | 3,2402-6                                                |
| 28050                                 | 6631,8                                              | 2,4187                                    | 5,1738                                            | 405,17                                                 | 1,2408                                      | 3,2654                                                  |
| 28100                                 | 6633,4                                              | 2,4000                                    | 5,1338                                            | 405,21                                                 | 1,2313                                      | 3,2909                                                  |
| 28150                                 | 6634,9                                              | 2,3814                                    | 5,0941                                            | 405,26                                                 | 1,2219                                      | 3,3165                                                  |
| 28200                                 | 6636,5                                              | 2,3630                                    | 5,0548                                            | 405,30                                                 | 1,2126                                      | 3,3423                                                  |
| 28250                                 | 6638,1                                              | 2,3447                                    | 5,0157                                            | 405,35                                                 | 1,2034                                      | 3,3683                                                  |
| 28300                                 | 6639,6                                              | 2,3266                                    | 4,9770                                            | 405,39                                                 | 1,1942                                      | 3,3945                                                  |
| 28350                                 | 6641,2                                              | 2,3086                                    | 4,9385                                            | 405,43                                                 | 1,1851                                      | 3,4210                                                  |
| 28400                                 | 6642,8                                              | 2,2907                                    | 4,9005                                            | 405,48                                                 | 1,1761                                      | 3,4476                                                  |
| 28450                                 | 6644,3                                              | 2,2730                                    | 4,8626                                            | 405,52                                                 | 1,1672                                      | 3,4744                                                  |
| 28500                                 | 6645,9                                              | 2,2554-1                                  | 4,8251+23                                         | 405,57                                                 | 1,1583+8                                    | 3,5014-6                                                |
| 28550                                 | 6647,5                                              | 2,2380                                    | 4,7879                                            | 405,61                                                 | 1,1495                                      | 3,5286                                                  |
| 28600                                 | 6649,0                                              | 2,2207                                    | 4,7510                                            | 405,66                                                 | 1,1408                                      | 3,5560                                                  |
| 28650                                 | 6650,6                                              | 2,2035                                    | 4,7144                                            | 405,70                                                 | 1,1321                                      | 3,5837                                                  |
| 28700                                 | 6652,2                                              | 2,1865                                    | 4,6780                                            | 405,75                                                 | 1,1235                                      | 3,6115                                                  |
| 28750                                 | 6653,7                                              | 2,1696                                    | 4,6420                                            | 405,79                                                 | 1,1150                                      | 3,6395                                                  |
| 28800                                 | 6655,3                                              | 2,1529                                    | 4,6062                                            | 405,84                                                 | 1,1065                                      | 3,6678                                                  |
| 28850                                 | 6656,9                                              | 2,1363                                    | 4,5707                                            | 405,88                                                 | 1,0981                                      | 3,6963                                                  |
| 28900                                 | 6658,4                                              | 2,1198                                    | 4,5355                                            | 405,93                                                 | 1,0898                                      | 3,7249                                                  |
| 28950                                 | 6660,0                                              | 2,1034                                    | 4,5006                                            | 405,97                                                 | 1,0815                                      | 3,7538                                                  |
| 29000                                 | 6661,6                                              | 2,0872-1                                  | 4,4660+23                                         | 406,01                                                 | 1,0733+8                                    | 3,7830-6                                                |
| 29050                                 | 6663,1                                              | 2,0711                                    | 4,4316                                            | 406,06                                                 | 1,0651                                      | 3,8123                                                  |
| 29100                                 | 6664,7                                              | 2,0552                                    | 4,3975                                            | 406,10                                                 | 1,0571                                      | 3,8418                                                  |
| 29150                                 | 6666,3                                              | 2,0393                                    | 4,3637                                            | 406,15                                                 | 1,0490                                      | 3,8716                                                  |
| 29200                                 | 6667,8                                              | 2,0236                                    | 4,3302                                            | 406,19                                                 | 1,0411                                      | 3,9016                                                  |
| 29250                                 | 6669,4                                              | 2,0080                                    | 4,2969                                            | 406,24                                                 | 1,0332                                      | 3,9318                                                  |
| 29300                                 | 6671,0                                              | 1,9926                                    | 4,2638                                            | 406,28                                                 | 1,0254                                      | 3,9623                                                  |
| 29350                                 | 6672,5                                              | 1,9772                                    | 4,2311                                            | 406,33                                                 | 1,0176                                      | 3,9930                                                  |
| 29400                                 | 6674,1                                              | 1,9620                                    | 4,1986                                            | 406,37                                                 | 1,0099                                      | 4,0239                                                  |
| 29450                                 | 6675,7                                              | 1,9469                                    | 4,1663                                            | 406,42                                                 | 1,0022                                      | 4,0550                                                  |
| 29500                                 | 6677,3                                              | 1,9319-1                                  | 4,1343+23                                         | 406,46                                                 | 9,9466+7                                    | 4,0864-6                                                |
| 29550                                 | 6678,8                                              | 1,9171                                    | 4,1026                                            | 406,51                                                 | 9,8713                                      | 4,1180                                                  |
| 29600                                 | 6680,4                                              | 1,9023                                    | 4,0711                                            | 406,55                                                 | 9,7966                                      | 4,1499                                                  |
| 29650                                 | 6682,0                                              | 1,8877                                    | 4,0399                                            | 406,59                                                 | 9,7225                                      | 4,1820                                                  |
| 29700                                 | 6683,5                                              | 1,8732                                    | 4,0089                                            | 406,64                                                 | 9,6490                                      | 4,2143                                                  |
| 29750                                 | 6685,1                                              | 1,8588                                    | 3,9781                                            | 406,68                                                 | 9,5761                                      | 4,2469                                                  |
| 29800                                 | 6686,7                                              | 1,8445                                    | 3,9476                                            | 406,73                                                 | 9,5037                                      | 4,2797                                                  |
| 29850                                 | 6688,2                                              | 1,8303                                    | 3,9174                                            | 406,77                                                 | 9,4319                                      | 4,3128                                                  |
| 29900                                 | 6689,8                                              | 1,8163                                    | 3,8873                                            | 406,82                                                 | 9,3606                                      | 4,3461                                                  |
| 29950                                 | 6691,4                                              | 1,8023                                    | 3,8576                                            | 406,86                                                 | 9,2899                                      | 4,3796                                                  |

| Геопотенциальная<br>высота<br>$H$ , м | Величины в функции геопотенциальной высоты    |                                                |                                                 |                                            |                                                     |                                                   |
|---------------------------------------|-----------------------------------------------|------------------------------------------------|-------------------------------------------------|--------------------------------------------|-----------------------------------------------------|---------------------------------------------------|
|                                       | масштаб<br>высоты по<br>длинному<br>$H_p$ , м | условный<br>вес<br>$\gamma$ , Н/м <sup>3</sup> | концентрация<br>частиц<br>$n$ , м <sup>-3</sup> | средняя<br>скорость<br>частиц<br>$u$ , м/с | частота<br>соударений<br>$\omega$ , с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>$l$ , м |
| 28000                                 | 6634,1                                        | 2,3911-1                                       | 5,1148+23                                       | 405,23                                     | 1,2268+8                                            | 3,3031-6                                          |
| 28050                                 | 6635,7                                        | 2,3724                                         | 5,0749                                          | 405,28                                     | 1,2174                                              | 3,3290                                            |
| 28100                                 | 6637,3                                        | 2,3539                                         | 5,0354                                          | 405,32                                     | 1,2080                                              | 3,3552                                            |
| 28150                                 | 6638,8                                        | 2,3355                                         | 4,9962                                          | 405,37                                     | 1,1988                                              | 3,3815                                            |
| 28200                                 | 6640,4                                        | 2,3173                                         | 4,9572                                          | 405,41                                     | 1,1896                                              | 3,4081                                            |
| 28250                                 | 6642,0                                        | 2,2992                                         | 4,9186                                          | 405,46                                     | 1,1804                                              | 3,4348                                            |
| 28300                                 | 6643,6                                        | 2,2813                                         | 4,8803                                          | 405,50                                     | 1,1714                                              | 3,4618                                            |
| 28350                                 | 6645,2                                        | 2,2635                                         | 4,8423                                          | 405,55                                     | 1,1624                                              | 3,4889                                            |
| 28400                                 | 6646,8                                        | 2,2458                                         | 4,8047                                          | 405,59                                     | 1,1535                                              | 3,5163                                            |
| 28450                                 | 6648,3                                        | 2,2283                                         | 4,7673                                          | 405,64                                     | 1,1446                                              | 3,5439                                            |
| 28500                                 | 6649,9                                        | 2,2109-1                                       | 4,7302+23                                       | 405,68                                     | 1,1358+8                                            | 3,5717-6                                          |
| 28550                                 | 6651,5                                        | 2,1937                                         | 4,6934                                          | 405,73                                     | 1,1271                                              | 3,5997                                            |
| 28600                                 | 6653,1                                        | 2,1766                                         | 4,6569                                          | 405,77                                     | 1,1185                                              | 3,6279                                            |
| 28650                                 | 6654,7                                        | 2,1597                                         | 4,6207                                          | 405,82                                     | 1,1099                                              | 3,6563                                            |
| 28700                                 | 6656,3                                        | 2,1429                                         | 4,5848                                          | 405,86                                     | 1,1014                                              | 3,6849                                            |
| 28750                                 | 6657,8                                        | 2,1262                                         | 4,5492                                          | 405,91                                     | 1,0930                                              | 3,7138                                            |
| 28800                                 | 6659,4                                        | 2,1096                                         | 4,5138                                          | 405,95                                     | 1,0846                                              | 3,7429                                            |
| 28850                                 | 6661,0                                        | 2,0932                                         | 4,4788                                          | 406,00                                     | 1,0763                                              | 3,7722                                            |
| 28900                                 | 6662,6                                        | 2,0769                                         | 4,4440                                          | 406,04                                     | 1,0681                                              | 3,8017                                            |
| 28950                                 | 6664,2                                        | 2,0608                                         | 4,4095                                          | 406,09                                     | 1,0599                                              | 3,8314                                            |
| 29000                                 | 6665,7                                        | 2,0447-1                                       | 4,3752+23                                       | 406,13                                     | 1,0518+8                                            | 3,8614-6                                          |
| 29050                                 | 6667,3                                        | 2,0288                                         | 4,3413                                          | 406,18                                     | 1,0437                                              | 3,8916                                            |
| 29100                                 | 6668,9                                        | 2,0130                                         | 4,3076                                          | 406,22                                     | 1,0357                                              | 3,9221                                            |
| 29150                                 | 6670,5                                        | 1,9974                                         | 4,2742                                          | 406,27                                     | 1,0278                                              | 3,9527                                            |
| 29200                                 | 6672,1                                        | 1,9819                                         | 4,2410                                          | 406,31                                     | 1,0200                                              | 3,9836                                            |
| 29250                                 | 6673,7                                        | 1,9665                                         | 4,2082                                          | 406,36                                     | 1,0122                                              | 4,0147                                            |
| 29300                                 | 6675,2                                        | 1,9512                                         | 4,1755                                          | 406,40                                     | 1,0044                                              | 4,0461                                            |
| 29350                                 | 6676,8                                        | 1,9361                                         | 4,1432                                          | 406,45                                     | 9,9676+7                                            | 4,0777                                            |
| 29400                                 | 6678,4                                        | 1,9210                                         | 4,1111                                          | 406,49                                     | 9,8914                                              | 4,1095                                            |
| 29450                                 | 6680,0                                        | 1,9061                                         | 4,0792                                          | 406,54                                     | 9,8159                                              | 4,1416                                            |
| 29500                                 | 6681,6                                        | 1,8913-1                                       | 4,0476+23                                       | 406,58                                     | 9,7410+7                                            | 4,1740-6                                          |
| 29550                                 | 6683,1                                        | 1,8766                                         | 4,0163                                          | 406,63                                     | 9,6666                                              | 4,2065                                            |
| 29600                                 | 6684,7                                        | 1,8621                                         | 3,9852                                          | 406,67                                     | 9,5928                                              | 4,2393                                            |
| 29650                                 | 6686,3                                        | 1,8476                                         | 3,9544                                          | 406,72                                     | 9,5196                                              | 4,2724                                            |
| 29700                                 | 6687,9                                        | 1,8333                                         | 3,9238                                          | 406,76                                     | 9,4470                                              | 4,3057                                            |
| 29750                                 | 6689,5                                        | 1,8191                                         | 3,8934                                          | 406,81                                     | 9,3750                                              | 4,3393                                            |
| 29800                                 | 6691,1                                        | 1,8050                                         | 3,8633                                          | 406,85                                     | 9,3035                                              | 4,3731                                            |
| 29850                                 | 6692,6                                        | 1,7910                                         | 3,8334                                          | 406,90                                     | 9,2325                                              | 4,4072                                            |
| 29900                                 | 6694,2                                        | 1,7771                                         | 3,8038                                          | 406,94                                     | 9,1622                                              | 4,4416                                            |
| 29950                                 | 6695,8                                        | 1,7634                                         | 3,7744                                          | 406,99                                     | 9,0924                                              | 4,4762                                            |

От 30000 до 31950 м

| Геометри-<br>ческая<br>высота<br>$H$ , м | Величины в функции геометрической высоты      |                                                |                                                       |                                                  |                                                |                                                   |
|------------------------------------------|-----------------------------------------------|------------------------------------------------|-------------------------------------------------------|--------------------------------------------------|------------------------------------------------|---------------------------------------------------|
|                                          | масштаб<br>высоты по<br>давлению<br>$H_p$ , м | удельный<br>вес<br>$\gamma$ , Н/м <sup>3</sup> | концентрация<br>частиц<br>$\lambda$ , м <sup>-3</sup> | средняя<br>скорость<br>частиц<br>$\bar{w}$ , м/с | частота<br>соударений<br>$n$ , с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>$l$ , м |
| 30000                                    | 6692,9                                        | 1,7885-1                                       | 3,8280+23                                             | 406,91                                           | 9,2197+7                                       | 4,4134-6                                          |
| 30050                                    | 6694,5                                        | 1,7748                                         | 3,7987                                                | 406,95                                           | 9,1501                                         | 4,4475                                            |
| 30100                                    | 6696,1                                        | 1,7611                                         | 3,7696                                                | 406,99                                           | 9,0810                                         | 4,4818                                            |
| 30150                                    | 6697,6                                        | 1,7476                                         | 3,7407                                                | 407,04                                           | 9,0125                                         | 4,5164                                            |
| 30200                                    | 6699,2                                        | 1,7342                                         | 3,7121                                                | 407,08                                           | 8,9445                                         | 4,5512                                            |
| 30250                                    | 6700,8                                        | 1,7209                                         | 3,6837                                                | 407,13                                           | 8,8770                                         | 4,5863                                            |
| 30300                                    | 6702,3                                        | 1,7077                                         | 3,6555                                                | 407,17                                           | 8,8101                                         | 4,6217                                            |
| 30350                                    | 6703,9                                        | 1,6947                                         | 3,6276                                                | 407,22                                           | 8,7437                                         | 4,6573                                            |
| 30400                                    | 6705,5                                        | 1,6817                                         | 3,5998                                                | 407,26                                           | 8,6777                                         | 4,6932                                            |
| 30450                                    | 6707,0                                        | 1,6688                                         | 3,5723                                                | 407,31                                           | 8,6123                                         | 4,7293                                            |
| 30500                                    | 6708,6                                        | 1,6560-1                                       | 3,5450+23                                             | 407,35                                           | 8,5475+7                                       | 4,7657-6                                          |
| 30550                                    | 6710,2                                        | 1,6433                                         | 3,5179                                                | 407,39                                           | 8,4831                                         | 4,8024                                            |
| 30600                                    | 6711,8                                        | 1,6308                                         | 3,4911                                                | 407,44                                           | 8,4192                                         | 4,8394                                            |
| 30650                                    | 6713,3                                        | 1,6183                                         | 3,4644                                                | 407,48                                           | 8,3558                                         | 4,8767                                            |
| 30700                                    | 6714,9                                        | 1,6059                                         | 3,4379                                                | 407,53                                           | 8,2929                                         | 4,9142                                            |
| 30750                                    | 6716,5                                        | 1,5936                                         | 3,4117                                                | 407,57                                           | 8,2305                                         | 4,9520                                            |
| 30800                                    | 6718,0                                        | 1,5814                                         | 3,3857                                                | 407,62                                           | 8,1686                                         | 4,9901                                            |
| 30850                                    | 6719,6                                        | 1,5693                                         | 3,3598                                                | 407,66                                           | 8,1071                                         | 5,0284                                            |
| 30900                                    | 6721,2                                        | 1,5573                                         | 3,3342                                                | 407,71                                           | 8,0461                                         | 5,0671                                            |
| 30950                                    | 6722,7                                        | 1,5454                                         | 3,3088                                                | 407,75                                           | 7,9856                                         | 5,1060                                            |
| 31000                                    | 6724,3                                        | 1,5336-1                                       | 3,2835+23                                             | 407,79                                           | 7,9256+7                                       | 5,1453-6                                          |
| 31050                                    | 6725,9                                        | 1,5219                                         | 3,2585                                                | 407,84                                           | 7,8661                                         | 5,1848                                            |
| 31100                                    | 6727,4                                        | 1,5103                                         | 3,2337                                                | 407,88                                           | 7,8070                                         | 5,2246                                            |
| 31150                                    | 6729,0                                        | 1,4988                                         | 3,2090                                                | 407,93                                           | 7,7483                                         | 5,2647                                            |
| 31200                                    | 6730,6                                        | 1,4873                                         | 3,1846                                                | 407,97                                           | 7,6901                                         | 5,3051                                            |
| 31250                                    | 6732,1                                        | 1,4760                                         | 3,1603                                                | 408,02                                           | 7,6324                                         | 5,3459                                            |
| 31300                                    | 6733,7                                        | 1,4647                                         | 3,1363                                                | 408,06                                           | 7,5751                                         | 5,3869                                            |
| 31350                                    | 6735,3                                        | 1,4535                                         | 3,1124                                                | 408,10                                           | 7,5182                                         | 5,4282                                            |
| 31400                                    | 6736,9                                        | 1,4424                                         | 3,0887                                                | 408,15                                           | 7,4618                                         | 5,4698                                            |
| 31450                                    | 6738,4                                        | 1,4314                                         | 3,0652                                                | 408,19                                           | 7,4059                                         | 5,5118                                            |
| 31500                                    | 6740,0                                        | 1,4205-1                                       | 3,0419+23                                             | 408,24                                           | 7,3503+7                                       | 5,5540-6                                          |
| 31550                                    | 6741,6                                        | 1,4097                                         | 3,0187                                                | 408,28                                           | 7,2952                                         | 5,5966                                            |
| 31600                                    | 6743,1                                        | 1,3990                                         | 2,9958                                                | 408,33                                           | 7,2405                                         | 5,6395                                            |
| 31650                                    | 6744,7                                        | 1,3883                                         | 2,9730                                                | 408,37                                           | 7,1863                                         | 5,6827                                            |
| 31700                                    | 6746,3                                        | 1,3777                                         | 2,9504                                                | 408,42                                           | 7,1324                                         | 5,7262                                            |
| 31750                                    | 6747,8                                        | 1,3672                                         | 2,9280                                                | 408,46                                           | 7,0790                                         | 5,7700                                            |
| 31800                                    | 6749,4                                        | 1,3568                                         | 2,9058                                                | 408,50                                           | 7,0260                                         | 5,8142                                            |
| 31850                                    | 6751,0                                        | 1,3465                                         | 2,8837                                                | 408,55                                           | 6,9734                                         | 5,8587                                            |
| 31900                                    | 6752,5                                        | 1,3363                                         | 2,8618                                                | 408,59                                           | 6,9212                                         | 5,9035                                            |
| 31950                                    | 6754,1                                        | 1,3261                                         | 2,8401                                                | 408,64                                           | 6,8694                                         | 5,9487                                            |

| Геопотенциальная<br>высота<br>$H$ , м | Величины в функции геопотенциальной высоты      |                                                |                                                    |                                            |                                                     |                                                   |
|---------------------------------------|-------------------------------------------------|------------------------------------------------|----------------------------------------------------|--------------------------------------------|-----------------------------------------------------|---------------------------------------------------|
|                                       | масштаб<br>высоты по<br>дальномеру<br>$H_p$ , м | удельный<br>вес<br>$\gamma$ , Н/м <sup>3</sup> | концентрация<br>частот<br>$\rho$ , м <sup>-3</sup> | средняя<br>скорость<br>частот<br>$v$ , м/с | частота<br>соударений<br>$\omega$ , с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>$l$ , м |
| 30000                                 | 6697,4                                          | 1,7497-1                                       | 3,7452+23                                          | 407,03                                     | 9,0231+7                                            | 4,510-6                                           |
| 30050                                 | 6699,0                                          | 1,7362                                         | 3,7163                                             | 407,08                                     | 8,9544                                              | 4,5461                                            |
| 30100                                 | 6700,6                                          | 1,7227                                         | 3,6876                                             | 407,12                                     | 8,8862                                              | 4,5815                                            |
| 30150                                 | 6702,1                                          | 1,7094                                         | 3,6591                                             | 407,17                                     | 8,8185                                              | 4,6172                                            |
| 30200                                 | 6703,7                                          | 1,6962                                         | 3,6308                                             | 407,21                                     | 8,7514                                              | 4,6531                                            |
| 30250                                 | 6705,3                                          | 1,6831                                         | 3,6028                                             | 407,26                                     | 8,6848                                              | 4,6893                                            |
| 30300                                 | 6706,9                                          | 1,6700                                         | 3,5750                                             | 407,30                                     | 8,6187                                              | 4,7258                                            |
| 30350                                 | 6708,5                                          | 1,6571                                         | 3,5474                                             | 407,35                                     | 8,5531                                              | 4,7625                                            |
| 30400                                 | 6710,1                                          | 1,6443                                         | 3,5200                                             | 407,39                                     | 8,4881                                              | 4,7996                                            |
| 30450                                 | 6711,6                                          | 1,6316                                         | 3,4929                                             | 407,44                                     | 8,4236                                              | 4,8369                                            |
| 30500                                 | 6713,2                                          | 1,6190-1                                       | 3,4660+23                                          | 407,48                                     | 8,3595+7                                            | 4,8745-6                                          |
| 30550                                 | 6714,8                                          | 1,6065                                         | 3,4392                                             | 407,53                                     | 8,2960                                              | 4,9123                                            |
| 30600                                 | 6716,4                                          | 1,5941                                         | 3,4127                                             | 407,57                                     | 8,2330                                              | 4,9505                                            |
| 30650                                 | 6718,0                                          | 1,5818                                         | 3,3864                                             | 407,62                                     | 8,1704                                              | 4,9889                                            |
| 30700                                 | 6719,6                                          | 1,5696                                         | 3,3603                                             | 407,66                                     | 8,1084                                              | 5,0277                                            |
| 30750                                 | 6721,2                                          | 1,5575                                         | 3,3345                                             | 407,71                                     | 8,0468                                              | 5,0667                                            |
| 30800                                 | 6722,7                                          | 1,5454                                         | 3,3088                                             | 407,75                                     | 7,9857                                              | 5,1060                                            |
| 30850                                 | 6724,3                                          | 1,5335                                         | 3,2833                                             | 407,79                                     | 7,9251                                              | 5,1456                                            |
| 30900                                 | 6725,9                                          | 1,5217                                         | 3,2580                                             | 407,84                                     | 7,8649                                              | 5,1855                                            |
| 30950                                 | 6727,5                                          | 1,5100                                         | 3,2330                                             | 407,88                                     | 7,8053                                              | 5,2258                                            |
| 31000                                 | 6729,1                                          | 1,4983-1                                       | 3,2081+23                                          | 407,93                                     | 7,7461+7                                            | 5,2663-6                                          |
| 31050                                 | 6730,7                                          | 1,4868                                         | 3,1834                                             | 407,97                                     | 7,6873                                              | 5,3071                                            |
| 31100                                 | 6732,2                                          | 1,4753                                         | 3,1589                                             | 408,02                                     | 7,6290                                              | 5,3482                                            |
| 31150                                 | 6733,8                                          | 1,4639                                         | 3,1346                                             | 408,06                                     | 7,5712                                              | 5,3897                                            |
| 31200                                 | 6735,4                                          | 1,4527                                         | 3,1105                                             | 408,11                                     | 7,5138                                              | 5,4314                                            |
| 31250                                 | 6737,0                                          | 1,4415                                         | 3,0866                                             | 408,15                                     | 7,4569                                              | 5,4735                                            |
| 31300                                 | 6738,6                                          | 1,4304                                         | 3,0629                                             | 408,20                                     | 7,4004                                              | 5,5159                                            |
| 31350                                 | 6740,2                                          | 1,4194                                         | 3,0394                                             | 408,24                                     | 7,3444                                              | 5,5586                                            |
| 31400                                 | 6741,7                                          | 1,4084                                         | 3,0160                                             | 408,29                                     | 7,2888                                              | 5,6016                                            |
| 31450                                 | 6743,3                                          | 1,3976                                         | 2,9929                                             | 408,33                                     | 7,2336                                              | 5,6450                                            |
| 31500                                 | 6744,9                                          | 1,3869-1                                       | 2,9689+23                                          | 408,38                                     | 7,1788+7                                            | 5,6886-6                                          |
| 31550                                 | 6746,5                                          | 1,3762                                         | 2,9471                                             | 408,42                                     | 7,1245                                              | 5,7326                                            |
| 31600                                 | 6748,1                                          | 1,3656                                         | 2,9245                                             | 408,47                                     | 7,0706                                              | 5,7770                                            |
| 31650                                 | 6749,7                                          | 1,3551                                         | 2,9020                                             | 408,51                                     | 7,0171                                              | 5,8216                                            |
| 31700                                 | 6751,3                                          | 1,3447                                         | 2,8798                                             | 408,56                                     | 6,9641                                              | 5,8666                                            |
| 31750                                 | 6752,8                                          | 1,3344                                         | 2,8577                                             | 408,60                                     | 6,9114                                              | 5,9120                                            |
| 31800                                 | 6754,4                                          | 1,3241                                         | 2,8358                                             | 408,65                                     | 6,8592                                              | 5,9577                                            |
| 31850                                 | 6756,0                                          | 1,3139                                         | 2,8141                                             | 408,69                                     | 6,8073                                              | 6,0037                                            |
| 31900                                 | 6757,6                                          | 1,3038                                         | 2,7925                                             | 408,73                                     | 6,7559                                              | 6,0500                                            |
| 31950                                 | 6759,2                                          | 1,2938                                         | 2,7711                                             | 408,78                                     | 6,7049                                              | 6,0968                                            |



От 32000 до 35900 м

| Геометри-<br>ческая<br>высота<br>h, м | Величины в функции геометрической высоты |                            |                                |                                         |                                 |                                                |
|---------------------------------------|------------------------------------------|----------------------------|--------------------------------|-----------------------------------------|---------------------------------|------------------------------------------------|
|                                       | масштаб<br>высоты по<br>длину<br>H, м    | удельный<br>вес<br>γ, Н/м³ | концентрация<br>частиц<br>λ, м | средняя<br>скорость<br>частиц<br>v, м/с | частота<br>соударений<br>n, с⁻¹ | средняя длина<br>свободного<br>пробега<br>L, м |
| 32000                                 | 6755,7                                   | 1,3160-1                   | 2,8185+23                      | 408,68                                  | 6,8180+7                        | 5,9942-6                                       |
| 32100                                 | 6758,8                                   | 1,2961                     | 2,7759                         | 408,77                                  | 6,7164                          | 6,0862                                         |
| 32200                                 | 6764,0                                   | 1,2761                     | 2,7332                         | 408,92                                  | 6,6153                          | 6,1814                                         |
| 32300                                 | 6772,4                                   | 1,2558                     | 2,6898                         | 409,17                                  | 6,5144                          | 6,2810                                         |
| 32400                                 | 6780,8                                   | 1,2359                     | 2,6472                         | 409,41                                  | 6,4151                          | 6,3821                                         |
| 32500                                 | 6789,2                                   | 1,2163                     | 2,6053                         | 409,65                                  | 6,3174                          | 6,4847                                         |
| 32600                                 | 6797,6                                   | 1,1970                     | 2,5642                         | 409,91                                  | 6,2213                          | 6,5888                                         |
| 32700                                 | 6806,0                                   | 1,1781                     | 2,5237                         | 410,16                                  | 6,1268                          | 6,6944                                         |
| 32800                                 | 6814,4                                   | 1,1595                     | 2,4839                         | 410,40                                  | 6,0339                          | 6,8016                                         |
| 32900                                 | 6822,8                                   | 1,1412                     | 2,4448                         | 410,65                                  | 5,9425                          | 6,9104                                         |
| 33000                                 | 6831,2                                   | 1,1232-1                   | 2,4064+23                      | 410,90                                  | 5,8525+7                        | 7,0208-6                                       |
| 33100                                 | 6839,6                                   | 1,1056                     | 2,3686                         | 411,14                                  | 5,7641                          | 7,1328                                         |
| 33200                                 | 6848,1                                   | 1,0882                     | 2,3314                         | 411,39                                  | 5,6771                          | 7,2465                                         |
| 33300                                 | 6856,5                                   | 1,0711                     | 2,2949                         | 411,63                                  | 5,5915                          | 7,3618                                         |
| 33400                                 | 6864,9                                   | 1,0543                     | 2,2590                         | 411,88                                  | 5,5073                          | 7,4788                                         |
| 33500                                 | 6873,3                                   | 1,0378                     | 2,2237                         | 412,13                                  | 5,4245                          | 7,5976                                         |
| 33600                                 | 6881,7                                   | 1,0216                     | 2,1890                         | 412,37                                  | 5,3430                          | 7,7180                                         |
| 33700                                 | 6890,1                                   | 1,0056                     | 2,1549                         | 412,62                                  | 5,2628                          | 7,8402                                         |
| 33800                                 | 6898,5                                   | 9,8992-2                   | 2,1213                         | 412,86                                  | 5,1839                          | 7,9643                                         |
| 33900                                 | 6906,9                                   | 9,7450                     | 2,0883                         | 413,11                                  | 5,1063                          | 8,0901                                         |
| 34000                                 | 6915,4                                   | 9,5933-2                   | 2,0559+23                      | 413,35                                  | 5,0300-7                        | 8,2177-5                                       |
| 34100                                 | 6923,8                                   | 9,4442                     | 2,0240                         | 413,60                                  | 4,9549                          | 8,3472                                         |
| 34200                                 | 6932,2                                   | 9,2975                     | 1,9926                         | 413,84                                  | 4,8810                          | 8,4786                                         |
| 34300                                 | 6940,6                                   | 9,1533                     | 1,9618                         | 414,09                                  | 4,8083                          | 8,6119                                         |
| 34400                                 | 6949,0                                   | 9,0116                     | 1,9315                         | 414,33                                  | 4,7368                          | 8,7471                                         |
| 34500                                 | 6957,4                                   | 8,8721                     | 1,9016                         | 414,58                                  | 4,6664                          | 8,8843                                         |
| 34600                                 | 6965,8                                   | 8,7350                     | 1,8723                         | 414,82                                  | 4,5971                          | 9,0235                                         |
| 34700                                 | 6974,2                                   | 8,6002                     | 1,8435                         | 415,06                                  | 4,5293                          | 9,1646                                         |
| 34800                                 | 6982,7                                   | 8,4677                     | 1,8151                         | 415,31                                  | 4,4619                          | 9,3078                                         |
| 34900                                 | 6991,1                                   | 8,3373                     | 1,7872                         | 415,55                                  | 4,3959                          | 9,4531                                         |
| 35000                                 | 6999,5                                   | 8,2091-2                   | 1,7598+23                      | 415,79                                  | 4,3310+7                        | 9,6004-6                                       |
| 35100                                 | 7007,9                                   | 8,0830                     | 1,7328                         | 416,04                                  | 4,2671                          | 9,7499                                         |
| 35200                                 | 7016,3                                   | 7,9589                     | 1,7063                         | 416,28                                  | 4,2042                          | 9,9015                                         |
| 35300                                 | 7024,7                                   | 7,8370                     | 1,6802                         | 416,52                                  | 4,1423                          | 1,0055-5                                       |
| 35400                                 | 7033,1                                   | 7,7170                     | 1,6545                         | 416,77                                  | 4,0814                          | 1,0211                                         |
| 35500                                 | 7041,6                                   | 7,5991                     | 1,6293                         | 417,01                                  | 4,0215                          | 1,0369                                         |
| 35600                                 | 7050,0                                   | 7,4830                     | 1,6044                         | 417,25                                  | 3,9625                          | 1,0530                                         |
| 35700                                 | 7058,4                                   | 7,3689                     | 1,5800                         | 417,49                                  | 3,9045                          | 1,0693                                         |
| 35800                                 | 7066,8                                   | 7,2566                     | 1,5560                         | 417,74                                  | 3,8474                          | 1,0858                                         |
| 35900                                 | 7075,2                                   | 7,1462                     | 1,5324                         | 417,98                                  | 3,7911                          | 1,1026                                         |

| Геоцентри-<br>ческая<br>высота<br>$H$ , м | Величины и функции геопотенциальной высоты  |                                                |                                                       |                                            |                                                     |                                                   |
|-------------------------------------------|---------------------------------------------|------------------------------------------------|-------------------------------------------------------|--------------------------------------------|-----------------------------------------------------|---------------------------------------------------|
|                                           | масса<br>высоты по<br>длинному<br>$H_p$ , м | удельный<br>вес<br>$\gamma$ , Н/м <sup>3</sup> | концентрация<br>частиц<br>$\lambda$ , м <sup>-3</sup> | средняя<br>скорость<br>частиц<br>$v$ , м/с | частота<br>соударений<br>$\omega$ , с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>$l$ , м |
| 32000                                     | 6760,8                                      | 1,2839-1                                       | 2,7499+23                                             | 408,82                                     | 6,6542+7                                            | 6,1438-6                                          |
| 32100                                     | 6769,3                                      | 1,2633                                         | 2,7058                                                | 409,07                                     | 6,5516                                              | 6,2439                                            |
| 32200                                     | 6777,8                                      | 1,2430                                         | 2,6625                                                | 409,32                                     | 6,4507                                              | 6,3455                                            |
| 32300                                     | 6786,2                                      | 1,2231                                         | 2,6199                                                | 409,57                                     | 6,3514                                              | 6,4486                                            |
| 32400                                     | 6794,7                                      | 1,2035                                         | 2,5781                                                | 409,82                                     | 6,2538                                              | 6,5532                                            |
| 32500                                     | 6803,2                                      | 1,1843                                         | 2,5370                                                | 410,07                                     | 6,1578                                              | 6,6594                                            |
| 32600                                     | 6811,7                                      | 1,1654                                         | 2,4965                                                | 410,32                                     | 6,0634                                              | 6,7672                                            |
| 32700                                     | 6820,2                                      | 1,1468                                         | 2,4568                                                | 410,57                                     | 5,9706                                              | 6,8766                                            |
| 32800                                     | 6828,7                                      | 1,1286                                         | 2,4178                                                | 410,82                                     | 5,8793                                              | 6,9877                                            |
| 32900                                     | 6837,2                                      | 1,1106                                         | 2,3794                                                | 411,07                                     | 5,7894                                              | 7,1003                                            |
| 33000                                     | 6845,7                                      | 1,0930-1                                       | 2,3417+23                                             | 411,32                                     | 5,7011+7                                            | 7,2147-5                                          |
| 33100                                     | 6854,2                                      | 1,0756                                         | 2,3046                                                | 411,57                                     | 5,6142                                              | 7,3308                                            |
| 33200                                     | 6862,7                                      | 1,0586                                         | 2,2682                                                | 411,82                                     | 5,5288                                              | 7,4486                                            |
| 33300                                     | 6871,2                                      | 1,0418                                         | 2,2323                                                | 412,07                                     | 5,4447                                              | 7,5681                                            |
| 33400                                     | 6879,7                                      | 1,0254                                         | 2,1971                                                | 412,31                                     | 5,3621                                              | 7,6895                                            |
| 33500                                     | 6888,2                                      | 1,0092                                         | 2,1625                                                | 412,56                                     | 5,2807                                              | 7,8126                                            |
| 33600                                     | 6896,7                                      | 9,9327-2                                       | 2,1285                                                | 412,81                                     | 5,2008                                              | 7,9375                                            |
| 33700                                     | 6905,2                                      | 9,7762                                         | 2,0950                                                | 413,06                                     | 5,1221                                              | 8,0643                                            |
| 33800                                     | 6913,7                                      | 9,6224                                         | 2,0621                                                | 413,31                                     | 5,0447                                              | 8,1929                                            |
| 33900                                     | 6922,2                                      | 9,4712                                         | 2,0298                                                | 413,55                                     | 4,9685                                              | 8,3235                                            |
| 34000                                     | 6930,7                                      | 9,3225-2                                       | 1,9980+23                                             | 413,80                                     | 4,8936+7                                            | 8,4559-6                                          |
| 34100                                     | 6939,2                                      | 9,1764                                         | 1,9667                                                | 414,05                                     | 4,8199                                              | 8,5903                                            |
| 34200                                     | 6947,7                                      | 9,0327                                         | 1,9360                                                | 414,29                                     | 4,7474                                              | 8,7267                                            |
| 34300                                     | 6956,2                                      | 8,8914                                         | 1,9058                                                | 414,54                                     | 4,6761                                              | 8,8651                                            |
| 34400                                     | 6964,8                                      | 8,7525                                         | 1,8760                                                | 414,79                                     | 4,6059                                              | 9,0055                                            |
| 34500                                     | 6973,3                                      | 8,6159                                         | 1,8468                                                | 415,03                                     | 4,5369                                              | 9,1480                                            |
| 34600                                     | 6981,8                                      | 8,4816                                         | 1,8181                                                | 415,28                                     | 4,4690                                              | 9,2925                                            |
| 34700                                     | 6990,3                                      | 8,3496                                         | 1,7899                                                | 415,53                                     | 4,4022                                              | 9,4391                                            |
| 34800                                     | 6998,8                                      | 8,2198                                         | 1,7621                                                | 415,77                                     | 4,3364                                              | 9,5879                                            |
| 34900                                     | 7007,3                                      | 8,0921                                         | 1,7348                                                | 416,02                                     | 4,2718                                              | 9,7389                                            |
| 35000                                     | 7015,8                                      | 7,9666-2                                       | 1,7079+23                                             | 416,27                                     | 4,2081+7                                            | 9,8920-6                                          |
| 35100                                     | 7024,3                                      | 7,8432                                         | 1,6815                                                | 416,51                                     | 4,1455                                              | 1,0047-5                                          |
| 35200                                     | 7032,8                                      | 7,7218                                         | 1,6555                                                | 416,76                                     | 4,0839                                              | 1,0205                                            |
| 35300                                     | 7041,3                                      | 7,6024                                         | 1,6300                                                | 417,00                                     | 4,0232                                              | 1,0365                                            |
| 35400                                     | 7049,8                                      | 7,4850                                         | 1,6049                                                | 417,25                                     | 3,9636                                              | 1,0527                                            |
| 35500                                     | 7058,3                                      | 7,3696                                         | 1,5802                                                | 417,49                                     | 3,9049                                              | 1,0692                                            |
| 35600                                     | 7066,9                                      | 7,2561                                         | 1,5559                                                | 417,74                                     | 3,8471                                              | 1,0859                                            |
| 35700                                     | 7075,4                                      | 7,1444                                         | 1,5320                                                | 417,98                                     | 3,7902                                              | 1,1028                                            |
| 35800                                     | 7083,9                                      | 7,0346                                         | 1,5085                                                | 418,23                                     | 3,7343                                              | 1,1200                                            |
| 35900                                     | 7092,4                                      | 6,9267                                         | 1,4854                                                | 418,47                                     | 3,6792                                              | 1,1374                                            |

От 36000 до 39900 м

| Геометрическая высота<br>$H$ , м | Величины в функции геометрической высоты            |                                                |                                                       |                                                  |                                                     |                                                   |
|----------------------------------|-----------------------------------------------------|------------------------------------------------|-------------------------------------------------------|--------------------------------------------------|-----------------------------------------------------|---------------------------------------------------|
|                                  | массовый<br>коэффициент<br>по давлению<br>$H_p$ , м | удельный<br>вес<br>$\gamma$ , Н/м <sup>3</sup> | концентрация<br>частиц<br>$\lambda$ , м <sup>-3</sup> | средняя<br>скорость<br>частиц<br>$\bar{v}$ , м/с | частота<br>соударений<br>$\omega$ , с <sup>-1</sup> | средняя длина<br>свободного<br>прохода<br>$l$ , м |
| 36000                            | 7083,6                                              | 7,0376-2                                       | 1,5091+23                                             | 418,22                                           | 3,7358+7                                            | 1,1195-5                                          |
| 36100                            | 7092,1                                              | 6,9308                                         | 1,4863                                                | 418,46                                           | 3,6813                                              | 1,1367                                            |
| 36200                            | 7100,5                                              | 6,8257                                         | 1,4638                                                | 418,71                                           | 3,6277                                              | 1,1542                                            |
| 36300                            | 7108,9                                              | 6,7223                                         | 1,4417                                                | 418,95                                           | 3,5750                                              | 1,1719                                            |
| 36400                            | 7117,3                                              | 6,6206                                         | 1,4199                                                | 419,19                                           | 3,5230                                              | 1,1899                                            |
| 36500                            | 7125,7                                              | 6,5206                                         | 1,3985                                                | 419,43                                           | 3,4719                                              | 1,2081                                            |
| 36600                            | 7134,2                                              | 6,4222                                         | 1,3774                                                | 419,67                                           | 3,4216                                              | 1,2265                                            |
| 36700                            | 7142,6                                              | 6,3254                                         | 1,3567                                                | 419,91                                           | 3,3720                                              | 1,2453                                            |
| 36800                            | 7151,0                                              | 6,2302                                         | 1,3363                                                | 420,15                                           | 3,3233                                              | 1,2643                                            |
| 36900                            | 7159,4                                              | 6,1365                                         | 1,3163                                                | 420,39                                           | 3,2753                                              | 1,2835                                            |
| 37000                            | 7167,8                                              | 6,0443-2                                       | 1,2965+23                                             | 420,63                                           | 3,2280+7                                            | 1,3031-5                                          |
| 37100                            | 7176,3                                              | 5,9536                                         | 1,2771                                                | 420,87                                           | 3,1815                                              | 1,3229                                            |
| 37200                            | 7184,7                                              | 5,8644                                         | 1,2580                                                | 421,11                                           | 3,1357                                              | 1,3430                                            |
| 37300                            | 7193,1                                              | 5,7766                                         | 1,2392                                                | 421,35                                           | 3,0907                                              | 1,3633                                            |
| 37400                            | 7201,5                                              | 5,6903                                         | 1,2207                                                | 421,59                                           | 3,0463                                              | 1,3840                                            |
| 37500                            | 7209,9                                              | 5,6053                                         | 1,2025                                                | 421,83                                           | 3,0026                                              | 1,4049                                            |
| 37600                            | 7218,4                                              | 5,5217                                         | 1,1846                                                | 422,07                                           | 2,9596                                              | 1,4261                                            |
| 37700                            | 7226,8                                              | 5,4394                                         | 1,1670                                                | 422,31                                           | 2,9172                                              | 1,4477                                            |
| 37800                            | 7235,2                                              | 5,3581                                         | 1,1497                                                | 422,55                                           | 2,8755                                              | 1,4695                                            |
| 37900                            | 7243,6                                              | 5,2788                                         | 1,1326                                                | 422,79                                           | 2,8345                                              | 1,4916                                            |
| 38000                            | 7252,1                                              | 5,2004-2                                       | 1,1159+23                                             | 423,03                                           | 2,7940+7                                            | 1,5140-5                                          |
| 38100                            | 7260,5                                              | 5,1233                                         | 1,0993                                                | 423,27                                           | 2,7543                                              | 1,5368                                            |
| 38200                            | 7268,9                                              | 5,0474                                         | 1,0831                                                | 423,51                                           | 2,7151                                              | 1,5598                                            |
| 38300                            | 7277,3                                              | 4,9727                                         | 1,0671                                                | 423,75                                           | 2,6765                                              | 1,5832                                            |
| 38400                            | 7285,7                                              | 4,8992                                         | 1,0514                                                | 423,99                                           | 2,6385                                              | 1,6069                                            |
| 38500                            | 7294,2                                              | 4,8269                                         | 1,0359                                                | 424,22                                           | 2,6011                                              | 1,6310                                            |
| 38600                            | 7302,6                                              | 4,7557                                         | 1,0206                                                | 424,46                                           | 2,5642                                              | 1,6553                                            |
| 38700                            | 7311,0                                              | 4,6857                                         | 1,0056                                                | 424,70                                           | 2,5280                                              | 1,6800                                            |
| 38800                            | 7319,4                                              | 4,6167                                         | 9,9087+22                                             | 424,94                                           | 2,4923                                              | 1,7050                                            |
| 38900                            | 7327,9                                              | 4,5489                                         | 9,7634                                                | 425,18                                           | 2,4571                                              | 1,7304                                            |
| 39000                            | 7336,3                                              | 4,4821-2                                       | 9,6203+22                                             | 425,41                                           | 2,4224+7                                            | 1,7561-5                                          |
| 39100                            | 7344,7                                              | 4,4164                                         | 9,4796                                                | 425,65                                           | 2,3883                                              | 1,7822                                            |
| 39200                            | 7353,1                                              | 4,3517                                         | 9,3410                                                | 425,89                                           | 2,3547                                              | 1,8086                                            |
| 39300                            | 7361,6                                              | 4,2880                                         | 9,2047                                                | 426,13                                           | 2,3217                                              | 1,8354                                            |
| 39400                            | 7370,0                                              | 4,2254                                         | 9,0705                                                | 426,36                                           | 2,2891                                              | 1,8626                                            |
| 39500                            | 7378,4                                              | 4,1637                                         | 8,9383                                                | 426,60                                           | 2,2570                                              | 1,8901                                            |
| 39600                            | 7386,9                                              | 4,1030                                         | 8,8083                                                | 426,84                                           | 2,2254                                              | 1,9180                                            |
| 39700                            | 7395,3                                              | 4,0433                                         | 8,6803                                                | 427,07                                           | 2,1943                                              | 1,9463                                            |
| 39800                            | 7403,7                                              | 3,9844                                         | 8,5543                                                | 427,31                                           | 2,1636                                              | 1,9750                                            |
| 39900                            | 7412,1                                              | 3,9265                                         | 8,4303                                                | 427,55                                           | 2,1334                                              | 2,0040                                            |

| Геопотенциальная высота $H$ , м | Величины в функции геопотенциальной высоты |                                          |                                           |                                   |                                               |                                          |
|---------------------------------|--------------------------------------------|------------------------------------------|-------------------------------------------|-----------------------------------|-----------------------------------------------|------------------------------------------|
|                                 | масштаб высоты по дальности $H_p$ , м      | удельный вес $\gamma$ , Н/м <sup>3</sup> | концентрация частиц $n$ , м <sup>-3</sup> | средняя скорость частиц $v$ , м/с | частота соударений $\omega$ , с <sup>-1</sup> | средняя длина свободного пробега $l$ , м |
| 36000                           | 7100,9                                     | 6,8205-2                                 | 1,4627+23                                 | 418,72                            | 3,6251+7                                      | 1,1551-5                                 |
| 36100                           | 7109,4                                     | 6,7160                                   | 1,4403                                    | 418,96                            | 3,5717                                        | 1,1730                                   |
| 36200                           | 7117,9                                     | 6,6133                                   | 1,4183                                    | 419,21                            | 3,5193                                        | 1,1912                                   |
| 36300                           | 7126,5                                     | 6,5122                                   | 1,3967                                    | 419,45                            | 3,4676                                        | 1,2096                                   |
| 36400                           | 7135,0                                     | 6,4128                                   | 1,3754                                    | 419,69                            | 3,4168                                        | 1,2283                                   |
| 36500                           | 7143,5                                     | 6,3151                                   | 1,3545                                    | 419,94                            | 3,3667                                        | 1,2473                                   |
| 36600                           | 7152,0                                     | 6,2189                                   | 1,3339                                    | 420,18                            | 3,3175                                        | 1,2666                                   |
| 36700                           | 7160,5                                     | 6,1243                                   | 1,3137                                    | 420,42                            | 3,2690                                        | 1,2861                                   |
| 36800                           | 7169,0                                     | 6,0313                                   | 1,2937                                    | 420,67                            | 3,2213                                        | 1,3059                                   |
| 36900                           | 7177,6                                     | 5,9397                                   | 1,2742                                    | 420,91                            | 3,1744                                        | 1,3260                                   |
| 37000                           | 7186,1                                     | 5,8497-2                                 | 1,2549+23                                 | 421,15                            | 3,1282+7                                      | 1,3463-5                                 |
| 37100                           | 7194,6                                     | 5,7611                                   | 1,2359                                    | 421,40                            | 3,0827                                        | 1,3670                                   |
| 37200                           | 7203,1                                     | 5,6740                                   | 1,2173                                    | 421,64                            | 3,0379                                        | 1,3879                                   |
| 37300                           | 7211,6                                     | 5,5883                                   | 1,1989                                    | 421,88                            | 2,9939                                        | 1,4092                                   |
| 37400                           | 7220,2                                     | 5,5040                                   | 1,1809                                    | 422,13                            | 2,9505                                        | 1,4307                                   |
| 37500                           | 7228,7                                     | 5,4210                                   | 1,1631                                    | 422,37                            | 2,9078                                        | 1,4526                                   |
| 37600                           | 7237,2                                     | 5,3394                                   | 1,1456                                    | 422,61                            | 2,8657                                        | 1,4747                                   |
| 37700                           | 7245,7                                     | 5,2591                                   | 1,1284                                    | 422,85                            | 2,8243                                        | 1,4972                                   |
| 37800                           | 7254,3                                     | 5,1801                                   | 1,1115                                    | 423,09                            | 2,7836                                        | 1,5200                                   |
| 37900                           | 7262,8                                     | 5,1024                                   | 1,0949                                    | 423,34                            | 2,7433                                        | 1,5431                                   |
| 38000                           | 7271,3                                     | 5,0260-2                                 | 1,0785+23                                 | 423,58                            | 2,7040+7                                      | 1,5665-5                                 |
| 38100                           | 7279,8                                     | 4,9507                                   | 1,0624                                    | 423,82                            | 2,6651                                        | 1,5902                                   |
| 38200                           | 7288,4                                     | 4,8767                                   | 1,0465                                    | 424,06                            | 2,6269                                        | 1,6143                                   |
| 38300                           | 7296,9                                     | 4,8039                                   | 1,0309                                    | 424,30                            | 2,5892                                        | 1,6388                                   |
| 38400                           | 7305,4                                     | 4,7322                                   | 1,0156                                    | 424,54                            | 2,5521                                        | 1,6635                                   |
| 38500                           | 7313,9                                     | 4,6617                                   | 1,0005                                    | 424,78                            | 2,5156                                        | 1,6886                                   |
| 38600                           | 7322,5                                     | 4,5923                                   | 9,8563+22                                 | 425,02                            | 2,4796                                        | 1,7141                                   |
| 38700                           | 7331,0                                     | 4,5240                                   | 9,7101                                    | 425,26                            | 2,4442                                        | 1,7399                                   |
| 38800                           | 7339,5                                     | 4,4568                                   | 9,5662                                    | 425,51                            | 2,4093                                        | 1,7661                                   |
| 38900                           | 7348,0                                     | 4,3907                                   | 9,4246                                    | 425,75                            | 2,3750                                        | 1,7926                                   |
| 39000                           | 7356,6                                     | 4,3256-2                                 | 9,2852+22                                 | 425,99                            | 2,3412+7                                      | 1,8195-5                                 |
| 39100                           | 7365,1                                     | 4,2616                                   | 9,1481                                    | 426,23                            | 2,3079                                        | 1,8468                                   |
| 39200                           | 7373,6                                     | 4,1986                                   | 9,0131                                    | 426,47                            | 2,2751                                        | 1,8745                                   |
| 39300                           | 7382,2                                     | 4,1366                                   | 8,8802                                    | 426,71                            | 2,2429                                        | 1,9025                                   |
| 39400                           | 7390,7                                     | 4,0756                                   | 8,7495                                    | 426,95                            | 2,2111                                        | 1,9309                                   |
| 39500                           | 7399,2                                     | 4,0155                                   | 8,6209                                    | 427,19                            | 2,1798                                        | 1,9597                                   |
| 39600                           | 7407,8                                     | 3,9564                                   | 8,4942                                    | 427,43                            | 2,1490                                        | 1,9890                                   |
| 39700                           | 7416,3                                     | 3,8982                                   | 8,3696                                    | 427,66                            | 2,1186                                        | 2,0186                                   |
| 39800                           | 7424,8                                     | 3,8410                                   | 8,2469                                    | 427,90                            | 2,0888                                        | 2,0486                                   |
| 39900                           | 7433,4                                     | 3,7846                                   | 8,1262                                    | 428,14                            | 2,0593                                        | 2,0790                                   |

От 40000 до 43900 м

| Геометри-<br>ческая<br>высота<br>$H$ , м | Величины в функции геометрической высоты                |                                                |                                                 |                                            |                                                     |                                                   |
|------------------------------------------|---------------------------------------------------------|------------------------------------------------|-------------------------------------------------|--------------------------------------------|-----------------------------------------------------|---------------------------------------------------|
|                                          | нашле-<br>б<br>высоты по<br>дально-<br>сти<br>$H_p$ , м | удельный<br>вес<br>$\gamma$ , Н/м <sup>3</sup> | концентрация<br>частиц<br>$n$ , м <sup>-3</sup> | средняя<br>скорость<br>частиц<br>$v$ , м/с | частота<br>соударений<br>$\omega$ , с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>$l$ , м |
| 40000                                    | 7420,6                                                  | 3,8696-2                                       | 8,3082+22                                       | 427,78                                     | 2,1037+7                                            | 2,0335-5                                          |
| 40100                                    | 7429,0                                                  | 3,8135                                         | 8,1880                                          | 428,02                                     | 2,0744                                              | 2,0638                                            |
| 40200                                    | 7437,4                                                  | 3,7582                                         | 8,0697                                          | 428,26                                     | 2,0455                                              | 2,0936                                            |
| 40300                                    | 7445,8                                                  | 3,7039                                         | 7,9532                                          | 428,49                                     | 2,0171                                              | 2,1243                                            |
| 40400                                    | 7454,3                                                  | 3,6504                                         | 7,8385                                          | 428,73                                     | 1,9891                                              | 2,1553                                            |
| 40500                                    | 7462,7                                                  | 3,5977                                         | 7,7256                                          | 428,96                                     | 1,9616                                              | 2,1868                                            |
| 40600                                    | 7471,1                                                  | 3,5458                                         | 7,6145                                          | 429,20                                     | 1,9344                                              | 2,2187                                            |
| 40700                                    | 7479,6                                                  | 3,4947                                         | 7,5051                                          | 429,43                                     | 1,9077                                              | 2,2511                                            |
| 40800                                    | 7488,0                                                  | 3,4445                                         | 7,3974                                          | 429,67                                     | 1,8813                                              | 2,2839                                            |
| 40900                                    | 7496,4                                                  | 3,3950                                         | 7,2913                                          | 429,90                                     | 1,8554                                              | 2,3171                                            |
| 41000                                    | 7504,9                                                  | 3,3463-2                                       | 7,1869+22                                       | 430,14                                     | 1,8298+7                                            | 2,3508-5                                          |
| 41100                                    | 7513,3                                                  | 3,2983                                         | 7,0841                                          | 430,37                                     | 1,8046                                              | 2,3849                                            |
| 41200                                    | 7521,7                                                  | 3,2511                                         | 6,9828                                          | 430,61                                     | 1,7798                                              | 2,4195                                            |
| 41300                                    | 7530,1                                                  | 3,2045                                         | 6,8832                                          | 430,84                                     | 1,7553                                              | 2,4545                                            |
| 41400                                    | 7538,6                                                  | 3,1588                                         | 6,7850                                          | 431,08                                     | 1,7312                                              | 2,4900                                            |
| 41500                                    | 7547,0                                                  | 3,1137                                         | 6,6884                                          | 431,31                                     | 1,7075                                              | 2,5260                                            |
| 41600                                    | 7555,4                                                  | 3,0693                                         | 6,5932                                          | 431,55                                     | 1,6841                                              | 2,5621                                            |
| 41700                                    | 7563,9                                                  | 3,0256                                         | 6,4996                                          | 431,78                                     | 1,6611                                              | 2,5994                                            |
| 41800                                    | 7572,3                                                  | 2,9825                                         | 6,4073                                          | 432,01                                     | 1,6384                                              | 2,6368                                            |
| 41900                                    | 7580,7                                                  | 2,9402                                         | 6,3164                                          | 432,25                                     | 1,6161                                              | 2,6747                                            |
| 42000                                    | 7589,2                                                  | 2,8984-2                                       | 6,2270+22                                       | 432,48                                     | 1,5940+7                                            | 2,7131-5                                          |
| 42100                                    | 7597,6                                                  | 2,8573                                         | 6,1389                                          | 432,71                                     | 1,5723                                              | 2,7521                                            |
| 42200                                    | 7606,0                                                  | 2,8169                                         | 6,0521                                          | 432,95                                     | 1,5509                                              | 2,7915                                            |
| 42300                                    | 7614,5                                                  | 2,7770                                         | 5,9667                                          | 433,18                                     | 1,5299                                              | 2,8315                                            |
| 42400                                    | 7622,9                                                  | 2,7378                                         | 5,8826                                          | 433,41                                     | 1,5091                                              | 2,8720                                            |
| 42500                                    | 7631,3                                                  | 2,6991                                         | 5,7997                                          | 433,65                                     | 1,4887                                              | 2,9130                                            |
| 42600                                    | 7639,8                                                  | 2,6611                                         | 5,7181                                          | 433,88                                     | 1,4685                                              | 2,9545                                            |
| 42700                                    | 7648,2                                                  | 2,6236                                         | 5,6377                                          | 434,11                                     | 1,4486                                              | 2,9967                                            |
| 42800                                    | 7656,6                                                  | 2,5867                                         | 5,5586                                          | 434,35                                     | 1,4291                                              | 3,0394                                            |
| 42900                                    | 7665,1                                                  | 2,5503                                         | 5,4806                                          | 434,58                                     | 1,4098                                              | 3,0826                                            |
| 43000                                    | 7673,5                                                  | 2,5145-2                                       | 5,4039+22                                       | 434,81                                     | 1,3908+7                                            | 3,1264-5                                          |
| 43100                                    | 7682,0                                                  | 2,4792                                         | 5,3282                                          | 435,04                                     | 1,3720                                              | 3,1708                                            |
| 43200                                    | 7690,4                                                  | 2,4445                                         | 5,2538                                          | 435,27                                     | 1,3536                                              | 3,2157                                            |
| 43300                                    | 7698,8                                                  | 2,4103                                         | 5,1804                                          | 435,51                                     | 1,3354                                              | 3,2613                                            |
| 43400                                    | 7707,3                                                  | 2,3766                                         | 5,1081                                          | 435,74                                     | 1,3175                                              | 3,3074                                            |
| 43500                                    | 7715,7                                                  | 2,3434                                         | 5,0370                                          | 435,97                                     | 1,2998                                              | 3,3541                                            |
| 43600                                    | 7724,1                                                  | 2,3107                                         | 4,9669                                          | 436,20                                     | 1,2824                                              | 3,4015                                            |
| 43700                                    | 7732,6                                                  | 2,2785                                         | 4,8978                                          | 436,43                                     | 1,2652                                              | 3,4494                                            |
| 43800                                    | 7741,0                                                  | 2,2468                                         | 4,8298                                          | 436,66                                     | 1,2483                                              | 3,4980                                            |
| 43900                                    | 7749,4                                                  | 2,2156                                         | 4,7628                                          | 436,89                                     | 1,2317                                              | 3,5472                                            |

| Геопотенциальная<br>высота<br>$H, м'$ | Величины в функции геопотенциальной высоты  |                                    |                                       |                                           |                                           |                                                  |
|---------------------------------------|---------------------------------------------|------------------------------------|---------------------------------------|-------------------------------------------|-------------------------------------------|--------------------------------------------------|
|                                       | миситб<br>высоты по<br>давлению<br>$H_p, м$ | удельный<br>вес<br>$\gamma, Н/м^3$ | концентрация<br>частиц<br>$n, м^{-3}$ | средняя<br>скорость<br>частиц<br>$v, м/с$ | частота<br>спуларений<br>$\sigma, с^{-1}$ | средняя длина<br>свободного<br>пробега<br>$l, м$ |
| 40000                                 | 7441,9                                      | 3,7291-2                           | 8,0074+22                             | 428,38                                    | 2,0303+7                                  | 2,1099-5                                         |
| 40100                                 | 7450,4                                      | 3,6746                             | 7,8904                                | 428,62                                    | 2,0018                                    | 2,1412                                           |
| 40200                                 | 7459,0                                      | 3,6208                             | 7,7753                                | 428,86                                    | 1,9737                                    | 2,1729                                           |
| 40300                                 | 7467,5                                      | 3,5679                             | 7,6619                                | 429,10                                    | 1,9460                                    | 2,2050                                           |
| 40400                                 | 7476,1                                      | 3,5159                             | 7,5504                                | 429,34                                    | 1,9187                                    | 2,2376                                           |
| 40500                                 | 7484,6                                      | 3,4646                             | 7,4406                                | 429,57                                    | 1,8919                                    | 2,2706                                           |
| 40600                                 | 7493,1                                      | 3,4142                             | 7,3325                                | 429,81                                    | 1,8654                                    | 2,3041                                           |
| 40700                                 | 7501,7                                      | 3,3646                             | 7,2261                                | 430,05                                    | 1,8394                                    | 2,3380                                           |
| 40800                                 | 7510,2                                      | 3,3157                             | 7,1213                                | 430,29                                    | 1,8137                                    | 2,3724                                           |
| 40900                                 | 7518,8                                      | 3,2676                             | 7,0182                                | 430,53                                    | 1,7885                                    | 2,4073                                           |
| 41000                                 | 7527,3                                      | 3,2202-2                           | 6,9167+22                             | 430,76                                    | 1,7636+7                                  | 2,4426-5                                         |
| 41100                                 | 7535,8                                      | 3,1736                             | 6,8168                                | 431,00                                    | 1,7390                                    | 2,4784                                           |
| 41200                                 | 7544,4                                      | 3,1277                             | 6,7184                                | 431,24                                    | 1,7149                                    | 2,5147                                           |
| 41300                                 | 7552,9                                      | 3,0825                             | 6,6216                                | 431,48                                    | 1,6911                                    | 2,5515                                           |
| 41400                                 | 7561,5                                      | 3,0380                             | 6,5262                                | 431,71                                    | 1,6677                                    | 2,5887                                           |
| 41500                                 | 7570,0                                      | 2,9942                             | 6,4323                                | 431,95                                    | 1,6446                                    | 2,6265                                           |
| 41600                                 | 7578,5                                      | 2,9511                             | 6,3399                                | 432,19                                    | 1,6218                                    | 2,6648                                           |
| 41700                                 | 7587,1                                      | 2,9086                             | 6,2489                                | 432,42                                    | 1,5994                                    | 2,7036                                           |
| 41800                                 | 7595,6                                      | 2,8668                             | 6,1593                                | 432,66                                    | 1,5774                                    | 2,7429                                           |
| 41900                                 | 7604,2                                      | 2,8257                             | 6,0711                                | 432,90                                    | 1,5556                                    | 2,7828                                           |
| 42000                                 | 7612,7                                      | 2,7852-2                           | 5,9842+22                             | 433,13                                    | 1,5342+7                                  | 2,8232-5                                         |
| 42100                                 | 7621,3                                      | 2,7453                             | 5,8987                                | 433,37                                    | 1,5131                                    | 2,8641                                           |
| 42200                                 | 7629,8                                      | 2,7060                             | 5,8145                                | 433,61                                    | 1,4923                                    | 2,9056                                           |
| 42300                                 | 7638,4                                      | 2,6673                             | 5,7316                                | 433,84                                    | 1,4718                                    | 2,9476                                           |
| 42400                                 | 7646,9                                      | 2,6293                             | 5,6499                                | 434,08                                    | 1,4516                                    | 2,9902                                           |
| 42500                                 | 7655,5                                      | 2,5918                             | 5,5695                                | 434,31                                    | 1,4318                                    | 3,0334                                           |
| 42600                                 | 7664,0                                      | 2,5548                             | 5,4904                                | 434,55                                    | 1,4122                                    | 3,0771                                           |
| 42700                                 | 7672,6                                      | 2,5185                             | 5,4124                                | 434,78                                    | 1,3929                                    | 3,1215                                           |
| 42800                                 | 7681,1                                      | 2,4827                             | 5,3365                                | 435,02                                    | 1,3739                                    | 3,1664                                           |
| 42900                                 | 7689,7                                      | 2,4474                             | 5,2600                                | 435,25                                    | 1,3551                                    | 3,2119                                           |
| 43000                                 | 7698,2                                      | 2,4127-2                           | 5,1856+22                             | 435,49                                    | 1,3367+7                                  | 3,2580-5                                         |
| 43100                                 | 7706,8                                      | 2,3785                             | 5,1123                                | 435,72                                    | 1,3185                                    | 3,3047                                           |
| 43200                                 | 7715,3                                      | 2,3449                             | 5,0401                                | 435,96                                    | 1,3006                                    | 3,3521                                           |
| 43300                                 | 7723,9                                      | 2,3117                             | 4,9690                                | 436,19                                    | 1,2829                                    | 3,4000                                           |
| 43400                                 | 7732,4                                      | 2,2791                             | 4,8990                                | 436,43                                    | 1,2655                                    | 3,4486                                           |
| 43500                                 | 7741,0                                      | 2,2469                             | 4,8300                                | 436,66                                    | 1,2484                                    | 3,4979                                           |
| 43600                                 | 7749,5                                      | 2,2152                             | 4,7621                                | 436,90                                    | 1,2315                                    | 3,5478                                           |
| 43700                                 | 7758,1                                      | 2,1841                             | 4,6952                                | 437,13                                    | 1,2148                                    | 3,5983                                           |
| 43800                                 | 7766,7                                      | 2,1533                             | 4,6293                                | 437,37                                    | 1,1984                                    | 3,6495                                           |
| 43900                                 | 7775,2                                      | 2,1231                             | 4,5644                                | 437,60                                    | 1,1823                                    | 3,7014                                           |

| Геометри-<br>ческая<br>высота<br>h, м | Величины в функции геометрической высоты      |                                    |                                                       |                                                  |                                                     |                                                   |
|---------------------------------------|-----------------------------------------------|------------------------------------|-------------------------------------------------------|--------------------------------------------------|-----------------------------------------------------|---------------------------------------------------|
|                                       | масштаб<br>высоты по<br>давлению<br>$H_p$ , м | удельный<br>вес<br>$\gamma$ , Н/м³ | концентрация<br>частиц<br>$\lambda$ , м <sup>-3</sup> | средняя<br>скорость<br>частиц<br>$\bar{v}$ , м/с | частота<br>соударений<br>$\omega$ , с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>$l$ , м |
| 44000                                 | 7757,9                                        | 2,1848-2                           | 4,6968+22                                             | 437,13                                           | 1,2152+7                                            | 3,5971-5                                          |
| 44100                                 | 7766,3                                        | 2,1545                             | 4,6318                                                | 437,36                                           | 1,1990                                              | 3,6475                                            |
| 44200                                 | 7774,8                                        | 2,1246                             | 4,5677                                                | 437,59                                           | 1,1831                                              | 3,6987                                            |
| 44300                                 | 7783,2                                        | 2,0952                             | 4,5047                                                | 437,82                                           | 1,1674                                              | 3,7505                                            |
| 44400                                 | 7791,6                                        | 2,0663                             | 4,4425                                                | 438,05                                           | 1,1519                                              | 3,8030                                            |
| 44500                                 | 7800,1                                        | 2,0377                             | 4,3813                                                | 438,28                                           | 1,1366                                              | 3,8561                                            |
| 44600                                 | 7808,5                                        | 2,0096                             | 4,3210                                                | 438,51                                           | 1,1215                                              | 3,9099                                            |
| 44700                                 | 7817,0                                        | 1,9819                             | 4,2615                                                | 438,74                                           | 1,1067                                              | 3,9645                                            |
| 44800                                 | 7825,4                                        | 1,9546                             | 4,2030                                                | 438,97                                           | 1,0920                                              | 4,0197                                            |
| 44900                                 | 7833,8                                        | 1,9277                             | 4,1453                                                | 439,20                                           | 1,0776                                              | 4,0756                                            |
| 45000                                 | 7842,3                                        | 1,9012-2                           | 4,0885+22                                             | 439,43                                           | 1,0634+7                                            | 4,1323-5                                          |
| 45100                                 | 7850,7                                        | 1,8751                             | 4,0325                                                | 439,66                                           | 1,0494                                              | 4,1896                                            |
| 45200                                 | 7859,2                                        | 1,8494                             | 3,9773                                                | 439,89                                           | 1,0356                                              | 4,2478                                            |
| 45300                                 | 7867,6                                        | 1,8241                             | 3,9230                                                | 440,12                                           | 1,0220                                              | 4,3066                                            |
| 45400                                 | 7876,0                                        | 1,7991                             | 3,8694                                                | 440,35                                           | 1,0085                                              | 4,3652                                            |
| 45500                                 | 7884,5                                        | 1,7746                             | 3,8166                                                | 440,57                                           | 9,9530+6                                            | 4,4266                                            |
| 45600                                 | 7892,9                                        | 1,7503                             | 3,7647                                                | 440,80                                           | 9,8225                                              | 4,4877                                            |
| 45700                                 | 7901,4                                        | 1,7265                             | 3,7134                                                | 441,03                                           | 9,6939                                              | 4,5496                                            |
| 45800                                 | 7909,8                                        | 1,7029                             | 3,6630                                                | 441,26                                           | 9,5671                                              | 4,6123                                            |
| 45900                                 | 7918,3                                        | 1,6798                             | 3,6132                                                | 441,49                                           | 9,4420                                              | 4,6758                                            |
| 46000                                 | 7926,7                                        | 1,6569-2                           | 3,5642+22                                             | 441,72                                           | 9,3188+6                                            | 4,7401-5                                          |
| 46100                                 | 7935,1                                        | 1,6344                             | 3,5159                                                | 441,95                                           | 9,1973                                              | 4,8052                                            |
| 46200                                 | 7943,6                                        | 1,6123                             | 3,4683                                                | 442,17                                           | 9,0775                                              | 4,8711                                            |
| 46300                                 | 7952,0                                        | 1,5904                             | 3,4214                                                | 442,40                                           | 8,9593                                              | 4,9379                                            |
| 46400                                 | 7960,5                                        | 1,5689                             | 3,3752                                                | 442,63                                           | 8,8429                                              | 5,0055                                            |
| 46500                                 | 7968,9                                        | 1,5477                             | 3,3297                                                | 442,86                                           | 8,7281                                              | 5,0740                                            |
| 46600                                 | 7977,4                                        | 1,5268                             | 3,2848                                                | 443,09                                           | 8,6149                                              | 5,1433                                            |
| 46700                                 | 7985,8                                        | 1,5061                             | 3,2406                                                | 443,31                                           | 8,5032                                              | 5,2135                                            |
| 46800                                 | 7994,3                                        | 1,4858                             | 3,1970                                                | 443,54                                           | 8,3932                                              | 5,2846                                            |
| 46900                                 | 8002,7                                        | 1,4658                             | 3,1540                                                | 443,77                                           | 8,2846                                              | 5,3565                                            |
| 47000                                 | 8011,2                                        | 1,4461-2                           | 3,1117+22                                             | 444,00                                           | 8,1776+6                                            | 5,4294-5                                          |
| 47100                                 | 8019,6                                        | 1,4267                             | 3,0700                                                | 444,22                                           | 8,0721                                              | 5,5032                                            |
| 47200                                 | 8028,0                                        | 1,4075                             | 3,0289                                                | 444,45                                           | 7,9681                                              | 5,5779                                            |
| 47300                                 | 8036,5                                        | 1,3887                             | 2,9883                                                | 444,68                                           | 7,8655                                              | 5,6535                                            |
| 47400                                 | 8040,9                                        | 1,3707                             | 2,9490                                                | 444,91                                           | 7,7662                                              | 5,7272                                            |
| 47500                                 | 8041,1                                        | 1,3538                             | 2,9134                                                | 444,79                                           | 7,6703                                              | 5,7989                                            |
| 47600                                 | 8041,4                                        | 1,3370                             | 2,8774                                                | 444,79                                           | 7,5755                                              | 5,8715                                            |
| 47700                                 | 8041,6                                        | 1,3204                             | 2,8419                                                | 444,79                                           | 7,4818                                              | 5,9449                                            |
| 47800                                 | 8041,9                                        | 1,3041                             | 2,8067                                                | 444,79                                           | 7,3894                                              | 6,0193                                            |
| 47900                                 | 8042,1                                        | 1,2879                             | 2,7721                                                | 444,79                                           | 7,2981                                              | 6,0946                                            |

Продолжение табл. 3

| Геоморфическая<br>высота<br>H, м | Величины в функции геоморфической высоты               |                            |                                              |                                         |                                             |                                                |
|----------------------------------|--------------------------------------------------------|----------------------------|----------------------------------------------|-----------------------------------------|---------------------------------------------|------------------------------------------------|
|                                  | масштаб<br>высоты по<br>давлению<br>H <sub>p</sub> , м | удельный<br>вес<br>γ, Н/м³ | концентрация<br>частиц<br>л, м <sup>-3</sup> | средняя<br>скорость<br>частиц<br>v, м/с | частота<br>соударений<br>ω, с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>l, м |
| 44000                            | 7733,8                                                 | 2,0933-2                   | 4,5005+22                                    | 437,83                                  | 1,1663+7                                    | 3,7540-5                                       |
| 44100                            | 7792,3                                                 | 2,0639                     | 4,4375                                       | 438,07                                  | 1,1506                                      | 3,8072                                         |
| 44200                            | 7800,9                                                 | 2,0350                     | 4,3753                                       | 438,30                                  | 1,1351                                      | 3,8612                                         |
| 44300                            | 7809,4                                                 | 2,0066                     | 4,3144                                       | 438,53                                  | 1,1199                                      | 3,9158                                         |
| 44400                            | 7818,0                                                 | 1,9785                     | 4,2543                                       | 438,77                                  | 1,1049                                      | 3,9712                                         |
| 44500                            | 7826,6                                                 | 1,9509                     | 4,1950                                       | 439,00                                  | 1,0901                                      | 4,0273                                         |
| 44600                            | 7835,1                                                 | 1,9237                     | 4,1366                                       | 439,23                                  | 1,0755                                      | 4,0842                                         |
| 44700                            | 7843,7                                                 | 1,8969                     | 4,0791                                       | 439,47                                  | 1,0611                                      | 4,1417                                         |
| 44800                            | 7852,2                                                 | 1,8705                     | 4,0225                                       | 439,70                                  | 1,0469                                      | 4,2000                                         |
| 44900                            | 7860,8                                                 | 1,8445                     | 3,9667                                       | 439,93                                  | 1,0329                                      | 4,2591                                         |
| 45000                            | 7869,4                                                 | 1,8189-2                   | 3,9117+22                                    | 440,16                                  | 1,0191+7                                    | 4,3190-5                                       |
| 45100                            | 7877,9                                                 | 1,7936                     | 3,8576                                       | 440,40                                  | 1,0058                                      | 4,3795                                         |
| 45200                            | 7886,5                                                 | 1,7688                     | 3,8043                                       | 440,63                                  | 9,9219+6                                    | 4,4410                                         |
| 45300                            | 7895,1                                                 | 1,7443                     | 3,7517                                       | 440,86                                  | 9,7990                                      | 4,5032                                         |
| 45400                            | 7903,6                                                 | 1,7202                     | 3,6999                                       | 441,09                                  | 9,6600                                      | 4,5662                                         |
| 45500                            | 7912,2                                                 | 1,6964                     | 3,6489                                       | 441,33                                  | 9,5318                                      | 4,6300                                         |
| 45600                            | 7920,8                                                 | 1,6730                     | 3,5987                                       | 441,56                                  | 9,4055                                      | 4,6947                                         |
| 45700                            | 7929,3                                                 | 1,6499                     | 3,5492                                       | 441,79                                  | 9,2810                                      | 4,7601                                         |
| 45800                            | 7937,9                                                 | 1,6272                     | 3,5004                                       | 442,02                                  | 9,1593                                      | 4,8265                                         |
| 45900                            | 7946,5                                                 | 1,6048                     | 3,4524                                       | 442,25                                  | 9,0373                                      | 4,8936                                         |
| 46000                            | 7955,0                                                 | 1,5828-2                   | 3,4050+22                                    | 442,48                                  | 8,9180+6                                    | 4,9617-5                                       |
| 46100                            | 7963,6                                                 | 1,5610                     | 3,3584                                       | 442,71                                  | 8,8005                                      | 5,0306                                         |
| 46200                            | 7972,2                                                 | 1,5396                     | 3,3124                                       | 442,95                                  | 8,6846                                      | 5,1004                                         |
| 46300                            | 7980,7                                                 | 1,5185                     | 3,2672                                       | 443,18                                  | 8,5703                                      | 5,1711                                         |
| 46400                            | 7989,3                                                 | 1,4977                     | 3,2225                                       | 443,41                                  | 8,4577                                      | 5,2426                                         |
| 46500                            | 7997,9                                                 | 1,4773                     | 3,1786                                       | 443,64                                  | 8,3467                                      | 5,3152                                         |
| 46600                            | 8006,4                                                 | 1,4571                     | 3,1353                                       | 443,87                                  | 8,2372                                      | 5,3886                                         |
| 46700                            | 8015,0                                                 | 1,4372                     | 3,0926                                       | 444,10                                  | 8,1293                                      | 5,4630                                         |
| 46800                            | 8023,6                                                 | 1,4176                     | 3,0505                                       | 444,33                                  | 8,0229                                      | 5,5383                                         |
| 46900                            | 8032,2                                                 | 1,3983                     | 3,0091                                       | 444,56                                  | 7,9180                                      | 5,6145                                         |
| 47000                            | 8040,7                                                 | 1,3793-2                   | 2,9683+22                                    | 444,79                                  | 7,8146+6                                    | 5,6918-5                                       |
| 47100                            | 8041,0                                                 | 1,3620                     | 2,9310                                       | 444,79                                  | 7,7166                                      | 5,7641                                         |
| 47200                            | 8041,2                                                 | 1,3448                     | 2,8943                                       | 444,79                                  | 7,6198                                      | 5,8373                                         |
| 47300                            | 8041,5                                                 | 1,3279                     | 2,8580                                       | 444,79                                  | 7,5242                                      | 5,9115                                         |
| 47400                            | 8041,7                                                 | 1,3112                     | 2,8221                                       | 444,79                                  | 7,4298                                      | 5,9865                                         |
| 47500                            | 8042,0                                                 | 1,2947                     | 2,7867                                       | 444,79                                  | 7,336                                       | 6,0628                                         |
| 47600                            | 8042,3                                                 | 1,2785                     | 2,7517                                       | 444,79                                  | 7,2446                                      | 6,1396                                         |
| 47700                            | 8042,5                                                 | 1,2624                     | 2,7172                                       | 444,79                                  | 7,1537                                      | 6,2176                                         |
| 47800                            | 8042,8                                                 | 1,2465                     | 2,6832                                       | 444,79                                  | 7,0640                                      | 6,2965                                         |
| 47900                            | 8043,0                                                 | 1,2308                     | 2,6495                                       | 444,79                                  | 6,9754                                      | 6,3766                                         |



От 48000 до 52800 м

| Геометрическая высота $H$ , м | Величины в функции геометрической высоты |                                          |                                           |                                         |                                               |                                          |
|-------------------------------|------------------------------------------|------------------------------------------|-------------------------------------------|-----------------------------------------|-----------------------------------------------|------------------------------------------|
|                               | масштаб высоты по давлению $H_p$ , м     | удельный вес $\gamma$ , Н/м <sup>3</sup> | концентрация частиц $n$ , м <sup>-3</sup> | средняя скорость частиц $\bar{v}$ , м/с | частота соударений $\omega$ , с <sup>-1</sup> | средняя длина свободного пробега $L$ , м |
| 48000                         | 8042,4                                   | 1,2720-2                                 | 2,7378+22                                 | 444,79                                  | 7,2079+6                                      | 6,1709-5                                 |
| 48100                         | 8042,6                                   | 1,2562                                   | 2,7040                                    | 444,79                                  | 7,1188                                        | 6,2481                                   |
| 48200                         | 8042,9                                   | 1,2406                                   | 2,6706                                    | 444,79                                  | 7,0308                                        | 6,3263                                   |
| 48300                         | 8043,1                                   | 1,2253                                   | 2,6376                                    | 444,79                                  | 6,9440                                        | 6,4054                                   |
| 48400                         | 8043,4                                   | 1,2101                                   | 2,6050                                    | 444,79                                  | 6,8582                                        | 6,4855                                   |
| 48500                         | 8043,6                                   | 1,1951                                   | 2,5728                                    | 444,79                                  | 6,7734                                        | 6,5667                                   |
| 48600                         | 8043,9                                   | 1,1803                                   | 2,5410                                    | 444,79                                  | 6,6895                                        | 6,6488                                   |
| 48700                         | 8044,1                                   | 1,1657                                   | 2,5096                                    | 444,79                                  | 6,6071                                        | 6,7320                                   |
| 48800                         | 8044,4                                   | 1,1512                                   | 2,4786                                    | 444,79                                  | 6,5255                                        | 6,8162                                   |
| 48900                         | 8044,6                                   | 1,1370                                   | 2,4480                                    | 444,79                                  | 6,4449                                        | 6,9015                                   |
| 49000                         | 8044,9                                   | 1,1229-2                                 | 2,4177+22                                 | 444,79                                  | 6,3652+6                                      | 6,9878-5                                 |
| 49100                         | 8045,1                                   | 1,1090                                   | 2,3879                                    | 444,79                                  | 6,2866                                        | 7,0752                                   |
| 49200                         | 8045,4                                   | 1,0953                                   | 2,3584                                    | 444,79                                  | 6,2090                                        | 7,1637                                   |
| 49300                         | 8045,6                                   | 1,0817                                   | 2,3292                                    | 444,79                                  | 6,1323                                        | 7,2533                                   |
| 49400                         | 8045,9                                   | 1,0683                                   | 2,3005                                    | 444,79                                  | 6,0565                                        | 7,3440                                   |
| 49500                         | 8046,1                                   | 1,0551                                   | 2,2721                                    | 444,79                                  | 5,9817                                        | 7,4358                                   |
| 49600                         | 8046,4                                   | 1,0420                                   | 2,2440                                    | 444,79                                  | 5,9078                                        | 7,5288                                   |
| 49700                         | 8046,6                                   | 1,0291                                   | 2,2163                                    | 444,79                                  | 5,8349                                        | 7,6230                                   |
| 49800                         | 8046,9                                   | 1,0164                                   | 2,1889                                    | 444,79                                  | 5,7628                                        | 7,7183                                   |
| 49900                         | 8047,1                                   | 1,0038                                   | 2,1619                                    | 444,79                                  | 5,6916                                        | 7,8148                                   |
| 50000                         | 8047,4                                   | 9,9136-3                                 | 2,1352+22                                 | 444,79                                  | 5,6213+6                                      | 7,9125-5                                 |
| 50100                         | 8047,6                                   | 9,7909                                   | 2,1088                                    | 444,79                                  | 5,5519                                        | 8,0115                                   |
| 50200                         | 8047,9                                   | 9,6697                                   | 2,0828                                    | 444,79                                  | 5,4834                                        | 8,1115                                   |
| 50300                         | 8048,1                                   | 9,5500                                   | 2,0570                                    | 444,79                                  | 5,4156                                        | 8,2131                                   |
| 50400                         | 8048,4                                   | 9,4318                                   | 2,0316                                    | 444,79                                  | 5,3488                                        | 8,3157                                   |
| 50500                         | 8048,6                                   | 9,3150                                   | 2,0066                                    | 444,79                                  | 5,2827                                        | 8,4197                                   |
| 50600                         | 8048,9                                   | 9,1997                                   | 1,9818                                    | 444,79                                  | 5,2175                                        | 8,5250                                   |
| 50700                         | 8049,1                                   | 9,0858                                   | 1,9573                                    | 444,79                                  | 5,1531                                        | 8,6315                                   |
| 50800                         | 8049,4                                   | 8,9734                                   | 1,9332                                    | 444,79                                  | 5,0895                                        | 8,7394                                   |
| 50900                         | 8049,6                                   | 8,8623                                   | 1,9093                                    | 444,79                                  | 5,0266                                        | 8,8487                                   |
| 51000                         | 8049,9                                   | 8,7526-3                                 | 1,8857+22                                 | 444,79                                  | 4,9646+6                                      | 8,9593-5                                 |
| 51200                         | 8050,4                                   | 8,5373                                   | 1,8394                                    | 444,79                                  | 4,8427                                        | 9,1847                                   |
| 51400                         | 8050,9                                   | 8,3273                                   | 1,7943                                    | 444,79                                  | 4,7239                                        | 9,4157                                   |
| 51600                         | 8051,0                                   | 8,1578                                   | 1,7536                                    | 444,37                                  | 4,6123                                        | 9,6343                                   |
| 51800                         | 8051,1                                   | 7,9533                                   | 1,7139                                    | 443,91                                  | 4,5034                                        | 9,8572                                   |
| 52000                         | 8051,2                                   | 7,7727                                   | 1,6751                                    | 443,46                                  | 4,3969                                        | 1,0080-4                                 |
| 52200                         | 7988,4                                   | 7,5958                                   | 1,6371                                    | 443,00                                  | 4,2927                                        | 1,0320                                   |
| 52400                         | 7972,5                                   | 7,4225                                   | 1,5998                                    | 442,55                                  | 4,1907                                        | 1,0566                                   |
| 52600                         | 7956,5                                   | 7,2529                                   | 1,5634                                    | 442,09                                  | 4,0910                                        | 1,0806                                   |
| 52800                         | 7940,7                                   | 7,0869                                   | 1,5277                                    | 441,64                                  | 3,9935                                        | 1,1059                                   |

Продолжение табл. 3

| Геопотенциальная<br>высота<br>$H, \text{ м}$ | Величины в функции геопотенциальной высоты           |                                            |                                               |                                                         |                                                   |                                                          |
|----------------------------------------------|------------------------------------------------------|--------------------------------------------|-----------------------------------------------|---------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------|
|                                              | масштаб<br>высоты по<br>давлению<br>$H_p, \text{ м}$ | удельный<br>вес<br>$\gamma, \text{ Н/м}^3$ | концентрация<br>частиц<br>$n, \text{ м}^{-3}$ | средняя<br>скорость<br>частиц<br>$\bar{v}, \text{ м/с}$ | частота<br>соударений<br>$\omega, \text{ с}^{-1}$ | средняя длина<br>свободного<br>пробега<br>$l, \text{ м}$ |
| 48000                                        | 8043,3                                               | 1,2153-2                                   | 2,6163+22                                     | 444,79                                                  | 6,8879+6                                          | 6,4576-5                                                 |
| 48100                                        | 8043,5                                               | 1,2001                                     | 2,5834                                        | 444,79                                                  | 6,8015                                            | 6,5396                                                   |
| 48200                                        | 8043,8                                               | 1,1850                                     | 2,5510                                        | 444,79                                                  | 6,7162                                            | 6,6227                                                   |
| 48300                                        | 8044,0                                               | 1,1701                                     | 2,5190                                        | 444,79                                                  | 6,6319                                            | 6,7068                                                   |
| 48400                                        | 8044,3                                               | 1,1554                                     | 2,4874                                        | 444,79                                                  | 6,5488                                            | 6,7920                                                   |
| 48500                                        | 8044,5                                               | 1,1408                                     | 2,4562                                        | 444,79                                                  | 6,4666                                            | 6,8783                                                   |
| 48600                                        | 8044,8                                               | 1,1265                                     | 2,4254                                        | 444,79                                                  | 6,3855                                            | 6,9656                                                   |
| 48700                                        | 8045,1                                               | 1,1123                                     | 2,3950                                        | 444,79                                                  | 6,3054                                            | 7,0541                                                   |
| 48800                                        | 8045,3                                               | 1,0983                                     | 2,3650                                        | 444,79                                                  | 6,2263                                            | 7,1437                                                   |
| 48900                                        | 8045,6                                               | 1,0845                                     | 2,3353                                        | 444,79                                                  | 6,1482                                            | 7,2345                                                   |
| 49000                                        | 8045,8                                               | 1,0709-2                                   | 2,3060+22                                     | 444,79                                                  | 6,0711+6                                          | 7,3264-5                                                 |
| 49100                                        | 8046,1                                               | 1,0574                                     | 2,2771                                        | 444,79                                                  | 5,9949                                            | 7,4194                                                   |
| 49200                                        | 8046,3                                               | 1,0441                                     | 2,2485                                        | 444,79                                                  | 5,9198                                            | 7,5137                                                   |
| 49300                                        | 8046,6                                               | 1,0310                                     | 2,2203                                        | 444,79                                                  | 5,8455                                            | 7,6091                                                   |
| 49400                                        | 8046,8                                               | 1,0180                                     | 2,1925                                        | 444,79                                                  | 5,7722                                            | 7,7058                                                   |
| 49500                                        | 8047,1                                               | 1,0052                                     | 2,1650                                        | 444,79                                                  | 5,6998                                            | 7,8036                                                   |
| 49600                                        | 8047,4                                               | 9,9259-3                                   | 2,1378                                        | 444,79                                                  | 5,6283                                            | 7,9028                                                   |
| 49700                                        | 8047,6                                               | 9,8011                                     | 2,1110                                        | 444,79                                                  | 5,5577                                            | 8,0032                                                   |
| 49800                                        | 8047,9                                               | 9,6778                                     | 2,0845                                        | 444,79                                                  | 5,4880                                            | 8,1048                                                   |
| 49900                                        | 8048,1                                               | 9,5561                                     | 2,0584                                        | 444,79                                                  | 5,4191                                            | 8,2078                                                   |
| 50000                                        | 8048,4                                               | 9,4360-3                                   | 2,0326+22                                     | 444,79                                                  | 5,3512+6                                          | 8,3120-5                                                 |
| 50100                                        | 8048,6                                               | 9,3173                                     | 2,0071                                        | 444,79                                                  | 5,2840                                            | 8,4176                                                   |
| 50200                                        | 8048,9                                               | 9,2002                                     | 1,9819                                        | 444,79                                                  | 5,2178                                            | 8,5245                                                   |
| 50300                                        | 8049,1                                               | 9,0845                                     | 1,9570                                        | 444,79                                                  | 5,1523                                            | 8,6328                                                   |
| 50400                                        | 8049,4                                               | 8,9702                                     | 1,9325                                        | 444,79                                                  | 5,0877                                            | 8,7425                                                   |
| 50500                                        | 8049,7                                               | 8,8574                                     | 1,9082                                        | 444,79                                                  | 5,0239                                            | 8,8535                                                   |
| 50600                                        | 8049,9                                               | 8,7461                                     | 1,8843                                        | 444,79                                                  | 4,9608                                            | 8,9660                                                   |
| 50700                                        | 8050,2                                               | 8,6361                                     | 1,8607                                        | 444,79                                                  | 4,8986                                            | 9,0799                                                   |
| 50800                                        | 8050,4                                               | 8,5275                                     | 1,8373                                        | 444,79                                                  | 4,8372                                            | 9,1952                                                   |
| 50900                                        | 8050,7                                               | 8,4203                                     | 1,8143                                        | 444,79                                                  | 4,7765                                            | 9,3120                                                   |
| 51000                                        | 8050,9                                               | 8,3144-3                                   | 1,7915+22                                     | 444,79                                                  | 4,7166+6                                          | 9,4303-5                                                 |
| 51200                                        | 8034,8                                               | 8,1232                                     | 1,7504                                        | 444,33                                                  | 4,6037                                            | 9,6517                                                   |
| 51400                                        | 8018,6                                               | 7,9360                                     | 1,7102                                        | 443,87                                                  | 4,4932                                            | 9,8787                                                   |
| 51600                                        | 8002,5                                               | 7,7528                                     | 1,6708                                        | 443,41                                                  | 4,3852                                            | 1,0112-4                                                 |
| 51800                                        | 7986,3                                               | 7,5734                                     | 1,6323                                        | 442,95                                                  | 4,2795                                            | 1,0350                                                   |
| 52000                                        | 7970,2                                               | 7,3978                                     | 1,5945                                        | 442,48                                                  | 4,1762                                            | 1,0595                                                   |
| 52200                                        | 7954,0                                               | 7,2259                                     | 1,5576                                        | 442,02                                                  | 4,0752                                            | 1,0847                                                   |
| 52400                                        | 7937,8                                               | 7,0577                                     | 1,5214                                        | 441,56                                                  | 3,9764                                            | 1,1105                                                   |
| 52600                                        | 7921,7                                               | 6,8931                                     | 1,4860                                        | 441,09                                                  | 3,8798                                            | 1,1369                                                   |
| 52800                                        | 7905,5                                               | 6,7319                                     | 1,4514                                        | 440,63                                                  | 3,7853                                            | 1,1640                                                   |

От 53000 до 60800 м

| Геометри-<br>ческая<br>высота<br>Б, м | Величины в функции геометрической высоты             |                            |                                              |                                         |                                             |                                                |
|---------------------------------------|------------------------------------------------------|----------------------------|----------------------------------------------|-----------------------------------------|---------------------------------------------|------------------------------------------------|
|                                       | масса<br>высоты по<br>дальному<br>Н <sub>р</sub> , м | удельный<br>вес<br>γ, Н/м³ | концентрация<br>частот<br>n, м <sup>-3</sup> | средняя<br>скорость<br>частот<br>v, м/с | частота<br>соударений<br>ω, с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>l, м |
| 53000                                 | 7924,8                                               | 6,9243-3                   | 1,4927+22                                    | 441,18                                  | 3,8981+6                                    | 1,1318-4                                       |
| 53200                                 | 7908,9                                               | 6,7651                     | 1,4585                                       | 440,73                                  | 3,8048                                      | 1,1583                                         |
| 53400                                 | 7893,0                                               | 6,6093                     | 1,4250                                       | 440,27                                  | 3,7135                                      | 1,1856                                         |
| 53600                                 | 7877,1                                               | 6,4568                     | 1,3922                                       | 439,81                                  | 3,6243                                      | 1,2135                                         |
| 53800                                 | 7861,2                                               | 6,3075                     | 1,3601                                       | 439,35                                  | 3,5370                                      | 1,2422                                         |
| 54000                                 | 7845,3                                               | 6,1613                     | 1,3287                                       | 438,90                                  | 3,4517                                      | 1,2715                                         |
| 54200                                 | 7829,4                                               | 6,0083                     | 1,2979                                       | 438,44                                  | 3,3682                                      | 1,3017                                         |
| 54400                                 | 7813,5                                               | 5,8783                     | 1,2678                                       | 437,98                                  | 3,2866                                      | 1,3326                                         |
| 54600                                 | 7797,6                                               | 5,7413                     | 1,2383                                       | 437,52                                  | 3,2069                                      | 1,3643                                         |
| 54800                                 | 7781,7                                               | 5,6072                     | 1,2095                                       | 437,06                                  | 3,1289                                      | 1,3969                                         |
| 55000                                 | 7765,8                                               | 5,4760-3                   | 1,1812+22                                    | 436,60                                  | 3,0526+6                                    | 1,4302-4                                       |
| 55200                                 | 7749,8                                               | 5,3475                     | 1,1536                                       | 436,14                                  | 2,9781                                      | 1,4645                                         |
| 55400                                 | 7733,9                                               | 5,2219                     | 1,1266                                       | 435,67                                  | 2,9052                                      | 1,4996                                         |
| 55600                                 | 7718,0                                               | 5,0989                     | 1,1001                                       | 435,21                                  | 2,8339                                      | 1,5357                                         |
| 55800                                 | 7702,1                                               | 4,9786                     | 1,0742                                       | 434,75                                  | 2,7643                                      | 1,5727                                         |
| 56000                                 | 7686,2                                               | 4,8609                     | 1,0489                                       | 434,29                                  | 2,6963                                      | 1,6107                                         |
| 56200                                 | 7670,3                                               | 4,7458                     | 1,0241                                       | 433,82                                  | 2,6297                                      | 1,6497                                         |
| 56400                                 | 7654,4                                               | 4,6331                     | 9,9987+21                                    | 433,36                                  | 2,5647                                      | 1,6897                                         |
| 56600                                 | 7638,5                                               | 4,5229                     | 9,7614                                       | 432,90                                  | 2,5012                                      | 1,7308                                         |
| 56800                                 | 7622,5                                               | 4,4151                     | 9,5293                                       | 432,43                                  | 2,4391                                      | 1,7729                                         |
| 57000                                 | 7606,6                                               | 4,3096-3                   | 9,3023+21                                    | 431,97                                  | 2,3784+6                                    | 1,8162-4                                       |
| 57200                                 | 7590,7                                               | 4,2065                     | 9,0802                                       | 431,50                                  | 2,3191                                      | 1,8606                                         |
| 57400                                 | 7574,8                                               | 4,1056                     | 8,8630                                       | 431,03                                  | 2,2612                                      | 1,9062                                         |
| 57600                                 | 7558,9                                               | 4,0069                     | 8,6505                                       | 430,57                                  | 2,2046                                      | 1,9530                                         |
| 57800                                 | 7542,9                                               | 3,9104                     | 8,4427                                       | 430,10                                  | 2,1493                                      | 2,0011                                         |
| 58000                                 | 7527,0                                               | 3,8161                     | 8,2395                                       | 429,63                                  | 2,0953                                      | 2,0504                                         |
| 58200                                 | 7511,1                                               | 3,7238                     | 8,0407                                       | 429,16                                  | 2,0425                                      | 2,1011                                         |
| 58400                                 | 7495,2                                               | 3,6335                     | 7,8464                                       | 428,70                                  | 1,9910                                      | 2,1532                                         |
| 58600                                 | 7479,3                                               | 3,5453                     | 7,6563                                       | 428,23                                  | 1,9406                                      | 2,2066                                         |
| 58800                                 | 7463,3                                               | 3,4590                     | 7,4704                                       | 427,76                                  | 1,8914                                      | 2,2615                                         |
| 59000                                 | 7447,4                                               | 3,3746-3                   | 7,2887+21                                    | 427,29                                  | 1,8434+6                                    | 2,3179-4                                       |
| 59200                                 | 7431,5                                               | 3,2922                     | 7,1110                                       | 426,82                                  | 1,7965                                      | 2,3758                                         |
| 59400                                 | 7415,5                                               | 3,2115                     | 6,9373                                       | 426,35                                  | 1,7507                                      | 2,4353                                         |
| 59600                                 | 7399,6                                               | 3,1327                     | 6,7674                                       | 425,87                                  | 1,7059                                      | 2,4965                                         |
| 59800                                 | 7383,7                                               | 3,0557                     | 6,6014                                       | 425,40                                  | 1,6622                                      | 2,5593                                         |
| 60000                                 | 7367,8                                               | 2,9804                     | 6,4391                                       | 424,93                                  | 1,6195                                      | 2,6238                                         |
| 60200                                 | 7351,8                                               | 2,9067                     | 6,2805                                       | 424,46                                  | 1,5779                                      | 2,6900                                         |
| 60400                                 | 7335,9                                               | 2,8348                     | 6,1254                                       | 423,98                                  | 1,5372                                      | 2,7581                                         |
| 60600                                 | 7319,9                                               | 2,7645                     | 5,9738                                       | 423,51                                  | 1,4975                                      | 2,8281                                         |
| 60800                                 | 7304,0                                               | 2,6958                     | 5,8257                                       | 423,04                                  | 1,4587                                      | 2,9000                                         |

Продолжение табл. 3

| Геопотенциальная<br>высота<br>$H$ , м' | Величины в функции геопотенциальной высоты     |                                                |                                                 |                                            |                                                |                                                   |
|----------------------------------------|------------------------------------------------|------------------------------------------------|-------------------------------------------------|--------------------------------------------|------------------------------------------------|---------------------------------------------------|
|                                        | масштаб<br>высоты по<br>плотности<br>$H_p$ , м | удельный<br>вес<br>$\gamma$ , Н/м <sup>3</sup> | концентрация<br>частиц<br>$n$ , м <sup>-3</sup> | средняя<br>скорость<br>частиц<br>$v$ , м/с | частота<br>соударений<br>$n$ , с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>$L$ , м |
| 53000                                  | 7889,4                                         | 6,5742-3                                       | 1,4175+22                                       | 440,16                                     | 3,6930+6                                       | 1,1919-4                                          |
| 53200                                  | 7873,2                                         | 6,4199                                         | 1,3843                                          | 439,70                                     | 3,6027                                         | 1,2205                                            |
| 53400                                  | 7857,0                                         | 6,2689                                         | 1,3518                                          | 439,23                                     | 3,5145                                         | 1,2498                                            |
| 53600                                  | 7840,8                                         | 6,1211                                         | 1,3200                                          | 438,77                                     | 3,4282                                         | 1,2799                                            |
| 53800                                  | 7824,7                                         | 5,9765                                         | 1,2889                                          | 438,30                                     | 3,3439                                         | 1,3108                                            |
| 54000                                  | 7808,5                                         | 5,8350                                         | 1,2585                                          | 437,83                                     | 3,2614                                         | 1,3425                                            |
| 54200                                  | 7792,3                                         | 5,6966                                         | 1,2287                                          | 437,37                                     | 3,1809                                         | 1,3750                                            |
| 54400                                  | 7776,1                                         | 5,5612                                         | 1,1996                                          | 436,90                                     | 3,1021                                         | 1,4084                                            |
| 54600                                  | 7759,9                                         | 5,4287                                         | 1,1711                                          | 436,43                                     | 3,0252                                         | 1,4427                                            |
| 54800                                  | 7743,8                                         | 5,2991                                         | 1,1432                                          | 436,96                                     | 2,9500                                         | 1,4778                                            |
| 55000                                  | 7727,6                                         | 5,1724-3                                       | 1,1159+22                                       | 435,49                                     | 2,8765+6                                       | 1,5140-4                                          |
| 55200                                  | 7711,4                                         | 5,0484                                         | 1,0892                                          | 435,02                                     | 2,8047                                         | 1,5511                                            |
| 55400                                  | 7695,2                                         | 4,9271                                         | 1,0631                                          | 434,55                                     | 2,7345                                         | 1,5891                                            |
| 55600                                  | 7679,0                                         | 4,8084                                         | 1,0376                                          | 434,08                                     | 2,6659                                         | 1,6282                                            |
| 55800                                  | 7662,8                                         | 4,6924                                         | 1,0126                                          | 433,61                                     | 2,5989                                         | 1,6684                                            |
| 56000                                  | 7646,6                                         | 4,5790                                         | 9,8821+21                                       | 433,13                                     | 2,5335                                         | 1,7096                                            |
| 56200                                  | 7630,4                                         | 4,4680                                         | 9,6432                                          | 432,66                                     | 2,4696                                         | 1,7520                                            |
| 56400                                  | 7614,2                                         | 4,3595                                         | 9,4096                                          | 432,19                                     | 2,4071                                         | 1,7955                                            |
| 56600                                  | 7598,0                                         | 4,2534                                         | 9,1812                                          | 431,71                                     | 2,3461                                         | 1,8401                                            |
| 56800                                  | 7581,8                                         | 4,1497                                         | 8,9579                                          | 431,24                                     | 2,2865                                         | 1,8860                                            |
| 57000                                  | 7565,6                                         | 4,0482-3                                       | 8,7395+21                                       | 430,76                                     | 2,2283+6                                       | 1,9331-4                                          |
| 57200                                  | 7549,4                                         | 3,9491                                         | 8,5259                                          | 430,29                                     | 2,1715                                         | 1,9816                                            |
| 57400                                  | 7533,2                                         | 3,8521                                         | 8,3172                                          | 429,81                                     | 2,1159                                         | 2,0313                                            |
| 57600                                  | 7516,9                                         | 3,7573                                         | 8,1130                                          | 429,34                                     | 2,0617                                         | 2,0824                                            |
| 57800                                  | 7500,7                                         | 3,6647                                         | 7,9135                                          | 428,86                                     | 2,0088                                         | 2,1349                                            |
| 58000                                  | 7484,5                                         | 3,5741                                         | 7,7184                                          | 428,38                                     | 1,9571                                         | 2,1899                                            |
| 58200                                  | 7468,3                                         | 3,4856                                         | 7,5278                                          | 427,90                                     | 1,9066                                         | 2,2443                                            |
| 58400                                  | 7452,1                                         | 3,3991                                         | 7,3414                                          | 427,43                                     | 1,8573                                         | 2,3013                                            |
| 58600                                  | 7435,8                                         | 3,3146                                         | 7,1592                                          | 426,95                                     | 1,8092                                         | 2,3598                                            |
| 58800                                  | 7419,6                                         | 3,2319                                         | 6,9812                                          | 426,47                                     | 1,7622                                         | 2,4200                                            |
| 59000                                  | 7403,4                                         | 3,1512-3                                       | 6,8072+21                                       | 425,99                                     | 1,7164+6                                       | 2,4819-4                                          |
| 59200                                  | 7387,1                                         | 3,0723                                         | 6,6372                                          | 425,51                                     | 1,6716                                         | 2,5455                                            |
| 59400                                  | 7370,9                                         | 2,9952                                         | 6,4710                                          | 425,02                                     | 1,6279                                         | 2,6108                                            |
| 59600                                  | 7354,7                                         | 2,9198                                         | 6,3087                                          | 424,54                                     | 1,5853                                         | 2,6780                                            |
| 59800                                  | 7338,4                                         | 2,8462                                         | 6,1500                                          | 424,05                                     | 1,5437                                         | 2,7471                                            |
| 60000                                  | 7322,2                                         | 2,7743                                         | 5,9950                                          | 423,58                                     | 1,5030                                         | 2,8181                                            |
| 60200                                  | 7306,0                                         | 2,7041                                         | 5,8436                                          | 423,09                                     | 1,4634                                         | 2,8912                                            |
| 60400                                  | 7289,7                                         | 2,6354                                         | 5,6956                                          | 422,61                                     | 1,4247                                         | 2,9662                                            |
| 60600                                  | 7273,5                                         | 2,5684                                         | 5,5511                                          | 422,13                                     | 1,3870                                         | 3,0435                                            |
| 60800                                  | 7257,2                                         | 2,5029                                         | 5,4099                                          | 421,64                                     | 1,3502                                         | 3,1229                                            |

61000 до 68800 м

| Геометри-<br>ческая<br>высота<br>h, м | Величины в функции геометрической высоты |                                    |                                              |                                         |                                                     |                                                |
|---------------------------------------|------------------------------------------|------------------------------------|----------------------------------------------|-----------------------------------------|-----------------------------------------------------|------------------------------------------------|
|                                       | масштаб<br>высоты по<br>давлению<br>H, м | удельный<br>вес<br>$\gamma$ , Н/м³ | концентрация<br>частиц<br>n, м <sup>-3</sup> | средняя<br>скорость<br>частиц<br>v, м/с | частота<br>соударений<br>$\omega$ , с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>l, м |
| 61000                                 | 7288,1                                   | 2,6286—3                           | 5,6809+21                                    | 422,56                                  | 1,4209+6                                            | 2,9739—4                                       |
| 61200                                 | 7272,1                                   | 2,5630                             | 5,5394                                       | 422,09                                  | 1,3839                                              | 3,0499                                         |
| 61400                                 | 7256,2                                   | 2,4988                             | 5,4011                                       | 421,61                                  | 1,3479                                              | 3,1280                                         |
| 61600                                 | 7240,3                                   | 2,4362                             | 5,2660                                       | 421,13                                  | 1,3127                                              | 3,2082                                         |
| 61800                                 | 7224,3                                   | 2,3750                             | 5,1340                                       | 420,66                                  | 1,2783                                              | 3,2907                                         |
| 62000                                 | 7208,4                                   | 2,3152                             | 5,0051                                       | 420,18                                  | 1,2448                                              | 3,3755                                         |
| 62200                                 | 7192,4                                   | 2,2567                             | 4,8790                                       | 419,70                                  | 1,2121                                              | 3,4627                                         |
| 62400                                 | 7176,6                                   | 2,1997                             | 4,7559                                       | 419,22                                  | 1,1801                                              | 3,5523                                         |
| 62600                                 | 7160,6                                   | 2,1439                             | 4,6357                                       | 418,74                                  | 1,1490                                              | 3,6445                                         |
| 62800                                 | 7144,6                                   | 2,0894                             | 4,5182                                       | 418,26                                  | 1,1186                                              | 3,7393                                         |
| 63000                                 | 7128,6                                   | 2,0362—3                           | 4,4034+21                                    | 417,78                                  | 1,0889+6                                            | 3,8367—4                                       |
| 63200                                 | 7112,7                                   | 1,9843                             | 4,2913                                       | 417,30                                  | 1,0600                                              | 3,9369                                         |
| 63400                                 | 7096,8                                   | 1,9336                             | 4,1819                                       | 416,82                                  | 1,0317                                              | 4,0400                                         |
| 63600                                 | 7080,8                                   | 1,8840                             | 4,0749                                       | 416,34                                  | 1,0042                                              | 4,1460                                         |
| 63800                                 | 7064,9                                   | 1,8356                             | 3,9705                                       | 415,86                                  | 9,7733+5                                            | 4,2550                                         |
| 64000                                 | 7048,9                                   | 1,7883                             | 3,8685                                       | 415,38                                  | 9,5112                                              | 4,3672                                         |
| 64200                                 | 7032,9                                   | 1,7422                             | 3,7690                                       | 414,89                                  | 9,2556                                              | 4,4826                                         |
| 64400                                 | 7017,0                                   | 1,6971                             | 3,6717                                       | 414,41                                  | 9,0064                                              | 4,6013                                         |
| 64600                                 | 7001,0                                   | 1,6532                             | 3,5768                                       | 413,92                                  | 8,7632                                              | 4,7234                                         |
| 64800                                 | 6985,1                                   | 1,6102                             | 3,4841                                       | 413,44                                  | 8,5261                                              | 4,8491                                         |
| 65000                                 | 6969,1                                   | 1,5683—3                           | 3,3936+21                                    | 412,95                                  | 8,2949+5                                            | 4,9784—4                                       |
| 65200                                 | 6953,2                                   | 1,5274                             | 3,3053                                       | 412,47                                  | 8,0695                                              | 5,1114                                         |
| 65400                                 | 6937,2                                   | 1,4874                             | 3,2190                                       | 411,98                                  | 7,8497                                              | 5,2484                                         |
| 65600                                 | 6921,2                                   | 1,4485                             | 3,1349                                       | 411,49                                  | 7,6354                                              | 5,3893                                         |
| 65800                                 | 6905,3                                   | 1,4104                             | 3,0527                                       | 411,01                                  | 7,4265                                              | 5,5343                                         |
| 66000                                 | 6889,3                                   | 1,3733                             | 2,9725                                       | 410,52                                  | 7,2228                                              | 5,6836                                         |
| 66200                                 | 6873,4                                   | 1,3370                             | 2,8942                                       | 410,03                                  | 7,0243                                              | 5,8373                                         |
| 66400                                 | 6857,4                                   | 1,3017                             | 2,8179                                       | 409,54                                  | 6,8307                                              | 5,9956                                         |
| 66600                                 | 6841,4                                   | 1,2672                             | 2,7433                                       | 409,05                                  | 6,6421                                              | 6,1584                                         |
| 66800                                 | 6825,5                                   | 1,2335                             | 2,6706                                       | 408,56                                  | 6,4583                                              | 6,3262                                         |
| 67000                                 | 6809,5                                   | 1,2006—3                           | 2,5996+21                                    | 408,07                                  | 6,2791+5                                            | 6,4989—4                                       |
| 67200                                 | 6793,5                                   | 1,1686                             | 2,5304                                       | 407,58                                  | 6,1045                                              | 6,6767                                         |
| 67400                                 | 6777,6                                   | 1,1373                             | 2,4628                                       | 407,09                                  | 5,9344                                              | 6,8598                                         |
| 67600                                 | 6761,6                                   | 1,1068                             | 2,3969                                       | 406,59                                  | 5,7686                                              | 7,0484                                         |
| 67800                                 | 6745,6                                   | 1,0771                             | 2,3327                                       | 406,10                                  | 5,6071                                              | 7,2427                                         |
| 68000                                 | 6729,6                                   | 1,0480                             | 2,2699                                       | 405,61                                  | 5,4497                                              | 7,4427                                         |
| 68200                                 | 6713,7                                   | 1,0197                             | 2,2088                                       | 405,11                                  | 5,2964                                              | 7,6489                                         |
| 68400                                 | 6697,7                                   | 9,9213—4                           | 2,1491                                       | 404,62                                  | 5,1470                                              | 7,8612                                         |
| 68600                                 | 6681,7                                   | 9,8521                             | 2,0909                                       | 404,12                                  | 5,0016                                              | 8,0799                                         |
| 68800                                 | 6665,7                                   | 9,7896                             | 2,0342                                       | 403,63                                  | 4,8599                                              | 8,3053                                         |

Продолжение табл. 3

| Геопотенциальная<br>высота<br>$H, м$ | Величины в функции геопотенциальной высоты   |                                    |                                             |                                           |                                      |                                                  |
|--------------------------------------|----------------------------------------------|------------------------------------|---------------------------------------------|-------------------------------------------|--------------------------------------|--------------------------------------------------|
|                                      | масштаб<br>высоты по<br>давлению<br>$H_p, м$ | узельный<br>вес<br>$\gamma, Н/м^3$ | концентрация<br>частиц<br>$\lambda, м^{-3}$ | средняя<br>скорость<br>частиц<br>$v, м/с$ | частота<br>соударений<br>$n, с^{-1}$ | средняя длина<br>свободного<br>пробега<br>$l, м$ |
| 61000                                | 7241,0                                       | 2,4390-3                           | 5,2720+21                                   | 421,15                                    | 1,3142+6                             | 3,2046-4                                         |
| 61200                                | 7224,7                                       | 2,3765                             | 5,1373                                      | 420,67                                    | 1,2792                               | 3,2886                                           |
| 61400                                | 7208,5                                       | 2,3155                             | 5,0058                                      | 420,18                                    | 1,2450                               | 3,3750                                           |
| 61600                                | 7192,2                                       | 2,2559                             | 4,8773                                      | 419,69                                    | 1,2116                               | 3,4639                                           |
| 61800                                | 7176,0                                       | 2,1978                             | 4,7518                                      | 419,21                                    | 1,1791                               | 3,5534                                           |
| 62000                                | 7159,7                                       | 2,1410                             | 4,6293                                      | 418,72                                    | 1,1473                               | 3,6495                                           |
| 62200                                | 7143,4                                       | 2,0855                             | 4,5097                                      | 418,23                                    | 1,1164                               | 3,7463                                           |
| 62400                                | 7127,2                                       | 2,0313                             | 4,3929                                      | 417,74                                    | 1,0862                               | 3,8459                                           |
| 62600                                | 7110,9                                       | 1,9785                             | 4,2788                                      | 417,25                                    | 1,0567                               | 3,9484                                           |
| 62800                                | 7094,6                                       | 1,9269                             | 4,1675                                      | 416,76                                    | 1,0280                               | 4,0539                                           |
| 63000                                | 7078,4                                       | 1,8765-3                           | 4,0588+21                                   | 416,27                                    | 1,0000+6                             | 4,1625-4                                         |
| 63200                                | 7062,1                                       | 1,8273                             | 3,9527                                      | 415,77                                    | 9,7274+5                             | 4,2743                                           |
| 63400                                | 7045,8                                       | 1,7793                             | 3,8491                                      | 415,28                                    | 9,4613                               | 4,3893                                           |
| 63600                                | 7029,5                                       | 1,7325                             | 3,7480                                      | 414,79                                    | 8,2018                               | 4,5077                                           |
| 63800                                | 7013,6                                       | 1,6867                             | 3,6493                                      | 414,29                                    | 8,9489                               | 4,6296                                           |
| 64000                                | 6997,0                                       | 1,6421                             | 3,5530                                      | 413,80                                    | 8,7023                               | 4,7551                                           |
| 64200                                | 6980,7                                       | 1,5986                             | 3,4590                                      | 413,31                                    | 8,4620                               | 4,8843                                           |
| 64400                                | 6964,4                                       | 1,5561                             | 3,3673                                      | 412,81                                    | 8,2277                               | 5,0173                                           |
| 64600                                | 6948,1                                       | 1,5146                             | 3,2778                                      | 412,31                                    | 7,9994                               | 5,1543                                           |
| 64800                                | 6931,8                                       | 1,4742                             | 3,1904                                      | 411,82                                    | 7,7769                               | 5,2954                                           |
| 65000                                | 6915,5                                       | 1,4347-3                           | 3,1052+21                                   | 411,32                                    | 7,5601+5                             | 5,4407-4                                         |
| 65200                                | 6899,2                                       | 1,3962                             | 3,0221                                      | 410,82                                    | 7,3488                               | 5,5903                                           |
| 65400                                | 6882,9                                       | 1,3587                             | 2,9410                                      | 410,32                                    | 7,1429                               | 5,7445                                           |
| 65600                                | 6866,6                                       | 1,3221                             | 2,8619                                      | 409,82                                    | 6,9423                               | 5,9033                                           |
| 65800                                | 6850,3                                       | 1,2863                             | 2,7847                                      | 409,32                                    | 6,7469                               | 6,0669                                           |
| 66000                                | 6834,0                                       | 1,2515                             | 2,7095                                      | 408,82                                    | 6,5565                               | 6,2354                                           |
| 66200                                | 6817,7                                       | 1,2175                             | 2,6361                                      | 408,32                                    | 6,3711                               | 6,4090                                           |
| 66400                                | 6801,4                                       | 1,1844                             | 2,5645                                      | 407,82                                    | 6,1904                               | 6,5879                                           |
| 66600                                | 6785,1                                       | 1,1520                             | 2,4947                                      | 407,32                                    | 6,0145                               | 6,7723                                           |
| 66800                                | 6768,8                                       | 1,1205                             | 2,4266                                      | 406,82                                    | 5,8431                               | 6,9623                                           |
| 67000                                | 6752,5                                       | 1,0898-3                           | 2,3602+21                                   | 406,31                                    | 5,6762+5                             | 7,1532-4                                         |
| 67200                                | 6736,2                                       | 1,0598                             | 2,2955                                      | 405,81                                    | 5,5137                               | 7,3600                                           |
| 67400                                | 6719,9                                       | 1,0306                             | 2,2324                                      | 405,30                                    | 5,3554                               | 7,5681                                           |
| 67600                                | 6703,6                                       | 1,0022                             | 2,1708                                      | 404,80                                    | 5,2014                               | 7,7826                                           |
| 67800                                | 6687,2                                       | 9,7443-4                           | 2,1109                                      | 404,29                                    | 5,0513                               | 8,0037                                           |
| 68000                                | 6670,9                                       | 9,4738                             | 2,0524                                      | 403,79                                    | 4,9053                               | 8,2317                                           |
| 68200                                | 6654,6                                       | 9,2102                             | 1,9954                                      | 403,28                                    | 4,7631                               | 8,4668                                           |
| 68400                                | 6638,3                                       | 8,9532                             | 1,9399                                      | 402,77                                    | 4,6247                               | 8,7092                                           |
| 68600                                | 6621,9                                       | 8,7029                             | 1,8857                                      | 402,26                                    | 4,4900                               | 8,9591                                           |
| 68800                                | 6605,6                                       | 8,4589                             | 1,8330                                      | 401,75                                    | 4,3589                               | 9,2170                                           |

От 69000 до 76800 м

| Геометри-<br>ческая<br>высота<br>H, м | Величины в функции геометрической высоты            |                            |                                              |                                         |                                             |                                                |
|---------------------------------------|-----------------------------------------------------|----------------------------|----------------------------------------------|-----------------------------------------|---------------------------------------------|------------------------------------------------|
|                                       | масштаб<br>высоты по<br>длину<br>H <sub>p</sub> , м | удельный<br>вес<br>γ, Н/м³ | концентрация<br>частиц<br>л, м <sup>-3</sup> | средняя<br>скорость<br>частиц<br>v, м/с | частота<br>соударений<br>ω, с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>l, м |
| 69000                                 | 6649,8                                              | 9,1336-4                   | 1,9789+21                                    | 403,13                                  | 4,7218+5                                    | 8,5375-4                                       |
| 69200                                 | 6633,8                                              | 8,8840                     | 1,9249                                       | 402,63                                  | 4,5874                                      | 8,7769                                         |
| 69400                                 | 6617,8                                              | 8,6407                     | 1,8723                                       | 402,13                                  | 4,4565                                      | 9,0235                                         |
| 69600                                 | 6601,8                                              | 8,4034                     | 1,8210                                       | 401,64                                  | 4,3291                                      | 9,2776                                         |
| 69800                                 | 6585,8                                              | 8,1722                     | 1,7710                                       | 401,14                                  | 4,2050                                      | 9,5396                                         |
| 70000                                 | 6569,9                                              | 7,9467                     | 1,7223                                       | 400,64                                  | 4,0841                                      | 9,8096                                         |
| 70200                                 | 6553,9                                              | 7,7270                     | 1,6747                                       | 400,14                                  | 3,9665                                      | 1,0088-3                                       |
| 70400                                 | 6537,9                                              | 7,5128                     | 1,6284                                       | 399,64                                  | 3,8519                                      | 1,0375                                         |
| 70600                                 | 6521,9                                              | 7,3040                     | 1,5833                                       | 399,14                                  | 3,7404                                      | 1,0671                                         |
| 70800                                 | 6505,9                                              | 7,1006                     | 1,5393                                       | 398,63                                  | 3,6319                                      | 1,0976                                         |
|                                       |                                                     |                            |                                              |                                         |                                             |                                                |
| 71000                                 | 6489,9                                              | 6,9023-4                   | 1,4964+21                                    | 398,13                                  | 3,5263+5                                    | 1,1290-3                                       |
| 71200                                 | 6473,9                                              | 6,7091                     | 1,4546                                       | 397,63                                  | 3,4235                                      | 1,1615                                         |
| 71400                                 | 6458,0                                              | 6,5209                     | 1,4139                                       | 397,12                                  | 3,3234                                      | 1,1949                                         |
| 71600                                 | 6442,0                                              | 6,3375                     | 1,3742                                       | 396,62                                  | 3,2260                                      | 1,2294                                         |
| 71800                                 | 6426,0                                              | 6,1588                     | 1,3355                                       | 396,12                                  | 3,1313                                      | 1,2650                                         |
| 72000                                 | 6410,6                                              | 5,9805                     | 1,2969                                       | 395,62                                  | 3,0380                                      | 1,3027                                         |
| 72200                                 | 6403,3                                              | 5,8070                     | 1,2594                                       | 395,12                                  | 2,9474                                      | 1,3415                                         |
| 72400                                 | 6392,0                                              | 5,6382                     | 1,2228                                       | 394,62                                  | 2,8593                                      | 1,3816                                         |
| 72600                                 | 6380,7                                              | 5,4740                     | 1,1873                                       | 394,12                                  | 2,7736                                      | 1,4229                                         |
| 72800                                 | 6369,4                                              | 5,3144                     | 1,1528                                       | 393,61                                  | 2,6905                                      | 1,4656                                         |
|                                       |                                                     |                            |                                              |                                         |                                             |                                                |
| 73000                                 | 6358,1                                              | 5,1591-4                   | 1,1192+21                                    | 393,11                                  | 2,6096+5                                    | 1,5096-3                                       |
| 73200                                 | 6346,7                                              | 5,0081                     | 1,0865                                       | 392,61                                  | 2,5311                                      | 1,5550                                         |
| 73400                                 | 6335,4                                              | 4,8613                     | 1,0547                                       | 392,11                                  | 2,4547                                      | 1,6019                                         |
| 73600                                 | 6324,1                                              | 4,7185                     | 1,0238                                       | 391,61                                  | 2,3806                                      | 1,6502                                         |
| 73800                                 | 6312,8                                              | 4,5797                     | 9,9371+20                                    | 391,11                                  | 2,3086                                      | 1,7002                                         |
| 74000                                 | 6301,5                                              | 4,4447                     | 9,8449                                       | 390,61                                  | 2,2386                                      | 1,7517                                         |
| 74200                                 | 6290,2                                              | 4,3135                     | 9,7607                                       | 390,11                                  | 2,1706                                      | 1,8049                                         |
| 74400                                 | 6278,9                                              | 4,1859                     | 9,6844                                       | 389,61                                  | 2,1046                                      | 1,8597                                         |
| 74600                                 | 6267,5                                              | 4,0619                     | 8,8158                                       | 389,11                                  | 2,0404                                      | 1,9164                                         |
| 74800                                 | 6256,2                                              | 3,9413                     | 8,5546                                       | 388,61                                  | 1,9781                                      | 1,9749                                         |
|                                       |                                                     |                            |                                              |                                         |                                             |                                                |
| 75000                                 | 6244,9                                              | 3,8241-4                   | 8,3008+20                                    | 388,11                                  | 1,9176+5                                    | 2,0353-3                                       |
| 75200                                 | 6233,6                                              | 3,7102                     | 8,0540                                       | 387,61                                  | 1,8589                                      | 2,0977                                         |
| 75400                                 | 6222,3                                              | 3,5995                     | 7,8142                                       | 387,11                                  | 1,8018                                      | 2,1621                                         |
| 75600                                 | 6210,9                                              | 3,4919                     | 7,5810                                       | 386,61                                  | 1,7464                                      | 2,2285                                         |
| 75800                                 | 6199,6                                              | 3,3873                     | 7,3544                                       | 386,11                                  | 1,6926                                      | 2,2972                                         |
| 76000                                 | 6188,3                                              | 3,2857                     | 7,1342                                       | 385,61                                  | 1,6404                                      | 2,3681                                         |
| 76200                                 | 6177,0                                              | 3,1869                     | 6,9202                                       | 385,11                                  | 1,5897                                      | 2,4413                                         |
| 76400                                 | 6165,6                                              | 3,0910                     | 6,7123                                       | 384,61                                  | 1,5405                                      | 2,5170                                         |
| 76600                                 | 6154,3                                              | 2,9977                     | 6,5102                                       | 384,11                                  | 1,4927                                      | 2,5951                                         |
| 76800                                 | 6143,0                                              | 2,9072                     | 6,3139                                       | 383,61                                  | 1,4463                                      | 2,6758                                         |

Продолжение табл. 3

| Геопотенциальная<br>высота<br>$H, \text{ м}^*$ | Величины в функции геопотенциальной высоты             |                                            |                                               |                                                   |                                                   |                                                          |
|------------------------------------------------|--------------------------------------------------------|--------------------------------------------|-----------------------------------------------|---------------------------------------------------|---------------------------------------------------|----------------------------------------------------------|
|                                                | масштаб<br>высоты по<br>дальномеру<br>$H_p, \text{ м}$ | удельный<br>вес<br>$\gamma, \text{ Н/м}^3$ | концентрация<br>частиц<br>$n, \text{ м}^{-3}$ | средняя<br>скорость<br>частиц<br>$v, \text{ м/с}$ | частота<br>соударений<br>$\omega, \text{ с}^{-1}$ | средняя длина<br>свободного<br>пробега<br>$l, \text{ м}$ |
| 69000                                          | 6589,3                                                 | 8,2211-4                                   | 1,7816+21                                     | 401,24                                            | 4,2312+5                                          | 9,4829-4                                                 |
| 69200                                          | 6572,9                                                 | 7,9895                                     | 1,7315                                        | 400,73                                            | 4,1071                                            | 9,7572                                                   |
| 69400                                          | 6556,6                                                 | 7,7638                                     | 1,6822                                        | 400,22                                            | 3,9862                                            | 1,0040-3                                                 |
| 69600                                          | 6540,3                                                 | 7,5440                                     | 1,6352                                        | 399,71                                            | 3,8636                                            | 1,0332                                                   |
| 69800                                          | 6523,9                                                 | 7,3298                                     | 1,5888                                        | 399,20                                            | 3,7542                                            | 1,0633                                                   |
| 70000                                          | 6507,6                                                 | 7,1212                                     | 1,5437                                        | 398,69                                            | 3,6429                                            | 1,0944                                                   |
| 70200                                          | 6491,2                                                 | 6,9180                                     | 1,4998                                        | 398,17                                            | 3,5346                                            | 1,1265                                                   |
| 70400                                          | 6474,9                                                 | 6,7202                                     | 1,4570                                        | 397,66                                            | 3,4293                                            | 1,1596                                                   |
| 70600                                          | 6458,5                                                 | 6,5274                                     | 1,4153                                        | 397,14                                            | 3,3269                                            | 1,1937                                                   |
| 70800                                          | 6442,2                                                 | 6,3398                                     | 1,3747                                        | 396,63                                            | 3,2272                                            | 1,2290                                                   |
| 71000                                          | 6425,8                                                 | 6,1570-4                                   | 1,3351+21                                     | 396,11                                            | 3,1303+5                                          | 1,2654-3                                                 |
| 71200                                          | 6414,2                                                 | 5,9747                                     | 1,2957                                        | 395,74                                            | 3,0350                                            | 1,3039                                                   |
| 71400                                          | 6402,7                                                 | 5,7947                                     | 1,2573                                        | 395,37                                            | 2,9424                                            | 1,3437                                                   |
| 71600                                          | 6391,1                                                 | 5,6251                                     | 1,2200                                        | 395,00                                            | 2,8525                                            | 1,3848                                                   |
| 71800                                          | 6379,5                                                 | 5,4576                                     | 1,1838                                        | 394,63                                            | 2,7651                                            | 1,4272                                                   |
| 72000                                          | 6368,0                                                 | 5,2948                                     | 1,1485                                        | 394,26                                            | 2,6803                                            | 1,4710                                                   |
| 72200                                          | 6356,4                                                 | 5,1366                                     | 1,1143                                        | 393,89                                            | 2,5979                                            | 1,5162                                                   |
| 72400                                          | 6344,8                                                 | 4,9828                                     | 1,0810                                        | 393,52                                            | 2,5179                                            | 1,5629                                                   |
| 72600                                          | 6333,2                                                 | 4,8333                                     | 1,0486                                        | 393,15                                            | 2,4402                                            | 1,6111                                                   |
| 72800                                          | 6321,7                                                 | 4,6881                                     | 1,0172                                        | 392,77                                            | 2,3648                                            | 1,6609                                                   |
| 73000                                          | 6310,1                                                 | 4,5469-4                                   | 9,8661+20                                     | 392,40                                            | 2,2915+5                                          | 1,7124-3                                                 |
| 73200                                          | 6298,5                                                 | 4,4098                                     | 9,5691                                        | 392,03                                            | 2,2204                                            | 1,7655                                                   |
| 73400                                          | 6286,9                                                 | 4,2765                                     | 9,2805                                        | 391,65                                            | 2,1514                                            | 1,8204                                                   |
| 73600                                          | 6275,3                                                 | 4,1470                                     | 9,0001                                        | 391,28                                            | 2,0844                                            | 1,8772                                                   |
| 73800                                          | 6263,8                                                 | 4,0212                                     | 8,7276                                        | 390,91                                            | 2,0194                                            | 1,9358                                                   |
| 74000                                          | 6252,2                                                 | 3,8990                                     | 8,4629                                        | 390,54                                            | 1,9563                                            | 1,9963                                                   |
| 74200                                          | 6240,6                                                 | 3,7803                                     | 8,2057                                        | 390,16                                            | 1,8950                                            | 2,0589                                                   |
| 74400                                          | 6229,0                                                 | 3,6649                                     | 7,9559                                        | 389,79                                            | 1,8365                                            | 2,1235                                                   |
| 74600                                          | 6217,4                                                 | 3,5529                                     | 7,7132                                        | 389,41                                            | 1,7778                                            | 2,1904                                                   |
| 74800                                          | 6205,8                                                 | 3,4441                                     | 7,4775                                        | 389,03                                            | 1,7218                                            | 2,2594                                                   |
| 75000                                          | 6194,2                                                 | 3,3384-4                                   | 7,2485+20                                     | 388,66                                            | 1,6675+5                                          | 2,3308-3                                                 |
| 75200                                          | 6182,6                                                 | 3,2358                                     | 7,0261                                        | 388,28                                            | 1,6148                                            | 2,4045                                                   |
| 75400                                          | 6171,0                                                 | 3,1362                                     | 6,8102                                        | 387,91                                            | 1,5636                                            | 2,4808                                                   |
| 75600                                          | 6159,4                                                 | 3,0394                                     | 6,6005                                        | 387,53                                            | 1,5140                                            | 2,5596                                                   |
| 75800                                          | 6147,8                                                 | 2,9454                                     | 6,3965                                        | 387,15                                            | 1,4659                                            | 2,6411                                                   |
| 76000                                          | 6136,2                                                 | 2,8542                                     | 6,1991                                        | 386,77                                            | 1,4192                                            | 2,7254                                                   |
| 76200                                          | 6124,6                                                 | 2,7656                                     | 6,0071                                        | 386,40                                            | 1,3739                                            | 2,8125                                                   |
| 76400                                          | 6113,0                                                 | 2,6796                                     | 5,8206                                        | 386,02                                            | 1,3299                                            | 2,9025                                                   |
| 76600                                          | 6101,4                                                 | 2,5961                                     | 5,6397                                        | 385,64                                            | 1,2873                                            | 2,9957                                                   |
| 76800                                          | 6089,8                                                 | 2,5151                                     | 5,4640                                        | 385,26                                            | 1,2460                                            | 3,0920                                                   |



От 77000 до 80000 м

| Геометри-<br>ческая<br>высота<br>h, м | Величины в функции геометрической высоты |                                    |                                              |                                         |                                             |                                                |
|---------------------------------------|------------------------------------------|------------------------------------|----------------------------------------------|-----------------------------------------|---------------------------------------------|------------------------------------------------|
|                                       | масштаб<br>высоты по<br>давлению<br>H, м | удельный<br>вес<br>$\gamma$ , Н/м³ | концентрация<br>частиц<br>л, м <sup>-3</sup> | средняя<br>скорость<br>частиц<br>v, м/с | частота<br>соударений<br>n, с <sup>-1</sup> | средняя длина<br>свободного<br>пробега<br>l, м |
| 77000                                 | 6131,7                                   | 2,8191-4                           | 6,1231+20                                    | 386,63                                  | 1,4012+5                                    | 2,7592-3                                       |
| 77200                                 | 6120,3                                   | 2,7336                             | 5,9378                                       | 386,26                                  | 1,3575                                      | 2,8453                                         |
| 77400                                 | 6109,0                                   | 2,6506                             | 5,7577                                       | 385,89                                  | 1,3151                                      | 2,9343                                         |
| 77600                                 | 6097,7                                   | 2,5699                             | 5,5828                                       | 385,52                                  | 1,2739                                      | 3,0262                                         |
| 77800                                 | 6086,3                                   | 2,4915                             | 5,4129                                       | 385,15                                  | 1,2340                                      | 3,1212                                         |
| 78000                                 | 6075,0                                   | 2,4154                             | 5,2478                                       | 384,78                                  | 1,1952                                      | 3,2194                                         |
| 78200                                 | 6063,7                                   | 2,3415                             | 5,0875                                       | 384,40                                  | 1,1576                                      | 3,3208                                         |
| 78400                                 | 6052,4                                   | 2,2697                             | 4,9318                                       | 384,03                                  | 1,1211                                      | 3,4256                                         |
| 78600                                 | 6041,0                                   | 2,2000                             | 4,7806                                       | 383,66                                  | 1,0856                                      | 3,5340                                         |
| 78800                                 | 6029,7                                   | 2,1323                             | 4,6338                                       | 383,29                                  | 1,0513                                      | 3,6460                                         |
| 79000                                 | 6018,4                                   | 2,0665-4                           | 4,4912+20                                    | 382,92                                  | 1,0179+5                                    | 3,7617-3                                       |
| 79200                                 | 6007,0                                   | 2,0027                             | 4,3527                                       | 382,54                                  | 9,8558+4                                    | 3,8814                                         |
| 79400                                 | 5995,7                                   | 1,9407                             | 4,2183                                       | 382,17                                  | 9,5421                                      | 4,0051                                         |
| 79600                                 | 5984,3                                   | 1,8805                             | 4,0877                                       | 381,80                                  | 9,2378                                      | 4,1330                                         |
| 79800                                 | 5973,0                                   | 1,8221                             | 3,9610                                       | 381,42                                  | 8,9426                                      | 4,2652                                         |
| 80000                                 | 5961,7                                   | 1,7654                             | 3,8380                                       | 381,05                                  | 8,6564                                      | 4,4020                                         |

Примечание. Однозначное или двузначное число со знаком плюс или минус — множителя данного и каждого последующего значений.

Продолжение табл. 3

| Геопотенциальная<br>высота<br>$H, м'$ | Величины в функции геопотенциальной высоты   |                                    |                                       |                                                 |                                           |                                                  |
|---------------------------------------|----------------------------------------------|------------------------------------|---------------------------------------|-------------------------------------------------|-------------------------------------------|--------------------------------------------------|
|                                       | масштаб<br>высоты по<br>давлению<br>$H_p, м$ | удельный<br>вес<br>$\gamma, Н/м^3$ | концентрация<br>частиц<br>$n, м^{-3}$ | средняя<br>скорость<br>частиц<br>$\bar{v}, м/с$ | частота<br>соударений<br>$\omega, с^{-1}$ | средняя длина<br>свободного<br>пробега<br>$l, м$ |
| 77000                                 | 6078,2                                       | 2,4364-4                           | 5,2934+20                             | 384,88                                          | 1,2059+5                                  | 3,1916-3                                         |
| 77200                                 | 6066,6                                       | 2,3601                             | 5,1279                                | 384,50                                          | 1,1670                                    | 3,2947                                           |
| 77400                                 | 6055,0                                       | 2,2850                             | 4,9672                                | 384,12                                          | 1,1293                                    | 3,4013                                           |
| 77600                                 | 6043,3                                       | 2,2141                             | 4,8112                                | 383,74                                          | 1,0928                                    | 3,5115                                           |
| 77800                                 | 6031,7                                       | 2,1443                             | 4,6599                                | 383,36                                          | 1,0574                                    | 3,6256                                           |
| 78000                                 | 6020,1                                       | 2,0766                             | 4,5130                                | 382,98                                          | 1,0230                                    | 3,7436                                           |
| 78200                                 | 6008,5                                       | 2,0109                             | 4,3705                                | 382,59                                          | 9,8973+4                                  | 3,8656                                           |
| 78400                                 | 5996,9                                       | 1,9471                             | 4,2322                                | 382,21                                          | 9,5745                                    | 3,9920                                           |
| 78600                                 | 5985,2                                       | 1,8852                             | 4,0980                                | 381,83                                          | 9,2617                                    | 4,1227                                           |
| 78800                                 | 5973,6                                       | 1,8252                             | 3,9678                                | 381,45                                          | 8,9584                                    | 4,2579                                           |
| 79000                                 | 5962,0                                       | 1,7670-4                           | 3,8415+20                             | 381,06                                          | 8,6646+4                                  | 4,3979-3                                         |
| 79200                                 | 5950,4                                       | 1,7106                             | 3,7190                                | 380,68                                          | 8,3798                                    | 4,5428                                           |
| 79400                                 | 5938,7                                       | 1,6558                             | 3,6001                                | 380,29                                          | 8,1038                                    | 4,6928                                           |
| 79600                                 | 5927,1                                       | 1,6027                             | 3,4848                                | 379,91                                          | 7,8363                                    | 4,8480                                           |
| 79800                                 | 5915,5                                       | 1,5511                             | 3,3730                                | 379,52                                          | 7,5772                                    | 5,0088                                           |
| 80000                                 | 5903,9                                       | 1,5012                             | 3,2646                                | 379,14                                          | 7,3262                                    | 5,1751                                           |

минус, стоящее после значения параметра, является показателем степени десяти

(Измененная редакция, Изм. № 1).

Таблица 4

Параметры атмосферы на высотах от 80000 до 120000 м  
От 80000 до 104000 м

| Гео-<br>метри-<br>ческая<br>высота<br>h, м | Темпе-<br>ратура T, К | Давление<br>p, Па | Плотность<br>ρ, кг/м³ | Ускорение<br>свободного<br>падения<br>g, м/с² | Концентрация<br>частиц N,<br>м⁻³ | Длина<br>свободного<br>пробега<br>l, м | Молярная<br>масса M,<br>кг/кмоль |
|--------------------------------------------|-----------------------|-------------------|-----------------------|-----------------------------------------------|----------------------------------|----------------------------------------|----------------------------------|
| 80000                                      | 198,639               | 1,05247 0         | 1,84580 -5            | 9,564                                         | 3,8380 +20                       | 4,4020 -3                              | 28,964420                        |
| 80500                                      | 197,664               | 9,67656 -1        | 1,70542               | 9,563                                         | 3,5461                           | 4,7644                                 | 28,964420                        |
| 81000                                      | 196,688               | 8,89202           | 1,57493               | 9,561                                         | 3,2747                           | 5,1591                                 | 28,964420                        |
| 81500                                      | 195,714               | 8,16908           | 1,45408               | 9,560                                         | 3,0235                           | 5,5879                                 | 28,964420                        |
| 82000                                      | 194,738               | 7,50042           | 1,34175               | 9,558                                         | 2,7899                           | 6,0537                                 | 28,964420                        |
| 82500                                      | 193,764               | 6,88475           | 1,23781               | 9,557                                         | 2,5738                           | 6,5642                                 | 28,964420                        |
| 83000                                      | 192,790               | 6,31690           | 1,14145               | 9,555                                         | 2,3734                           | 7,1183                                 | 28,964420                        |
| 83500                                      | 191,816               | 5,79335           | 1,05216               | 9,554                                         | 2,1878                           | 7,7224                                 | 28,964420                        |
| 84000                                      | 190,842               | 5,31086           | 9,69458 -6            | 9,552                                         | 2,0158                           | 8,3812                                 | 28,964420                        |
| 84500                                      | 189,868               | 4,86638           | 8,92678               | 9,551                                         | 1,8565                           | 9,1001                                 | 28,964420                        |
| 85000                                      | 188,894               | 4,45710 -1        | 8,22001 -6            | 9,550                                         | 1,7092 +20                       | 9,8847 -3                              | 28,964420                        |
| 85500                                      | 187,920               | 4,08039           | 7,56427               | 9,548                                         | 1,5728                           | 1,0742 -2                              | 28,964420                        |
| 86000                                      | 186,946               | 3,73380           | 6,95782               | 9,547                                         | 1,4467                           | 1,1678                                 | 28,964420                        |
| 86500                                      | 186,650               | 3,41546           | 6,37469               | 9,545                                         | 1,3255                           | 1,3175                                 | 28,964420                        |
| 87000                                      | 186,650               | 3,12476           | 5,83212               | 9,544                                         | 1,2127                           | 1,3932                                 | 28,964420                        |
| 87500                                      | 186,650               | 2,85828           | 5,33476               | 9,542                                         | 1,1093                           | 1,5231                                 | 28,964420                        |
| 88000                                      | 186,650               | 2,61501           | 4,88072               | 9,541                                         | 1,0148                           | 1,6648                                 | 28,964420                        |
| 88500                                      | 186,650               | 2,39201           | 4,46450               | 9,539                                         | 9,2830 +19                       | 1,8200                                 | 28,964420                        |
| 89000                                      | 186,650               | 2,18841           | 4,08450               | 9,538                                         | 8,4929                           | 1,9893                                 | 28,964420                        |
| 89500                                      | 186,650               | 2,00215           | 3,73686               | 9,536                                         | 7,7700                           | 2,1744                                 | 28,964420                        |
| 90000                                      | 186,650               | 1,83140 -1        | 3,41817 -6            | 9,535                                         | 7,1074 +19                       | 2,3771 -2                              | 28,964420                        |
| 90500                                      | 186,650               | 1,67553           | 3,12745               | 9,533                                         | 6,5025                           | 2,5982                                 | 28,964420                        |
| 91000                                      | 186,650               | 1,53292           | 2,86108               | 9,532                                         | 5,9190                           | 2,8399                                 | 28,964420                        |
| 91500                                      | 186,650               | 1,40245           | 2,61757               | 9,530                                         | 5,4427                           | 3,1041                                 | 28,964420                        |
| 92000                                      | 186,650               | 1,28308           | 2,39477               | 9,529                                         | 4,9794                           | 3,3929                                 | 28,964420                        |
| 92500                                      | 186,650               | 1,17409           | 2,19135               | 9,527                                         | 4,5565                           | 3,7079                                 | 28,964420                        |
| 93000                                      | 186,650               | 1,07416           | 2,00484               | 9,526                                         | 4,1687                           | 4,0528                                 | 28,964420                        |
| 93500                                      | 186,650               | 9,82737 -2        | 1,83420               | 9,524                                         | 3,8139                           | 4,4299                                 | 28,964420                        |
| 94000                                      | 186,650               | 8,99258           | 1,67840               | 9,523                                         | 3,4900                           | 4,8411                                 | 28,964420                        |
| 94500                                      | 186,644               | 8,22720           | 1,53554               | 9,521                                         | 3,1929                           | 5,2914                                 | 28,9640                          |
| 95000                                      | 186,622               | 7,52834 -2        | 1,40510 -6            | 9,520                                         | 2,9221 +19                       | 5,7818 -2                              | 28,960                           |
| 96000                                      | 188,240               | 6,30558           | 1,16617               | 9,517                                         | 2,4264                           | 6,9628                                 | 28,945                           |
| 97000                                      | 190,917               | 5,29545           | 9,64450 -7            | 9,514                                         | 2,0092                           | 8,4089                                 | 28,910                           |
| 98000                                      | 192,912               | 4,45890           | 7,99924               | 9,511                                         | 1,6976                           | 1,0091 -1                              | 28,774                           |
| 99000                                      | 194,775               | 3,76413           | 6,65312               | 9,508                                         | 1,3999                           | 1,2069                                 | 28,623                           |
| 100000                                     | 196,605               | 3,18603           | 5,54951               | 9,505                                         | 1,1739                           | 1,4393                                 | 28,472                           |
| 101000                                     | 198,404               | 2,70326           | 4,64111               | 9,502                                         | 9,8694 +18                       | 1,7118                                 | 28,321                           |
| 102000                                     | 200,172               | 2,29898           | 3,89128               | 9,499                                         | 8,3193                           | 2,0308                                 | 28,170                           |
| 103000                                     | 201,911               | 1,95962           | 3,27067               | 9,496                                         | 7,0302                           | 2,4032                                 | 28,019                           |
| 104000                                     | 203,618               | 1,67431           | 2,75614               | 9,493                                         | 5,9563                           | 2,8364                                 | 27,868                           |

От 105000 до 149000 м

| Гео-<br>метри-<br>ческая<br>высота<br>$h$ , м | Темпе-<br>ратура $T$ , К | Давление<br>$p$ , Па | Плотность<br>$\rho$ , кг/м <sup>3</sup> | Ускорение<br>свободного<br>падения<br>$g$ , м/с <sup>2</sup> | Концентрация<br>частиц $n$ ,<br>м <sup>-3</sup> | Длина<br>свободного<br>пробега<br>$l$ , м | Молярная<br>масса $M$ ,<br>кг/кмоль |
|-----------------------------------------------|--------------------------|----------------------|-----------------------------------------|--------------------------------------------------------------|-------------------------------------------------|-------------------------------------------|-------------------------------------|
| 105000                                        | 211,752                  | 1,43661-2            | 2,26166-7                               | 9,490                                                        | 4,9144+18                                       | 3,4379-1                                  | 27,717                              |
| 106000                                        | 220,721                  | 1,24169              | 1,86514                                 | 9,488                                                        | 4,0750                                          | 4,1460                                    | 27,566                              |
| 107000                                        | 229,589                  | 1,08011              | 1,55121                                 | 9,485                                                        | 3,4078                                          | 4,9577                                    | 27,415                              |
| 108000                                        | 238,336                  | 9,45321-3            | 1,30060                                 | 9,482                                                        | 2,8731                                          | 5,8804                                    | 27,263                              |
| 109000                                        | 246,962                  | 8,32015              | 1,09860                                 | 9,479                                                        | 2,4404                                          | 6,9231                                    | 27,112                              |
| 110000                                        | 255,487                  | 7,35900              | 9,34035-8                               | 9,476                                                        | 2,0864                                          | 8,0975                                    | 26,961                              |
| 111000                                        | 263,891                  | 6,54011              | 7,99116                                 | 9,473                                                        | 1,7952                                          | 9,4111                                    | 26,810                              |
| 112000                                        | 272,184                  | 5,83750              | 6,87683                                 | 9,470                                                        | 1,5535                                          | 1,0875                                    | 0 26,659                            |
| 113000                                        | 280,356                  | 5,23190              | 5,94575                                 | 9,467                                                        | 1,3518                                          | 1,2498                                    | 26,508                              |
| 114000                                        | 288,427                  | 4,70615              | 5,17245                                 | 9,462                                                        | 1,1819                                          | 1,4294                                    | 26,357                              |
| 115000                                        | 296,377                  | 4,24849-3            | 4,51814-8                               | 9,461                                                        | 1,0384+18                                       | 1,6271                                    | 0 26,206                            |
| 116000                                        | 304,207                  | 3,84826              | 3,96418                                 | 9,458                                                        | 9,1633+17                                       | 1,8438                                    | 26,055                              |
| 117000                                        | 311,926                  | 3,49640              | 3,49222                                 | 9,455                                                        | 8,1194                                          | 2,0808                                    | 25,904                              |
| 118000                                        | 319,535                  | 3,18584              | 3,08814                                 | 9,452                                                        | 7,2221                                          | 2,3393                                    | 25,752                              |
| 119000                                        | 327,033                  | 2,91073              | 2,74061                                 | 9,449                                                        | 6,4471                                          | 2,6146                                    | 25,601                              |
| 120000                                        | 334,417                  | 2,66618              | 2,44041                                 | 9,447                                                        | 5,7751                                          | 2,9255                                    | 25,450                              |
| 120000                                        | 334,42                   | 2,66618-3            | 2,44041-8                               | 9,447                                                        | 5,7751+17                                       | 2,9255+0                                  | 25,45                               |
| 121000                                        | 345,68                   | 2,50215              | 2,20814                                 | 9,444                                                        | 5,243                                           | 3,2222                                    | 25,36                               |
| 122000                                        | 356,94                   | 2,36291              | 2,01267                                 | 9,441                                                        | 4,795                                           | 3,5233                                    | 25,28                               |
| 123000                                        | 368,20                   | 2,22898              | 1,83438                                 | 9,438                                                        | 4,385                                           | 3,8528                                    | 25,19                               |
| 124000                                        | 379,46                   | 2,10075              | 1,67199                                 | 9,435                                                        | 4,010                                           | 4,2129                                    | 25,11                               |
| 125000                                        | 390,72                   | 1,97851              | 1,52430                                 | 9,432                                                        | 3,668                                           | 4,6060                                    | 25,03                               |
| 126000                                        | 401,97                   | 1,86245              | 1,39015                                 | 9,429                                                        | 3,356                                           | 5,0340                                    | 24,95                               |
| 127000                                        | 413,23                   | 1,75266              | 1,26846                                 | 9,426                                                        | 3,072                                           | 5,4991                                    | 24,87                               |
| 128000                                        | 424,49                   | 1,64917              | 1,15819                                 | 9,423                                                        | 2,814                                           | 6,0035                                    | 24,79                               |
| 129000                                        | 435,75                   | 1,55191              | 1,05836                                 | 9,420                                                        | 2,580                                           | 6,5489                                    | 24,71                               |
| 130000                                        | 447,01                   | 1,46076-3            | 9,68064-9                               | 9,418                                                        | 2,367+17                                        | 7,1373+0                                  | 24,63                               |
| 131000                                        | 458,27                   | 1,37554              | 8,86428                                 | 9,415                                                        | 2,174                                           | 7,7704                                    | 24,55                               |
| 132000                                        | 469,53                   | 1,29601              | 8,12642                                 | 9,412                                                        | 1,999                                           | 8,4499                                    | 24,48                               |
| 133000                                        | 480,79                   | 1,22190              | 7,45948                                 | 9,409                                                        | 1,841                                           | 9,1773                                    | 24,40                               |
| 134000                                        | 492,05                   | 1,15289              | 6,85639                                 | 9,406                                                        | 1,697                                           | 9,9544                                    | 24,33                               |
| 135000                                        | 503,31                   | 1,08865              | 6,31060                                 | 9,403                                                        | 1,567                                           | 1,0783+1                                  | 24,26                               |
| 136000                                        | 514,56                   | 1,02883              | 5,81605                                 | 9,400                                                        | 1,448                                           | 1,1665                                    | 24,19                               |
| 137000                                        | 525,82                   | 9,73053-4            | 5,36717                                 | 9,397                                                        | 1,340                                           | 1,2604                                    | 24,11                               |
| 138000                                        | 537,08                   | 9,20958              | 4,95889                                 | 9,394                                                        | 1,242                                           | 1,3602                                    | 24,04                               |
| 139000                                        | 548,34                   | 8,72181              | 4,58559                                 | 9,391                                                        | 1,152                                           | 1,4664                                    | 23,98                               |
| 140000                                        | 559,60                   | 8,26375-4            | 4,24614-9                               | 9,389                                                        | 1,070+17                                        | 1,5794+1                                  | 23,91                               |
| 141000                                        | 566,40                   | 7,77095              | 3,93386                                 | 9,386                                                        | 9,938+16                                        | 1,7000                                    | 23,84                               |
| 142000                                        | 573,20                   | 7,31027              | 3,64654                                 | 9,383                                                        | 9,238                                           | 1,8288                                    | 23,77                               |
| 143000                                        | 580,00                   | 6,87814              | 3,38138                                 | 9,380                                                        | 8,590                                           | 1,9668                                    | 23,71                               |
| 144000                                        | 586,80                   | 6,47162              | 3,13605                                 | 9,377                                                        | 7,989                                           | 2,1148                                    | 23,64                               |
| 145000                                        | 593,60                   | 6,08841              | 2,90864                                 | 9,374                                                        | 7,430                                           | 2,2740                                    | 23,58                               |
| 146000                                        | 600,40                   | 5,72689              | 2,69768                                 | 9,371                                                        | 6,909                                           | 2,4452                                    | 23,51                               |
| 147000                                        | 607,20                   | 5,38618              | 2,50210                                 | 9,368                                                        | 6,425                                           | 2,6294                                    | 23,45                               |
| 148000                                        | 614,00                   | 5,06620              | 2,32127                                 | 9,365                                                        | 5,977                                           | 2,8267                                    | 23,39                               |
| 149000                                        | 620,80                   | 4,76771              | 2,15494                                 | 9,363                                                        | 5,563                                           | 3,0370                                    | 23,33                               |

| Гео-<br>метри-<br>ческая<br>высота<br>h, м | Темпе-<br>ратура T, К | Давление<br>p, Па | Плотность<br>ρ, кг/м³ | Ускорение<br>свободного<br>падения<br>g, м/с² | Концен-<br>трация час-<br>тиц, л,<br>м-3 | Длина<br>свободно-<br>го пробе-<br>га l, м | Молярная<br>масса M,<br>кг/кмоль |
|--------------------------------------------|-----------------------|-------------------|-----------------------|-----------------------------------------------|------------------------------------------|--------------------------------------------|----------------------------------|
| 150000                                     | 627,60                | 4,49233-4         | 2,00329-09            | 9,360                                         | 5,185+16                                 | 3,2584+1                                   | 23,27                            |
| 151000                                     | 634,40                | 4,31065           | 1,89681               | 9,357                                         | 4,922                                    | 3,4326                                     | 23,21                            |
| 152000                                     | 641,20                | 4,14031           | 1,79797               | 9,354                                         | 4,677                                    | 3,6121                                     | 23,15                            |
| 153000                                     | 648,00                | 3,97769           | 1,70494               | 9,351                                         | 4,446                                    | 3,7996                                     | 23,09                            |
| 154000                                     | 654,80                | 3,82257           | 1,61741               | 9,348                                         | 4,229                                    | 3,9953                                     | 23,04                            |
| 155000                                     | 661,60                | 3,67473           | 1,53510               | 9,345                                         | 4,023                                    | 4,1992                                     | 22,98                            |
| 156000                                     | 668,40                | 3,53393           | 1,45770               | 9,342                                         | 3,830                                    | 4,4114                                     | 22,92                            |
| 157000                                     | 675,20                | 3,39992           | 1,38496               | 9,340                                         | 3,647                                    | 4,6319                                     | 22,87                            |
| 158000                                     | 682,00                | 3,27247           | 1,31660               | 9,337                                         | 3,476                                    | 4,8608                                     | 22,81                            |
| 159000                                     | 688,80                | 3,15131           | 1,25237               | 9,334                                         | 3,314                                    | 5,0980                                     | 22,76                            |
| 160000                                     | 695,60                | 3,03620-4         | 1,19204-09            | 9,331                                         | 3,162+16                                 | 5,3435+1                                   | 22,71                            |
| 161000                                     | 699,57                | 2,91509           | 1,13535               | 9,328                                         | 3,018                                    | 5,5973                                     | 22,65                            |
| 162000                                     | 703,54                | 2,80055           | 1,08210               | 9,325                                         | 2,883                                    | 5,8593                                     | 22,60                            |
| 163000                                     | 707,51                | 2,69225           | 1,03203               | 9,322                                         | 2,756                                    | 6,1294                                     | 22,55                            |
| 164000                                     | 711,48                | 2,58982           | 9,85037-10            | 9,320                                         | 2,637                                    | 6,4075                                     | 22,50                            |
| 165000                                     | 715,49                | 2,49295           | 9,40825               | 9,317                                         | 2,524                                    | 6,6937                                     | 22,45                            |
| 166000                                     | 719,42                | 2,40129           | 8,99240               | 9,314                                         | 2,418                                    | 6,9877                                     | 22,40                            |
| 167000                                     | 723,39                | 2,31452           | 8,60103               | 9,311                                         | 2,318                                    | 7,2897                                     | 22,35                            |
| 168000                                     | 727,36                | 2,23234           | 8,23245               | 9,308                                         | 2,223                                    | 7,5996                                     | 22,30                            |
| 169000                                     | 731,33                | 2,15444           | 7,88506               | 9,305                                         | 2,134                                    | 7,9173                                     | 22,25                            |
| 170000                                     | 735,30                | 2,08053-4         | 7,55732-10            | 9,302                                         | 2,050+16                                 | 8,2431+1                                   | 22,21                            |
| 171000                                     | 739,27                | 2,01034           | 7,24781               | 9,300                                         | 1,970                                    | 8,5769                                     | 22,16                            |
| 172000                                     | 743,24                | 1,94359           | 6,95515               | 9,297                                         | 1,894                                    | 8,9191                                     | 22,11                            |
| 173000                                     | 747,21                | 1,88004           | 6,67809               | 9,294                                         | 1,823                                    | 9,2699                                     | 22,07                            |
| 174000                                     | 751,18                | 1,81943           | 6,41542               | 9,291                                         | 1,754                                    | 9,6296                                     | 22,02                            |
| 175000                                     | 755,15                | 1,76153           | 6,16603               | 9,288                                         | 1,690                                    | 9,9986                                     | 21,98                            |
| 176000                                     | 759,12                | 1,70614           | 5,92889               | 9,285                                         | 1,628                                    | 1,0378+2                                   | 21,93                            |
| 177000                                     | 763,09                | 1,65304           | 5,70303               | 9,283                                         | 1,569                                    | 1,0767                                     | 21,89                            |
| 178000                                     | 767,06                | 1,60206           | 5,48769               | 9,280                                         | 1,513                                    | 1,1167                                     | 21,85                            |
| 179000                                     | 771,03                | 1,55301           | 5,28175               | 9,277                                         | 1,459                                    | 1,1580                                     | 21,80                            |
| 180000                                     | 775,00                | 1,50574-4         | 5,08478-10            | 9,274                                         | 1,407+16                                 | 1,2005+2                                   | 21,76                            |
| 181000                                     | 778,97                | 1,46011           | 4,89604               | 9,271                                         | 1,358                                    | 1,2443                                     | 21,72                            |
| 182000                                     | 782,94                | 1,41600           | 4,71493               | 9,268                                         | 1,310                                    | 1,2896                                     | 21,68                            |
| 183000                                     | 786,91                | 1,37329           | 4,54096               | 9,265                                         | 1,264                                    | 1,3365                                     | 21,63                            |
| 184000                                     | 790,88                | 1,33190           | 4,37368               | 9,263                                         | 1,220                                    | 1,3850                                     | 21,59                            |
| 185000                                     | 794,85                | 1,29177           | 4,21273               | 9,260                                         | 1,177                                    | 1,4352                                     | 21,55                            |
| 186000                                     | 798,82                | 1,25282           | 4,05781               | 9,267                                         | 1,136                                    | 1,4872                                     | 21,51                            |
| 187000                                     | 802,79                | 1,21505           | 3,90870               | 9,254                                         | 1,096                                    | 1,5410                                     | 21,47                            |
| 188000                                     | 806,76                | 1,17842           | 3,76524               | 9,251                                         | 1,058                                    | 1,5968                                     | 21,43                            |
| 189000                                     | 810,73                | 1,14294           | 3,62734               | 9,249                                         | 1,021                                    | 1,6544                                     | 21,39                            |

От 190000 до 229000 м

Продолжение табл. 4

| Гео-<br>метри-<br>ческая<br>высота<br>h, м | Темпера-<br>тура T, К | Давление<br>p, Па | Плотность<br>ρ, кг/м³ | Ускорение<br>свободного<br>падения<br>g, м/с² | Констан-<br>та частоты<br>ν, м⁻³ | Длина<br>свободно-<br>го пробе-<br>га l, м | Молярная<br>масса M,<br>кг/кмоль |
|--------------------------------------------|-----------------------|-------------------|-----------------------|-----------------------------------------------|----------------------------------|--------------------------------------------|----------------------------------|
| 190000                                     | 814,70                | 1,10866-4         | 3,49499-10            | 9,246                                         | 9,857+15                         | 1,7140+2                                   | 21,35                            |
| 191000                                     | 818,67                | 1,07561           | 3,36823               | 9,243                                         | 9,517                            | 1,7752                                     | 21,31                            |
| 192000                                     | 822,64                | 1,04386           | 3,24717               | 9,240                                         | 9,192                            | 1,8381                                     | 21,28                            |
| 193000                                     | 826,61                | 1,01351           | 3,13199               | 9,237                                         | 8,881                            | 1,9023                                     | 21,24                            |
| 194000                                     | 830,58                | 9,84678-5         | 3,02294               | 9,234                                         | 8,588                            | 1,9674                                     | 21,20                            |
| 195000                                     | 834,55                | 9,57500           | 2,92032               | 9,232                                         | 8,311                            | 2,0329                                     | 21,16                            |
| 196000                                     | 838,52                | 9,32141           | 2,82451               | 9,229                                         | 8,052                            | 2,0981                                     | 21,13                            |
| 197000                                     | 842,49                | 9,08788           | 2,73595               | 9,226                                         | 7,814                            | 2,1622                                     | 21,09                            |
| 198000                                     | 846,46                | 8,87655           | 2,65513               | 9,223                                         | 7,596                            | 2,2241                                     | 21,05                            |
| 199000                                     | 850,43                | 8,68079           | 2,58262               | 9,220                                         | 7,402                            | 2,2826                                     | 21,01                            |
| 200000                                     | 854,40                | 8,53026-5         | 2,51904-10            | 9,218                                         | 7,232+15                         | 2,3361+2                                   | 20,98                            |
| 201000                                     | 858,15                | 8,23175           | 2,42171               | 9,215                                         | 6,965                            | 2,4258                                     | 20,94                            |
| 202000                                     | 857,90                | 8,00431           | 2,34594               | 9,212                                         | 6,758                            | 2,4998                                     | 20,91                            |
| 203000                                     | 859,65                | 7,78409           | 2,27283               | 9,209                                         | 6,559                            | 2,5758                                     | 20,87                            |
| 204000                                     | 861,40                | 7,57087           | 2,20229               | 9,206                                         | 6,366                            | 2,6537                                     | 20,83                            |
| 205000                                     | 863,15                | 7,36446           | 2,13424               | 9,203                                         | 6,180                            | 2,7337                                     | 20,80                            |
| 206000                                     | 864,90                | 7,16466           | 2,06859               | 9,201                                         | 6,000                            | 2,8156                                     | 20,76                            |
| 207000                                     | 866,65                | 6,97127           | 2,00526               | 9,198                                         | 5,827                            | 2,8996                                     | 20,73                            |
| 208000                                     | 868,40                | 6,78409           | 1,94416               | 9,195                                         | 5,659                            | 2,9856                                     | 20,69                            |
| 209000                                     | 870,15                | 6,60295           | 1,88523               | 9,192                                         | 5,497                            | 3,0737                                     | 20,66                            |
| 210000                                     | 871,90                | 6,42764-5         | 1,82838-10            | 9,189                                         | 5,340+15                         | 3,1638+2                                   | 20,62                            |
| 211000                                     | 873,65                | 6,25800           | 1,77353               | 9,187                                         | 5,189                            | 3,2561                                     | 20,59                            |
| 212000                                     | 875,40                | 6,09383           | 1,72062               | 9,184                                         | 5,042                            | 3,3505                                     | 20,55                            |
| 213000                                     | 877,15                | 5,93496           | 1,66958               | 9,181                                         | 4,901                            | 3,4471                                     | 20,52                            |
| 214000                                     | 878,90                | 5,78122           | 1,62033               | 9,178                                         | 4,765                            | 3,5458                                     | 20,48                            |
| 215000                                     | 880,65                | 5,63242           | 1,57280               | 9,175                                         | 4,633                            | 3,6468                                     | 20,45                            |
| 216000                                     | 882,40                | 5,48842           | 1,52694               | 9,173                                         | 4,505                            | 3,7499                                     | 20,41                            |
| 217000                                     | 884,15                | 5,34903           | 1,48268               | 9,170                                         | 4,382                            | 3,8552                                     | 20,38                            |
| 218000                                     | 885,90                | 5,21409           | 1,43996               | 9,167                                         | 4,263                            | 3,9628                                     | 20,34                            |
| 219000                                     | 887,65                | 5,08346           | 1,39871               | 9,164                                         | 4,148                            | 4,0727                                     | 20,31                            |
| 220000                                     | 889,40                | 4,95697-5         | 1,35889-10            | 9,162                                         | 4,037+15                         | 4,1848+2                                   | 20,27                            |
| 221000                                     | 891,15                | 4,83448           | 1,32043               | 9,159                                         | 3,930                            | 4,2993                                     | 20,24                            |
| 222000                                     | 892,90                | 4,71583           | 1,28328               | 9,156                                         | 3,826                            | 4,4161                                     | 20,20                            |
| 223000                                     | 894,65                | 4,60088           | 1,24738               | 9,153                                         | 3,725                            | 4,5353                                     | 20,17                            |
| 224000                                     | 896,40                | 4,48950           | 1,21269               | 9,150                                         | 3,628                            | 4,6570                                     | 20,13                            |
| 225000                                     | 898,15                | 4,38153           | 1,17916               | 9,148                                         | 3,534                            | 4,7810                                     | 20,10                            |
| 226000                                     | 899,90                | 4,27686           | 1,14674               | 9,145                                         | 3,443                            | 4,9076                                     | 20,06                            |
| 227000                                     | 901,65                | 4,17535           | 1,11538               | 9,142                                         | 3,354                            | 5,0367                                     | 20,03                            |
| 228000                                     | 903,40                | 4,07687           | 1,08504               | 9,139                                         | 3,269                            | 5,1683                                     | 19,99                            |
| 229000                                     | 905,15                | 3,98131           | 1,05567               | 9,137                                         | 3,186                            | 5,3027                                     | 19,95                            |

| Гео-<br>метри-<br>ческая<br>высота<br>h, м | Темпе-<br>ратура T, К | Давление<br>p, Па | Плотность<br>$\rho$ , кг/м <sup>3</sup> | Ускорение<br>свободного<br>падения<br>g, м/с <sup>2</sup> | Концепту-<br>альная час-<br>тота $\nu$ ,<br>м <sup>-3</sup> | Длина<br>свободного<br>пробега<br>l, м | Молярная<br>масса, M,<br>кг/кмоль |
|--------------------------------------------|-----------------------|-------------------|-----------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------|----------------------------------------|-----------------------------------|
| 230000                                     | 906,90                | 3,88854-5         | 1,02724-10                              | 9,134                                                     | 3,106+15                                                    | 5,4397+2                               | 19,92                             |
| 231000                                     | 908,65                | 3,79845           | 9,99709-11                              | 9,131                                                     | 3,028                                                       | 5,5794                                 | 19,88                             |
| 232000                                     | 910,40                | 3,71094           | 9,73033                                 | 9,128                                                     | 2,953                                                       | 5,7220                                 | 19,85                             |
| 233000                                     | 912,15                | 3,62589           | 9,47179                                 | 9,125                                                     | 2,879                                                       | 5,8675                                 | 19,81                             |
| 234000                                     | 913,90                | 3,54321           | 9,22112                                 | 9,123                                                     | 2,808                                                       | 6,0159                                 | 19,77                             |
| 235000                                     | 915,65                | 3,46279           | 8,97799                                 | 9,120                                                     | 2,739                                                       | 6,1674                                 | 19,74                             |
| 236000                                     | 917,40                | 3,38455           | 8,74209                                 | 9,117                                                     | 2,672                                                       | 6,3220                                 | 19,70                             |
| 237000                                     | 919,15                | 3,30839           | 8,51310                                 | 9,114                                                     | 2,607                                                       | 6,4799                                 | 19,66                             |
| 238000                                     | 920,90                | 3,23424           | 8,29076                                 | 9,112                                                     | 2,544                                                       | 6,6411                                 | 19,63                             |
| 239000                                     | 922,65                | 3,16200           | 8,07479                                 | 9,109                                                     | 2,482                                                       | 6,8057                                 | 19,59                             |
| 240000                                     | 924,40                | 3,09161-5         | 7,86493-11                              | 9,106                                                     | 2,423+15                                                    | 6,9739+2                               | 19,55                             |
| 241000                                     | 926,15                | 3,02299           | 7,66094                                 | 9,103                                                     | 2,364                                                       | 7,1457                                 | 19,51                             |
| 242000                                     | 927,90                | 2,95607           | 7,46260                                 | 9,101                                                     | 2,308                                                       | 7,3212                                 | 19,48                             |
| 243000                                     | 929,65                | 2,89080           | 7,26970                                 | 9,098                                                     | 2,252                                                       | 7,5007                                 | 19,44                             |
| 244000                                     | 931,40                | 2,82711           | 7,08203                                 | 9,095                                                     | 2,199                                                       | 7,6841                                 | 19,40                             |
| 245000                                     | 933,15                | 2,76496           | 6,89942                                 | 9,092                                                     | 2,146                                                       | 7,8716                                 | 19,36                             |
| 246000                                     | 934,90                | 2,70429           | 6,72170                                 | 9,090                                                     | 2,095                                                       | 8,0633                                 | 19,32                             |
| 247000                                     | 936,65                | 2,64506           | 6,54871                                 | 9,087                                                     | 2,046                                                       | 8,2593                                 | 19,28                             |
| 248000                                     | 938,40                | 2,58723           | 6,38031                                 | 9,084                                                     | 1,997                                                       | 8,4596                                 | 19,24                             |
| 249000                                     | 940,15                | 2,53076           | 6,21637                                 | 9,081                                                     | 1,950                                                       | 8,6645                                 | 19,20                             |
| 250000                                     | 941,90                | 2,47564-5         | 6,05679-11                              | 9,079                                                     | 1,904+15                                                    | 8,8739+2                               | 19,16                             |
| 251000                                     | 942,47                | 2,42279           | 5,91295                                 | 9,076                                                     | 1,862                                                       | 9,0730                                 | 19,12                             |
| 252000                                     | 943,04                | 2,36864           | 5,76710                                 | 9,073                                                     | 1,819                                                       | 9,2860                                 | 19,09                             |
| 253000                                     | 943,61                | 2,31584           | 5,62529                                 | 9,070                                                     | 1,778                                                       | 9,5035                                 | 19,06                             |
| 254000                                     | 944,18                | 2,26439           | 5,48740                                 | 9,068                                                     | 1,737                                                       | 9,7253                                 | 19,02                             |
| 255000                                     | 944,75                | 2,21424           | 5,35333                                 | 9,065                                                     | 1,698                                                       | 9,9516                                 | 18,99                             |
| 256000                                     | 945,32                | 2,16535           | 5,22299                                 | 9,062                                                     | 1,659                                                       | 1,0182+3                               | 18,96                             |
| 257000                                     | 945,89                | 2,11771           | 5,09625                                 | 9,059                                                     | 1,622                                                       | 1,0418                                 | 18,93                             |
| 258000                                     | 946,46                | 2,07127           | 4,97302                                 | 9,057                                                     | 1,585                                                       | 1,0658                                 | 18,89                             |
| 259000                                     | 947,03                | 2,02602           | 4,85321                                 | 9,054                                                     | 1,550                                                       | 1,0902                                 | 18,86                             |
| 260000                                     | 947,60                | 1,98191-5         | 4,73671-11                              | 9,051                                                     | 1,515+15                                                    | 1,1152+3                               | 18,83                             |
| 261000                                     | 948,17                | 1,93892           | 4,62343                                 | 9,048                                                     | 1,481                                                       | 1,1406                                 | 18,80                             |
| 262000                                     | 948,74                | 1,89701           | 4,51328                                 | 9,046                                                     | 1,448                                                       | 1,1665                                 | 18,77                             |
| 263000                                     | 949,31                | 1,85617           | 4,40617                                 | 9,043                                                     | 1,416                                                       | 1,1929                                 | 18,74                             |
| 264000                                     | 949,88                | 1,81636           | 4,30201                                 | 9,040                                                     | 1,385                                                       | 1,2197                                 | 18,71                             |
| 265000                                     | 950,45                | 1,77756           | 4,20071                                 | 9,037                                                     | 1,355                                                       | 1,2471                                 | 18,67                             |
| 266000                                     | 951,02                | 1,73973           | 4,10218                                 | 9,035                                                     | 1,325                                                       | 1,2750                                 | 18,64                             |
| 267000                                     | 951,59                | 1,70286           | 4,00635                                 | 9,032                                                     | 1,296                                                       | 1,3034                                 | 18,61                             |
| 268000                                     | 952,16                | 1,66691           | 3,91313                                 | 9,029                                                     | 1,268                                                       | 1,3323                                 | 18,58                             |
| 269000                                     | 952,73                | 1,63185           | 3,82245                                 | 9,027                                                     | 1,241                                                       | 1,3617                                 | 18,55                             |

От 270000 до 318000 м

Продолжение табл. 4

| Гео-<br>метри-<br>ческая<br>высота<br>h, м | Темпера-<br>тура T, К | Давление<br>p, Па | Плотность<br>ρ, кг/м³ | Ускорение<br>свободного<br>падения<br>g, м/с² | Концент-<br>рация час-<br>тиц n,<br>м⁻³ | Длина<br>свободного<br>пробега,<br>l, м | Молярная<br>масса M,<br>кг/кмоль |
|--------------------------------------------|-----------------------|-------------------|-----------------------|-----------------------------------------------|-----------------------------------------|-----------------------------------------|----------------------------------|
| 270000                                     | 953,30                | 1,59767-5         | 3,73422-11            | 9,024                                         | 1,214+15                                | 1,3917+3                                | 18,53                            |
| 271000                                     | 953,87                | 1,56434           | 3,64837               | 9,021                                         | 1,188                                   | 1,4222                                  | 18,50                            |
| 272000                                     | 954,44                | 1,53183           | 3,56482               | 9,018                                         | 1,163                                   | 1,4532                                  | 18,47                            |
| 273000                                     | 955,01                | 1,50012           | 3,48351               | 9,016                                         | 1,138                                   | 1,4848                                  | 18,44                            |
| 274000                                     | 955,58                | 1,46919           | 3,40437               | 9,013                                         | 1,114                                   | 1,5170                                  | 18,41                            |
| 275000                                     | 956,15                | 1,43901           | 3,32732               | 9,010                                         | 1,090                                   | 1,5498                                  | 18,38                            |
| 276000                                     | 956,72                | 1,40956           | 3,25230               | 9,007                                         | 1,067                                   | 1,5831                                  | 18,35                            |
| 277000                                     | 957,29                | 1,38081           | 3,17925               | 9,005                                         | 1,045                                   | 1,6170                                  | 18,33                            |
| 278000                                     | 957,86                | 1,35276           | 3,10810               | 9,002                                         | 1,023                                   | 1,6515                                  | 18,30                            |
| 279000                                     | 958,43                | 1,32537           | 3,03879               | 8,999                                         | 1,002                                   | 1,6866                                  | 18,27                            |
| 280000                                     | 959,00                | 1,29862-5         | 2,97125-11            | 8,997                                         | 9,809+14                                | 1,7224+3                                | 18,24                            |
| 281000                                     | 959,57                | 1,27250           | 2,90544               | 8,994                                         | 9,605                                   | 1,7588                                  | 18,22                            |
| 282000                                     | 960,14                | 1,24699           | 2,84130               | 8,991                                         | 9,408                                   | 1,7959                                  | 18,19                            |
| 283000                                     | 960,71                | 1,22205           | 2,77876               | 8,989                                         | 9,214                                   | 1,8336                                  | 18,16                            |
| 284000                                     | 961,28                | 1,19769           | 2,71778               | 8,986                                         | 9,025                                   | 1,8720                                  | 18,14                            |
| 285000                                     | 961,85                | 1,17388           | 2,65831               | 8,983                                         | 8,840                                   | 1,9111                                  | 18,11                            |
| 286000                                     | 962,42                | 1,15060           | 2,60029               | 8,980                                         | 8,660                                   | 1,9509                                  | 18,08                            |
| 287000                                     | 962,99                | 1,12783           | 2,54368               | 8,978                                         | 8,484                                   | 1,9915                                  | 18,06                            |
| 288000                                     | 963,56                | 1,10556           | 2,48843               | 8,975                                         | 8,311                                   | 2,0328                                  | 18,03                            |
| 289000                                     | 964,13                | 1,08377           | 2,43449               | 8,972                                         | 8,142                                   | 2,0749                                  | 18,01                            |
| 290000                                     | 964,70                | 1,06244-5         | 2,38182-11            | 8,970                                         | 7,978+14                                | 2,1178+3                                | 17,98                            |
| 291000                                     | 965,27                | 1,04157           | 2,33038               | 8,967                                         | 7,816                                   | 2,1615                                  | 17,96                            |
| 292000                                     | 965,84                | 1,02112           | 2,28013               | 8,964                                         | 7,658                                   | 2,2061                                  | 17,93                            |
| 293000                                     | 966,41                | 1,00110           | 2,23102               | 8,961                                         | 7,504                                   | 2,2515                                  | 17,91                            |
| 294000                                     | 966,98                | 9,81493-6         | 2,18302               | 8,959                                         | 7,352                                   | 2,2979                                  | 17,88                            |
| 295000                                     | 967,55                | 9,62274           | 2,13610               | 8,956                                         | 7,204                                   | 2,3452                                  | 17,86                            |
| 296000                                     | 968,12                | 9,43437           | 2,09021               | 8,953                                         | 7,059                                   | 2,3934                                  | 17,83                            |
| 297000                                     | 968,69                | 9,24969           | 2,04532               | 8,951                                         | 6,917                                   | 2,4426                                  | 17,81                            |
| 298000                                     | 969,26                | 9,06858           | 2,00141               | 8,948                                         | 6,777                                   | 2,4929                                  | 17,79                            |
| 299000                                     | 969,83                | 8,89094           | 1,95843               | 8,945                                         | 6,641                                   | 2,5442                                  | 17,76                            |
| 300000                                     | 970,40                | 8,71665-6         | 1,91637-11            | 8,943                                         | 6,507+14                                | 2,5966+3                                | 17,74                            |
| 302000                                     | 971,54                | 8,37773           | 1,83486               | 8,937                                         | 6,246                                   | 2,7048                                  | 17,69                            |
| 304000                                     | 972,68                | 8,05108           | 1,75668               | 8,932                                         | 5,996                                   | 2,8178                                  | 17,65                            |
| 306000                                     | 973,82                | 7,73604           | 1,68164               | 8,927                                         | 5,754                                   | 2,9360                                  | 17,60                            |
| 308000                                     | 974,96                | 7,43202           | 1,60957               | 8,921                                         | 5,522                                   | 3,0597                                  | 17,56                            |
| 310000                                     | 976,10                | 7,13852           | 1,54032               | 8,916                                         | 5,297                                   | 3,1892                                  | 17,51                            |
| 312000                                     | 977,24                | 6,85513           | 1,47378               | 8,911                                         | 5,081                                   | 3,3249                                  | 17,47                            |
| 314000                                     | 978,38                | 6,58153           | 1,40984               | 8,905                                         | 4,873                                   | 3,4672                                  | 17,43                            |
| 316000                                     | 979,52                | 6,31746           | 1,34842               | 8,900                                         | 4,672                                   | 3,6163                                  | 17,38                            |
| 318000                                     | 980,66                | 6,06278           | 1,28945               | 8,894                                         | 4,478                                   | 3,7726                                  | 17,34                            |



От 320000 до 398000 м

Продолжение табл. 4

| Гео-<br>метри-<br>ческая<br>высота<br>h, м | Темпера-<br>тура T, К | Давление<br>p, Па | Плотность<br>$\rho$ , кг/м <sup>3</sup> | Ускорение<br>свободного<br>падения<br>g, м/с <sup>2</sup> | Концеп-<br>ция час-<br>тиц, л.<br>м <sup>-3</sup> | Длина<br>свободного<br>пробега<br>l, м | Молярная<br>масса M,<br>кг/кмоль |
|--------------------------------------------|-----------------------|-------------------|-----------------------------------------|-----------------------------------------------------------|---------------------------------------------------|----------------------------------------|----------------------------------|
| 320000                                     | 981,80                | 5,81741-6         | 1,23289-11                              | 8,889                                                     | 4,292+14                                          | 3,9363+3                               | 17,30                            |
| 322000                                     | 982,94                | 5,58438           | 1,17871                                 | 8,884                                                     | 4,113                                             | 4,1076                                 | 17,26                            |
| 324000                                     | 984,08                | 5,35478           | 1,12692                                 | 8,879                                                     | 3,942                                             | 4,2863                                 | 17,22                            |
| 326000                                     | 984,80                | 5,13564           | 1,07752                                 | 8,873                                                     | 3,777                                             | 4,4725                                 | 17,18                            |
| 328000                                     | 985,10                | 4,92450           | 1,03055                                 | 8,868                                                     | 3,621                                             | 4,6657                                 | 17,14                            |
| 330000                                     | 985,40                | 4,72399           | 9,86051-12                              | 8,863                                                     | 3,473                                             | 4,8652                                 | 17,10                            |
| 332000                                     | 985,70                | 4,53455           | 9,44101                                 | 8,857                                                     | 3,332                                             | 5,0700                                 | 17,06                            |
| 334000                                     | 986,00                | 4,35670           | 9,04785                                 | 8,852                                                     | 3,201                                             | 5,2786                                 | 17,03                            |
| 336000                                     | 986,30                | 4,19106           | 8,68207                                 | 8,847                                                     | 3,078                                             | 5,4889                                 | 16,99                            |
| 338000                                     | 986,60                | 4,03833           | 8,34490                                 | 8,841                                                     | 2,965                                             | 5,6982                                 | 16,95                            |
| 340000                                     | 986,90                | 3,89229-6         | 8,03773-12                              | 8,836                                                     | 2,862+14                                          | 5,9032+3                               | 16,91                            |
| 342000                                     | 987,20                | 3,77483           | 7,76214                                 | 8,831                                                     | 2,770                                             | 6,0997                                 | 16,88                            |
| 344000                                     | 987,50                | 3,66592           | 7,51986                                 | 8,826                                                     | 2,689                                             | 6,2828                                 | 16,84                            |
| 346000                                     | 987,80                | 3,57361           | 7,31282                                 | 8,820                                                     | 2,621                                             | 6,4470                                 | 16,81                            |
| 348000                                     | 988,10                | 3,49906           | 7,14309                                 | 8,815                                                     | 2,565                                             | 6,5864                                 | 16,77                            |
| 350000                                     | 988,40                | 3,44350           | 7,01292                                 | 8,810                                                     | 2,524                                             | 6,6947                                 | 16,74                            |
| 352000                                     | 988,70                | 3,32323           | 6,75194                                 | 8,805                                                     | 2,435                                             | 6,9391                                 | 16,70                            |
| 354000                                     | 989,00                | 3,20580           | 6,50003                                 | 8,799                                                     | 2,349                                             | 7,1932                                 | 16,67                            |
| 356000                                     | 989,30                | 3,09469           | 6,25809                                 | 8,794                                                     | 2,266                                             | 7,4561                                 | 16,63                            |
| 358000                                     | 989,60                | 2,98675           | 6,02573                                 | 8,789                                                     | 2,186                                             | 7,7279                                 | 16,60                            |
| 360000                                     | 989,90                | 2,88283-6         | 5,80258-12                              | 8,784                                                     | 2,110+14                                          | 8,0089+3                               | 16,57                            |
| 362000                                     | 990,20                | 2,78280           | 5,58829                                 | 8,778                                                     | 2,036                                             | 8,2993                                 | 16,53                            |
| 364000                                     | 990,50                | 2,68650           | 5,38249                                 | 8,773                                                     | 1,965                                             | 8,5994                                 | 16,50                            |
| 366000                                     | 990,80                | 2,59381           | 5,18486                                 | 8,768                                                     | 1,895                                             | 8,9094                                 | 16,47                            |
| 368000                                     | 991,10                | 2,50458           | 4,99506                                 | 8,763                                                     | 1,831                                             | 9,2296                                 | 16,43                            |
| 370000                                     | 991,40                | 2,41869           | 4,81277                                 | 8,758                                                     | 1,767                                             | 9,5602                                 | 16,40                            |
| 372000                                     | 991,70                | 2,33601           | 4,63769                                 | 8,752                                                     | 1,706                                             | 9,9016                                 | 16,37                            |
| 374000                                     | 992,00                | 2,25642           | 4,46952                                 | 8,747                                                     | 1,648                                             | 1,0254+4                               | 16,34                            |
| 376000                                     | 992,30                | 2,17979           | 4,30797                                 | 8,742                                                     | 1,591                                             | 1,0618                                 | 16,31                            |
| 378000                                     | 992,60                | 2,10602           | 4,15277                                 | 8,737                                                     | 1,537                                             | 1,0993                                 | 16,27                            |
| 380000                                     | 992,90                | 2,03498-6         | 4,00363-12                              | 8,732                                                     | 1,485+14                                          | 1,1380+4                               | 16,24                            |
| 382000                                     | 993,20                | 1,96657           | 3,86031                                 | 8,726                                                     | 1,434                                             | 1,1779                                 | 16,21                            |
| 384000                                     | 993,50                | 1,90068           | 3,72256                                 | 8,721                                                     | 1,386                                             | 1,2192                                 | 16,18                            |
| 386000                                     | 993,80                | 1,83720           | 3,59013                                 | 8,716                                                     | 1,339                                             | 1,2617                                 | 16,15                            |
| 388000                                     | 994,10                | 1,77605           | 3,46280                                 | 8,711                                                     | 1,294                                             | 1,3055                                 | 16,11                            |
| 390000                                     | 994,40                | 1,71711           | 3,34034                                 | 8,706                                                     | 1,251                                             | 1,3507                                 | 16,08                            |
| 392000                                     | 994,70                | 1,66031           | 3,22253                                 | 8,701                                                     | 1,209                                             | 1,3973                                 | 16,06                            |
| 394000                                     | 995,00                | 1,60555           | 3,10918                                 | 8,695                                                     | 1,169                                             | 1,4454                                 | 16,02                            |
| 396000                                     | 995,30                | 1,55274           | 3,00010                                 | 8,690                                                     | 1,130                                             | 1,4950                                 | 15,99                            |
| 398000                                     | 995,60                | 1,50180           | 2,89508                                 | 8,685                                                     | 1,093                                             | 1,5462                                 | 15,96                            |

От 400000 до 478000 м

Продолжение табл. 4

| Гео-<br>метри-<br>ческая<br>высота<br>h, м | Темпера-<br>тура T, К | Давление<br>p, Па | Плотность<br>$\rho$ , кг/м <sup>3</sup> | Ускорение<br>свободного<br>падения<br>g, м/с <sup>2</sup> | Концент-<br>рация час-<br>тиц $\lambda$ ,<br>м <sup>-3</sup> | Длина<br>свободного<br>пробега<br>L, м | Молярная<br>масса M,<br>кг/кмоль |
|--------------------------------------------|-----------------------|-------------------|-----------------------------------------|-----------------------------------------------------------|--------------------------------------------------------------|----------------------------------------|----------------------------------|
| 400000                                     | 995,90                | 1,45265-6         | 2,79396-12                              | 8,680                                                     | 1,057+14                                                     | 1,5990+4                               | 15,93                            |
| 402000                                     | 995,94                | 1,40486           | 2,66942                                 | 8,675                                                     | 1,022                                                        | 1,6535                                 | 15,91                            |
| 404000                                     | 995,98                | 1,35874           | 2,60748                                 | 8,670                                                     | 9,882+13                                                     | 1,7087                                 | 15,89                            |
| 406000                                     | 996,02                | 1,31422           | 2,51874                                 | 8,665                                                     | 9,558                                                        | 1,7677                                 | 15,87                            |
| 408000                                     | 996,06                | 1,27124           | 2,43308                                 | 8,659                                                     | 9,245                                                        | 1,8275                                 | 15,85                            |
| 410000                                     | 996,10                | 1,22973           | 2,35038                                 | 8,654                                                     | 8,943                                                        | 1,8893                                 | 15,83                            |
| 412000                                     | 996,14                | 1,18964           | 2,27052                                 | 8,649                                                     | 8,651                                                        | 1,9530                                 | 15,81                            |
| 414000                                     | 996,18                | 1,15090           | 2,19340                                 | 8,644                                                     | 8,369                                                        | 2,0188                                 | 15,78                            |
| 416000                                     | 996,22                | 1,11348           | 2,11891                                 | 8,639                                                     | 8,096                                                        | 2,0868                                 | 15,76                            |
| 418000                                     | 996,26                | 1,07731           | 2,04695                                 | 8,634                                                     | 7,833                                                        | 2,1569                                 | 15,74                            |
| 420000                                     | 996,30                | 1,04236-6         | 1,97745-12                              | 8,629                                                     | 7,579+13                                                     | 2,2293+4                               | 15,71                            |
| 422000                                     | 996,34                | 1,00859           | 1,91031                                 | 8,624                                                     | 7,333                                                        | 2,3040                                 | 15,69                            |
| 424000                                     | 996,38                | 9,75957-7         | 1,84547                                 | 8,619                                                     | 7,095                                                        | 2,3812                                 | 15,66                            |
| 426000                                     | 996,42                | 9,44428           | 1,78285                                 | 8,613                                                     | 6,866                                                        | 2,4608                                 | 15,64                            |
| 428000                                     | 996,46                | 9,13974           | 1,72241                                 | 8,608                                                     | 6,644                                                        | 2,5429                                 | 15,61                            |
| 430000                                     | 996,50                | 8,84568           | 1,66408                                 | 8,603                                                     | 6,430                                                        | 2,6275                                 | 15,59                            |
| 432000                                     | 996,54                | 8,56189           | 1,60781                                 | 8,598                                                     | 6,223                                                        | 2,7147                                 | 15,56                            |
| 434000                                     | 996,58                | 8,28816           | 1,55357                                 | 8,593                                                     | 6,024                                                        | 2,8045                                 | 15,53                            |
| 436000                                     | 996,62                | 8,02435           | 1,50131                                 | 8,588                                                     | 5,832                                                        | 2,8968                                 | 15,50                            |
| 438000                                     | 996,66                | 7,77033           | 1,45103                                 | 8,583                                                     | 5,647                                                        | 2,9916                                 | 15,47                            |
| 440000                                     | 996,70                | 7,52601-7         | 1,40268-12                              | 8,578                                                     | 5,470+13                                                     | 3,0889+4                               | 15,44                            |
| 442000                                     | 996,74                | 7,29136           | 1,35626                                 | 8,573                                                     | 5,299                                                        | 3,1884                                 | 15,42                            |
| 444000                                     | 996,78                | 7,06635           | 1,31176                                 | 8,568                                                     | 5,135                                                        | 3,2901                                 | 15,38                            |
| 446000                                     | 996,82                | 6,85102           | 1,26918                                 | 8,563                                                     | 4,978                                                        | 3,3936                                 | 15,35                            |
| 448000                                     | 996,86                | 6,64542           | 1,22852                                 | 8,558                                                     | 4,829                                                        | 3,4987                                 | 15,32                            |
| 450000                                     | 996,90                | 6,44964           | 1,18980                                 | 8,553                                                     | 4,686                                                        | 3,6051                                 | 15,29                            |
| 452000                                     | 996,94                | 6,24047           | 1,14872                                 | 8,548                                                     | 4,534                                                        | 3,7261                                 | 15,26                            |
| 454000                                     | 996,98                | 6,05019           | 1,11124                                 | 8,543                                                     | 4,396                                                        | 3,8434                                 | 15,22                            |
| 456000                                     | 997,02                | 5,86581           | 1,07496                                 | 8,538                                                     | 4,262                                                        | 3,9644                                 | 15,19                            |
| 458000                                     | 997,06                | 5,68718           | 1,03985                                 | 8,533                                                     | 4,132                                                        | 4,0891                                 | 15,16                            |
| 460000                                     | 997,10                | 5,51415-7         | 1,00587-12                              | 8,528                                                     | 4,006+13                                                     | 4,2175+4                               | 15,12                            |
| 462000                                     | 997,14                | 5,34656           | 9,73002-13                              | 8,523                                                     | 3,884                                                        | 4,3499                                 | 15,09                            |
| 464000                                     | 997,18                | 5,18428           | 9,41207                                 | 8,518                                                     | 3,766                                                        | 4,4863                                 | 15,05                            |
| 466000                                     | 997,22                | 5,02715           | 9,10457                                 | 8,513                                                     | 3,652                                                        | 4,6267                                 | 15,02                            |
| 468000                                     | 997,26                | 4,87503           | 8,80722                                 | 8,508                                                     | 3,541                                                        | 4,7712                                 | 14,98                            |
| 470000                                     | 997,30                | 4,72778           | 8,51973                                 | 8,503                                                     | 3,434                                                        | 4,9200                                 | 14,94                            |
| 472000                                     | 997,34                | 4,58527           | 8,24181                                 | 8,498                                                     | 3,330                                                        | 5,0731                                 | 14,90                            |
| 474000                                     | 997,38                | 4,44736           | 7,97319                                 | 8,493                                                     | 3,230                                                        | 5,2307                                 | 14,87                            |
| 476000                                     | 997,42                | 4,31391           | 7,71357                                 | 8,488                                                     | 3,133                                                        | 5,3927                                 | 14,83                            |
| 478000                                     | 997,46                | 4,18480           | 7,46270                                 | 8,483                                                     | 3,039                                                        | 5,5593                                 | 14,79                            |

От 48000 до 645000 м

Продолжение табл. 4

| Гео-<br>метри-<br>ческая<br>высота<br>h, м | Темпе-<br>ратура T, К | Давление<br>p, Па | Плотность<br>$\rho$ , кг/м <sup>3</sup> | Ускорение<br>свободного<br>падения<br>g, м/с <sup>2</sup> | Концент-<br>рация час-<br>тиц n,<br>м <sup>-3</sup> | Длина<br>свободного<br>пробега<br>l, м | Молярная<br>масса M,<br>кг/кмоль |
|--------------------------------------------|-----------------------|-------------------|-----------------------------------------|-----------------------------------------------------------|-----------------------------------------------------|----------------------------------------|----------------------------------|
| 480000                                     | 997,50                | 4,05990-7         | 7,22030-13                              | 8,478                                                     | 2,948+13                                            | 5,7306+4                               | 14,75                            |
| 482000                                     | 997,54                | 3,93907           | 6,98612                                 | 8,473                                                     | 2,860                                               | 5,9066                                 | 14,71                            |
| 484000                                     | 997,58                | 3,82220           | 6,75989                                 | 8,468                                                     | 2,775                                               | 6,0874                                 | 14,67                            |
| 486000                                     | 997,62                | 3,70917           | 6,54137                                 | 8,463                                                     | 2,693                                               | 6,2732                                 | 14,63                            |
| 488000                                     | 997,66                | 3,59985           | 6,33031                                 | 8,458                                                     | 2,614                                               | 6,4639                                 | 14,59                            |
| 490000                                     | 997,70                | 3,49413           | 6,12647                                 | 8,453                                                     | 2,537                                               | 6,6598                                 | 14,54                            |
| 492000                                     | 997,74                | 3,39190           | 5,92960                                 | 8,448                                                     | 2,463                                               | 6,8508                                 | 14,50                            |
| 494000                                     | 997,78                | 3,29304           | 5,73949                                 | 8,443                                                     | 2,391                                               | 7,0670                                 | 14,46                            |
| 496000                                     | 997,82                | 3,19744           | 5,55590                                 | 8,438                                                     | 2,321                                               | 7,2786                                 | 14,42                            |
| 498000                                     | 997,86                | 3,10501           | 5,37862                                 | 8,434                                                     | 2,254                                               | 7,4956                                 | 14,37                            |
| 500000                                     | 997,90                | 3,01562-7         | 5,20743-13                              | 8,429                                                     | 2,189+13                                            | 7,7181+4                               | 14,33                            |
| 505000                                     | 998,00                | 2,80484           | 4,80474                                 | 8,416                                                     | 2,036                                               | 8,2989                                 | 14,21                            |
| 510000                                     | 998,10                | 2,61098           | 4,43567                                 | 8,404                                                     | 1,895                                               | 8,9160                                 | 14,10                            |
| 515000                                     | 998,20                | 2,43258           | 4,09731                                 | 8,392                                                     | 1,765                                               | 9,5708                                 | 13,98                            |
| 520000                                     | 998,30                | 2,26830           | 3,78691                                 | 8,380                                                     | 1,646                                               | 1,0265+5                               | 13,86                            |
| 525000                                     | 998,40                | 2,11689           | 3,50196                                 | 8,367                                                     | 1,536                                               | 1,1000                                 | 13,73                            |
| 530000                                     | 998,50                | 1,97719           | 3,24011                                 | 8,355                                                     | 1,434                                               | 1,1779                                 | 13,60                            |
| 535000                                     | 998,60                | 1,84812           | 2,99926                                 | 8,343                                                     | 1,341                                               | 1,2603                                 | 13,47                            |
| 540000                                     | 998,70                | 1,72871           | 2,77744                                 | 8,331                                                     | 1,254                                               | 1,3475                                 | 13,34                            |
| 545000                                     | 998,80                | 1,61807           | 2,57292                                 | 8,319                                                     | 1,173                                               | 1,4397                                 | 13,20                            |
| 550000                                     | 998,90                | 1,51543-7         | 2,38414-13                              | 8,307                                                     | 1,099+13                                            | 1,5374+5                               | 13,07                            |
| 555000                                     | 999,00                | 1,42008           | 2,20971                                 | 8,295                                                     | 1,030                                               | 1,6408                                 | 12,92                            |
| 560000                                     | 999,10                | 1,33142           | 2,04842                                 | 8,283                                                     | 9,653+12                                            | 1,7502                                 | 12,78                            |
| 565000                                     | 999,20                | 1,24894           | 1,89925                                 | 8,271                                                     | 9,054                                               | 1,8660                                 | 12,63                            |
| 570000                                     | 999,30                | 1,17222           | 1,76131                                 | 8,259                                                     | 8,497                                               | 1,9883                                 | 12,48                            |
| 575000                                     | 999,40                | 1,10095           | 1,63389                                 | 8,247                                                     | 7,980                                               | 2,1172                                 | 12,33                            |
| 580000                                     | 999,50                | 1,03490           | 1,51643                                 | 8,235                                                     | 7,500                                               | 2,2526                                 | 12,18                            |
| 585000                                     | 999,60                | 9,73924-8         | 1,40850                                 | 8,223                                                     | 7,058                                               | 2,3939                                 | 12,02                            |
| 590000                                     | 999,70                | 9,17988           | 1,30981                                 | 8,212                                                     | 6,652                                               | 2,5400                                 | 11,86                            |
| 595000                                     | 999,80                | 8,67143           | 1,22020                                 | 8,200                                                     | 6,283                                               | 2,6892                                 | 11,70                            |
| 600000                                     | 999,90                | 8,21535-8         | 1,13960-13                              | 8,188                                                     | 5,951+12                                            | 2,8388+5                               | 11,53                            |
| 605000                                     | 999,90                | 7,76907           | 1,06205                                 | 8,176                                                     | 5,628                                               | 3,0018                                 | 11,36                            |
| 610000                                     | 999,91                | 7,35576           | 9,90517-14                              | 8,165                                                     | 5,329                                               | 3,1705                                 | 11,19                            |
| 615000                                     | 999,91                | 6,96888           | 9,23975                                 | 8,153                                                     | 5,048                                               | 3,3465                                 | 11,02                            |
| 620000                                     | 999,91                | 6,60695           | 8,62103                                 | 8,141                                                     | 4,786                                               | 3,5299                                 | 10,85                            |
| 625000                                     | 999,91                | 6,26855           | 8,04593                                 | 8,129                                                     | 4,541                                               | 3,7204                                 | 10,67                            |
| 630000                                     | 999,92                | 5,95228           | 7,51152                                 | 8,118                                                     | 4,312                                               | 3,9181                                 | 10,49                            |
| 635000                                     | 999,92                | 5,65682           | 7,01498                                 | 8,106                                                     | 4,098                                               | 4,1228                                 | 10,31                            |
| 640000                                     | 999,92                | 5,38089           | 6,55367                                 | 8,095                                                     | 3,898                                               | 4,3342                                 | 10,13                            |
| 645000                                     | 999,92                | 5,12324           | 6,12504                                 | 8,083                                                     | 3,711                                               | 4,5522                                 | 9,94                             |

От 650000 до 845000 м

Продолжение табл. 4

| Гео-<br>метри-<br>ческая<br>высота<br>h, м | Темпе-<br>ратура T, К | Давление<br>p, Па | Плотность<br>$\rho$ , кг/м <sup>3</sup> | Ускорение<br>свободного<br>падения<br>g, м/с <sup>2</sup> | Концент-<br>рация час-<br>тиц n,<br>м <sup>-3</sup> | Длина<br>свободного<br>пробега<br>l, м | Молярная<br>масса M,<br>кг/кмоль |
|--------------------------------------------|-----------------------|-------------------|-----------------------------------------|-----------------------------------------------------------|-----------------------------------------------------|----------------------------------------|----------------------------------|
| 650000                                     | 999,93                | 4,88269-8         | 5,72670-14                              | 8,072                                                     | 3,537+12                                            | 4,7765+5                               | 9,75                             |
| 655000                                     | 999,93                | 4,65811           | 5,35490                                 | 8,060                                                     | 3,374                                               | 5,0068                                 | 9,56                             |
| 660000                                     | 999,93                | 4,44839           | 5,01275                                 | 8,049                                                     | 3,222                                               | 5,2428                                 | 9,37                             |
| 665000                                     | 999,93                | 4,25250           | 4,69735                                 | 8,037                                                     | 3,081                                               | 5,4843                                 | 9,18                             |
| 670000                                     | 999,94                | 4,06945           | 4,40643                                 | 8,026                                                     | 2,948                                               | 5,7311                                 | 9,00                             |
| 675000                                     | 999,94                | 3,89828           | 4,13788                                 | 8,014                                                     | 2,824                                               | 5,9827                                 | 8,82                             |
| 680000                                     | 999,94                | 3,73810           | 3,88976                                 | 8,003                                                     | 2,708                                               | 6,2391                                 | 8,65                             |
| 685000                                     | 999,94                | 3,58806           | 3,66028                                 | 7,992                                                     | 2,599                                               | 6,5000                                 | 8,48                             |
| 690000                                     | 999,95                | 3,44737           | 3,44783                                 | 7,980                                                     | 2,497                                               | 6,7653                                 | 8,31                             |
| 695000                                     | 999,95                | 3,31526           | 3,25089                                 | 7,969                                                     | 2,402                                               | 7,0349                                 | 8,15                             |
| 700000                                     | 999,95                | 3,19103-8         | 3,06811-14                              | 7,958                                                     | 2,312+12                                            | 7,3088+5                               | 7,99                             |
| 705000                                     | 999,95                | 3,07403           | 2,89823                                 | 7,946                                                     | 2,227                                               | 7,5870                                 | 7,84                             |
| 710000                                     | 999,95                | 2,96365           | 2,74014                                 | 7,935                                                     | 2,147                                               | 7,8696                                 | 7,69                             |
| 715000                                     | 999,96                | 2,85933           | 2,59281                                 | 7,924                                                     | 2,071                                               | 8,1567                                 | 7,54                             |
| 720000                                     | 999,96                | 2,76057           | 2,45532                                 | 7,913                                                     | 2,000                                               | 8,4486                                 | 7,39                             |
| 725000                                     | 999,96                | 2,66689           | 2,32685                                 | 7,902                                                     | 1,932                                               | 8,7454                                 | 7,25                             |
| 730000                                     | 999,97                | 2,57788           | 2,20664                                 | 7,890                                                     | 1,867                                               | 9,0473                                 | 7,12                             |
| 735000                                     | 999,97                | 2,49319           | 2,09405                                 | 7,879                                                     | 1,806                                               | 9,3547                                 | 6,98                             |
| 740000                                     | 999,97                | 2,41248           | 1,98849                                 | 7,868                                                     | 1,748                                               | 9,6677                                 | 6,85                             |
| 745000                                     | 999,97                | 2,33550           | 1,88944                                 | 7,857                                                     | 1,692                                               | 9,9863                                 | 6,73                             |
| 750000                                     | 999,98                | 2,26202-8         | 1,79647-14                              | 7,846                                                     | 1,639+12                                            | 1,0311+6                               | 6,60                             |
| 755000                                     | 999,98                | 2,19187           | 1,70917                                 | 7,835                                                     | 1,588                                               | 1,0641                                 | 6,48                             |
| 760000                                     | 999,98                | 2,12493           | 1,62723                                 | 7,824                                                     | 1,539                                               | 1,0976                                 | 6,37                             |
| 765000                                     | 999,98                | 2,06112           | 1,55035                                 | 7,813                                                     | 1,493                                               | 1,1316                                 | 6,25                             |
| 770000                                     | 999,99                | 2,00041           | 1,47832                                 | 7,802                                                     | 1,449                                               | 1,1659                                 | 6,14                             |
| 775000                                     | 999,99                | 1,94283           | 1,41093                                 | 7,791                                                     | 1,407                                               | 1,2005                                 | 6,04                             |
| 780000                                     | 999,99                | 1,88844           | 1,34806                                 | 7,780                                                     | 1,368                                               | 1,2351                                 | 5,94                             |
| 785000                                     | 999,99                | 1,83736           | 1,28959                                 | 7,769                                                     | 1,331                                               | 1,2694                                 | 5,84                             |
| 790000                                     | 1000,00               | 1,78977           | 1,23545                                 | 7,758                                                     | 1,296                                               | 1,3032                                 | 5,74                             |
| 795000                                     | 1000,00               | 1,74587           | 1,18561                                 | 7,748                                                     | 1,265                                               | 1,3359                                 | 5,65                             |
| 800000                                     | 1000,00               | 1,70593-8         | 1,14006-14                              | 7,737                                                     | 1,236+12                                            | 1,3672+6                               | 5,56                             |
| 805000                                     | 1000,00               | 1,66060           | 1,09248                                 | 7,726                                                     | 1,203                                               | 1,4045                                 | 5,47                             |
| 810000                                     | 1000,00               | 1,61971           | 1,04935                                 | 7,715                                                     | 1,173                                               | 1,4400                                 | 5,39                             |
| 815000                                     | 1000,00               | 1,58032           | 1,00859                                 | 7,704                                                     | 1,145                                               | 1,4759                                 | 5,31                             |
| 820000                                     | 1000,00               | 1,54236           | 9,70075-15                              | 7,694                                                     | 1,117                                               | 1,5122                                 | 5,23                             |
| 825000                                     | 1000,00               | 1,50578           | 9,33686                                 | 7,683                                                     | 1,091                                               | 1,5490                                 | 5,16                             |
| 830000                                     | 1000,00               | 1,47051           | 8,99305                                 | 7,672                                                     | 1,065                                               | 1,5861                                 | 5,08                             |
| 835000                                     | 1000,00               | 1,43650           | 8,66819                                 | 7,662                                                     | 1,041                                               | 1,6236                                 | 5,02                             |
| 840000                                     | 1000,00               | 1,40371           | 8,36124                                 | 7,651                                                     | 1,017                                               | 1,6616                                 | 4,95                             |
| 845000                                     | 1000,00               | 1,37206           | 8,07122                                 | 7,640                                                     | 9,939+11                                            | 1,6999                                 | 4,89                             |

От 850000 до 1045000 м

Продолжение табл. 4

| Гео-<br>метри-<br>ческая<br>высота<br>h, м | Темпе-<br>ратура T, К | Давление<br>p, Па | Плотность<br>ρ, кг/м³ | Ускорение<br>свободного<br>падения<br>g, м/с² | Концент-<br>рация час-<br>тиц λ,<br>м⁻³ | Длина<br>свободного<br>пробега<br>l, м | Молярная<br>масса M,<br>кг/кмоль |
|--------------------------------------------|-----------------------|-------------------|-----------------------|-----------------------------------------------|-----------------------------------------|----------------------------------------|----------------------------------|
| 850000                                     | 1000,00               | 1,34153-8         | 7,79720-15            | 7,630                                         | 9,717+11                                | 1,7386+6                               | 4,83                             |
| 855000                                     | 1000,00               | 1,31204           | 7,53828               | 7,619                                         | 9,504                                   | 1,7777                                 | 4,78                             |
| 860000                                     | 1000,00               | 1,28357           | 7,29363               | 7,609                                         | 9,298                                   | 1,8171                                 | 4,72                             |
| 865000                                     | 1000,00               | 1,25606           | 7,06247               | 7,598                                         | 9,098                                   | 1,8565                                 | 4,67                             |
| 870000                                     | 1000,00               | 1,22946           | 6,84404               | 7,588                                         | 8,906                                   | 1,8971                                 | 4,63                             |
| 875000                                     | 1000,00               | 1,20374           | 6,63764               | 7,577                                         | 8,719                                   | 1,9376                                 | 4,58                             |
| 880000                                     | 1000,00               | 1,17886           | 6,44261               | 7,567                                         | 8,539                                   | 1,9785                                 | 4,54                             |
| 885000                                     | 1000,00               | 1,15476           | 6,25832               | 7,556                                         | 8,365                                   | 2,0198                                 | 4,51                             |
| 890000                                     | 1000,00               | 1,13142           | 6,08416               | 7,546                                         | 8,196                                   | 2,0615                                 | 4,47                             |
| 895000                                     | 1000,00               | 1,10880           | 5,91959               | 7,535                                         | 8,032                                   | 2,1035                                 | 4,44                             |
| 900000                                     | 1000,00               | 1,08686-8         | 5,76406-15            | 7,525                                         | 7,873+11                                | 2,1460+6                               | 4,41                             |
| 905000                                     | 1000,00               | 1,06557           | 5,60198               | 7,515                                         | 7,719                                   | 2,1888                                 | 4,37                             |
| 910000                                     | 1000,00               | 1,04490           | 5,44733               | 7,504                                         | 7,569                                   | 2,2322                                 | 4,33                             |
| 915000                                     | 1000,00               | 1,02481           | 5,29993               | 7,494                                         | 7,423                                   | 2,2759                                 | 4,30                             |
| 920000                                     | 1000,00               | 1,00529           | 5,15935               | 7,484                                         | 7,282                                   | 2,3201                                 | 4,27                             |
| 925000                                     | 1000,00               | 9,86287-9         | 5,02514               | 7,473                                         | 7,144                                   | 2,3648                                 | 4,24                             |
| 930000                                     | 1000,00               | 9,67793           | 4,89694               | 7,463                                         | 7,010                                   | 2,4100                                 | 4,21                             |
| 935000                                     | 1000,00               | 9,49779           | 4,77435               | 7,453                                         | 6,880                                   | 2,4557                                 | 4,18                             |
| 940000                                     | 1000,00               | 9,32222           | 4,65704               | 7,443                                         | 6,753                                   | 2,5020                                 | 4,15                             |
| 945000                                     | 1000,00               | 9,15102           | 4,54468               | 7,433                                         | 6,629                                   | 2,5488                                 | 4,13                             |
| 950000                                     | 1000,00               | 8,98397-9         | 4,43696-15            | 7,422                                         | 6,508+11                                | 2,5962+6                               | 4,11                             |
| 955000                                     | 1000,00               | 8,82091           | 4,33361               | 7,412                                         | 6,390                                   | 2,6441                                 | 4,08                             |
| 960000                                     | 1000,00               | 8,66167           | 4,23434               | 7,402                                         | 6,274                                   | 2,6928                                 | 4,06                             |
| 965000                                     | 1000,00               | 8,50609           | 4,13892               | 7,392                                         | 6,161                                   | 2,7420                                 | 4,05                             |
| 970000                                     | 1000,00               | 8,35405           | 4,04712               | 7,382                                         | 6,051                                   | 2,7919                                 | 4,03                             |
| 975000                                     | 1000,00               | 8,20542           | 3,95872               | 7,372                                         | 5,944                                   | 2,8425                                 | 4,01                             |
| 980000                                     | 1000,00               | 8,06010           | 3,87353               | 7,362                                         | 5,838                                   | 2,8937                                 | 4,00                             |
| 985000                                     | 1000,00               | 7,91801           | 3,79136               | 7,352                                         | 5,735                                   | 2,9457                                 | 3,98                             |
| 990000                                     | 1000,00               | 7,77907           | 3,71205               | 7,342                                         | 5,635                                   | 2,9983                                 | 3,97                             |
| 995000                                     | 1000,00               | 7,64322           | 3,63544               | 7,332                                         | 5,536                                   | 3,0516                                 | 3,95                             |
| 1000000                                    | 1000,00               | 7,51043-9         | 3,56140-15            | 7,322                                         | 5,440+11                                | 3,1055+6                               | 3,94                             |
| 1005000                                    | 1000,00               | 7,41143           | 3,50435               | 7,312                                         | 5,369                                   | 3,1470                                 | 3,93                             |
| 1010000                                    | 1000,00               | 7,31128           | 3,44759               | 7,302                                         | 5,296                                   | 3,1901                                 | 3,92                             |
| 1015000                                    | 1000,00               | 7,21239           | 3,39217               | 7,292                                         | 5,224                                   | 3,2338                                 | 3,91                             |
| 1020000                                    | 1000,00               | 7,11474           | 3,33801               | 7,282                                         | 5,154                                   | 3,2782                                 | 3,90                             |
| 1025000                                    | 1000,00               | 7,01834           | 3,28502               | 7,272                                         | 5,084                                   | 3,3233                                 | 3,89                             |
| 1030000                                    | 1000,00               | 6,92319           | 3,23313               | 7,262                                         | 5,015                                   | 3,3689                                 | 3,88                             |
| 1035000                                    | 1000,00               | 6,82929           | 3,18226               | 7,253                                         | 4,947                                   | 3,4153                                 | 3,87                             |
| 1040000                                    | 1000,00               | 6,73664           | 3,13235               | 7,243                                         | 4,880                                   | 3,4622                                 | 3,87                             |
| 1045000                                    | 1000,00               | 6,64524           | 3,08332               | 7,233                                         | 4,814                                   | 3,5098                                 | 3,86                             |

От 1050000 до 1200000 м

Продолжение табл. 4

| Гео-<br>метри-<br>ческая<br>высота<br>А, м | Темпе-<br>ратура Т, К | Давление<br>р, Па | Плотность<br>ρ, кг/м³ | Ускорение<br>свободного<br>падения<br>g, м/с² | Концент-<br>рация час-<br>тиц n,<br>м⁻³ | Длина<br>свободного<br>пробега<br>l, м | Молярная<br>масса М,<br>кг/кмоль |
|--------------------------------------------|-----------------------|-------------------|-----------------------|-----------------------------------------------|-----------------------------------------|----------------------------------------|----------------------------------|
| 1050000                                    | 1000,00               | 6,55509—9         | 3,03513—15            | 7,223                                         | 4,748+11                                | 3,5581+6                               | 3,85                             |
| 1055000                                    | 1000,00               | 6,46618           | 2,98845               | 7,214                                         | 4,684                                   | 3,6070                                 | 3,84                             |
| 1060000                                    | 1000,00               | 6,37853           | 2,94230               | 7,204                                         | 4,620                                   | 3,6566                                 | 3,84                             |
| 1065000                                    | 1000,00               | 6,29213           | 2,89697               | 7,194                                         | 4,558                                   | 3,7068                                 | 3,83                             |
| 1070000                                    | 1000,00               | 6,20697           | 2,85243               | 7,184                                         | 4,496                                   | 3,7577                                 | 3,82                             |
| 1075000                                    | 1000,00               | 6,12307           | 2,80870               | 7,175                                         | 4,435                                   | 3,8092                                 | 3,81                             |
| 1080000                                    | 1000,00               | 6,04041           | 2,76575               | 7,165                                         | 4,375                                   | 3,8613                                 | 3,81                             |
| 1085000                                    | 1000,00               | 5,95901           | 2,72358               | 7,156                                         | 4,316                                   | 3,9140                                 | 3,80                             |
| 1090000                                    | 1000,00               | 5,87885           | 2,68219               | 7,146                                         | 4,258                                   | 3,9674                                 | 3,79                             |
| 1095000                                    | 1000,00               | 5,79994           | 2,64156               | 7,136                                         | 4,201                                   | 4,0214                                 | 3,79                             |
| 1100000                                    | 1000,00               | 5,72228—9         | 2,60170—15            | 7,127                                         | 4,145+11                                | 4,0760+6                               | 3,78                             |
| 1105000                                    | 1000,00               | 5,64588           | 2,56259               | 7,117                                         | 4,090                                   | 4,1311                                 | 3,77                             |
| 1110000                                    | 1000,00               | 5,57072           | 2,52423               | 7,108                                         | 4,035                                   | 4,1869                                 | 3,77                             |
| 1115000                                    | 1000,00               | 5,49681           | 4,48661               | 7,098                                         | 3,982                                   | 4,2431                                 | 3,76                             |
| 1120000                                    | 1000,00               | 5,42415           | 2,44972               | 7,089                                         | 3,929                                   | 4,3000                                 | 3,76                             |
| 1125000                                    | 1000,00               | 5,35273           | 2,41357               | 7,079                                         | 3,877                                   | 4,3574                                 | 3,75                             |
| 1130000                                    | 1000,00               | 5,28257           | 2,37814               | 7,070                                         | 3,826                                   | 4,4152                                 | 3,74                             |
| 1135000                                    | 1000,00               | 5,21366           | 2,34342               | 7,060                                         | 3,777                                   | 4,4736                                 | 3,74                             |
| 1140000                                    | 1000,00               | 5,14600           | 2,30942               | 7,051                                         | 3,728                                   | 4,5324                                 | 3,73                             |
| 1145000                                    | 1000,00               | 5,07958           | 2,27613               | 7,042                                         | 3,679                                   | 4,5917                                 | 3,73                             |
| 1150000                                    | 1000,00               | 5,01442—9         | 2,24353—15            | 7,032                                         | 3,632+11                                | 4,6513+6                               | 3,72                             |
| 1155000                                    | 1000,00               | 4,95050           | 3,21163               | 7,023                                         | 3,586                                   | 4,7114                                 | 3,71                             |
| 1160000                                    | 1000,00               | 4,88784           | 2,18042               | 7,013                                         | 3,541                                   | 4,7718                                 | 3,71                             |
| 1165000                                    | 1000,00               | 4,82642           | 2,14990               | 7,004                                         | 3,496                                   | 4,8325                                 | 3,70                             |
| 1170000                                    | 1000,00               | 4,76626           | 2,12006               | 6,995                                         | 3,452                                   | 4,8935                                 | 3,70                             |
| 1175000                                    | 1000,00               | 4,70734           | 2,09089               | 6,986                                         | 3,410                                   | 4,9548                                 | 3,69                             |
| 1180000                                    | 1000,00               | 4,64967           | 2,06240               | 6,976                                         | 3,368                                   | 5,0162                                 | 3,69                             |
| 1185000                                    | 1000,00               | 4,59325           | 2,03457               | 6,967                                         | 3,327                                   | 5,0778                                 | 3,68                             |
| 1190000                                    | 1000,00               | 4,53808           | 2,00740               | 6,958                                         | 3,287                                   | 5,1396                                 | 3,68                             |
| 1195000                                    | 1000,00               | 4,48416           | 1,98089               | 6,949                                         | 3,248                                   | 5,2014                                 | 3,67                             |
| 1200000                                    | 1000,00               | 4,43149—9         | 1,95503—15            | 6,939                                         | 3,210+11                                | 5,2632+6                               | 3,67                             |

Примечание. Однозначное или двузначное число со знаком плюс или минус, стоящее после значения параметра, является показателем степени десяти — множителя данного и каждого последующего значений

В стандарте имеется обязательное приложение, в котором содержатся основные положения, константы, формулы и вспомогательные таблицы, необходимые для расчета параметров атмосферы.

ПРИЛОЖЕНИЕ  
Обязательное

ОСНОВНЫЕ ПОЛОЖЕНИЯ И ФОРМУЛЫ ДЛЯ РАСЧЕТА  
ПАРАМЕТРОВ СТАНДАРТНОЙ АТМОСФЕРЫ

1. Основные константы и параметры

Таблицы параметров стандартной атмосферы рассчитаны в предположении, что воздух представляет собой идеальный газ, и базируются на общепринятых для среднего уровня моря исходных значениях температуры, давления и плотности воздуха. В расчетах используются константы, числовые значения которых приведены в табл. 1.

Таблица 1

| Обозначение | Значение в единицах СИ                     | Обозначение | Значение в единицах СИ                                                                         |
|-------------|--------------------------------------------|-------------|------------------------------------------------------------------------------------------------|
| $M_c$       | 28,964420 кг/кмоль                         | $\beta_s$   | $1,458 \cdot 10^{-6} \text{ кг} \cdot \text{с}^{-1} \cdot \text{м}^{-1} \cdot \text{К}^{-1/2}$ |
| $N_A$       | $6,02257 \cdot 10^{23} \text{ кмоль}^{-1}$ | $x$         | 1,4                                                                                            |
| $R^*$       | 8314,32 Дж/К $\cdot$ кмоль $^{-1}$         | $\sigma$    | $0,365 \cdot 10^{-9} \text{ м}$                                                                |
| $R$         | 287,05287 Дж/кг $\cdot$ К $^{-1}$          |             |                                                                                                |
| $S$         | 110,4 К                                    |             |                                                                                                |

$M$  — молярная масса воздуха на уровне моря;

$N_A$  — число Авогадро, основанное на значении атомной массы изотопа углерода  $^{12}\text{C}=12,000$ , принятой в 1961 г. конференцией Международного Союза чистой и прикладной химии в качестве основы для единицы атомной массы;

$R^*$  — универсальная газовая постоянная;

$R$  — удельная газовая постоянная;

$S$  и  $\beta_s$  — эмпирические коэффициенты Сатерленда в уравнении для определения динамической вязкости;

$x = \frac{c_p}{c_v}$  — показатель адиабаты — отношение удельных теплоемкостей воздуха при постоянном давлении и постоянном объеме;

$\sigma$  — эффективный диаметр молекул воздуха при столкновении.

## 2. Уравнения статики атмосферы и состояния идеального газа

Неподвижная по отношению к Земле атмосфера подвержена силе тяготения. Условие статического равновесия воздуха описывается уравнением статики атмосферы, связывающим давление воздуха  $p$ , плотность  $\rho$ , ускорение свободного падения  $g$  и высоту  $h$

$$-dp = \rho g dh. \quad (1)$$

Уравнение состояния идеального газа связывает давление воздуха с плотностью и температурой

$$p = \frac{\rho R^* T}{M}. \quad (2)$$

Для высот до 94 км, на которых значения молярной массы  $M_c$  остаются неизменными,  $R^*/M_c = \text{const} = R$ , тогда

$$p = \rho R T.$$

## 3. Геопотенциальная и геометрическая высоты; ускорение свободного падения

При изучении вертикального распределения давления в атмосфере система уравнений (1) и (2) для ее решения упрощается введением потенциала силы тяжести или геопотенциала, характеризующего потенциальную энергию частицы, расположенной в данной точке.

Любая точка с координатами  $x, y, z$  может быть однозначно охарактеризована значением в ней потенциала силы тяжести  $\Phi(x, y, z)$ . Поверхность, описываемая уравнением  $\Phi(x, y, z) = \text{const}$ , имеет одинаковый потенциал во всех точках и называется изопотенциальной или геопотенциальной поверхностью. Если от некоторой точки, расположенной на поверхности  $\Phi_1$ , перейти по внешней нормали к соседней бесконечно близкой точке, для которой значение потенциала  $\Phi_2 = \Phi_1 + d\Phi$ , то для переноса единицы массы с первой поверхности на вторую необходимо произвести удельную работу

$$d\Phi = g(h) dh,$$

откуда

$$\Phi = \int_0^h g(h) dh.$$

Разделив геопотенциал  $\Phi$  на стандартное ускорение свободного падения  $g_c$  получим величину с размерностью длины, которую принято называть геопотенциальной высотой и обозначать символом  $H$

$$H = \frac{\Phi}{g_c} = \frac{1}{g_c} \int_0^h g(h) dh. \quad (3)$$

За начало отсчета геопотенциальной высоты так же, как и геометрической, принимается средний уровень моря. В метеорологии геопотенциальную высоту выражают через так называемые геопотенциальные меры, принимая, что 1 «геопотенциальный метр» равен  $9,80665 \text{ м}^2/\text{с}^2$ . В настоящем стандарте эта единица названа также метром, но, в отличие от геометрического метра обозначена символом  $\text{м}'$ :  $1 \text{ м}' = 9,80665 \text{ м}^2/\text{с}^2$ .

Из уравнения (3) видно, что для установления зависимости между геопотенциальной и геометрической высотами необходимо прежде найти зависимость ускорения свободного падения  $g$  от геометрической высоты  $h$ . Известно, что сила тяжести является векторной суммой гравитационного тяготения и центро-



бежной силы, зависящей от вращения Земли, т. е. сложной функцией широты и радиального расстояния от центра Земли, а ускорение свободного падения представляется несколько громоздким выражением, неудобным для расчетов. Для настоящего стандарта ускорение  $g$  можно получить, формально пренебрегая центробежным ускорением и пользуясь только законом тяготения Ньютона. В этом случае

$$g = g_c \left( \frac{r}{r+h} \right)^2, \quad (4)$$

где  $r=6356767$  м — условный радиус Земли, при котором ускорение свободного падения и вертикальный градиент ускорения на среднем уровне моря наиболее близки к истинным на широте  $45^\circ 32' 33''$ . Интегрирование правой части уравнения (3) после замены  $g$  его функцией из (4) дает следующие соотношения между геопотенциальной и геометрической высотами:

$$H = \frac{r h}{r+h};$$

$$h = \frac{r H}{r-H}.$$

#### 4. Состав атмосферы и молярная масса

Атмосфера Земли представляет собой смесь газов, водяного пара и некоторого количества аэрозолей. В определенных условиях в составе воздуха меняется концентрация водяного пара, углекислого газа, озона и некоторых других составляющих, содержание которых в атмосфере незначительно. Больше других подвержено изменению содержание водяного пара, концентрация которого у поверхности Земли при высокой температуре может достигать 4%, а с увеличением высоты и понижением температуры быстро падает. Состав сухого воздуха в области гомосферы до высоты 90—95 км остается практически постоянным (табл. 2).

Таблица 2

| Газ                           | Объемное содержание, %         | Молярная масса $M$ ,<br>кг/кмоль |
|-------------------------------|--------------------------------|----------------------------------|
| Азот ( $N_2$ )                | 78,084000                      | 28,01340                         |
| Кислород ( $O_2$ )            | 20,947600                      | 31,99880                         |
| Аргон (Ar)                    | 0,934000                       | 39,94800                         |
| Углекислый газ ( $CO_2$ )     | 0,031400*                      | 44,00995                         |
| Неон (Ne)                     | $1,818 \cdot 10^{-6}$          | 20,18300                         |
| Гелий (He)                    | $524,0 \cdot 10^{-6}$          | 4,00260                          |
| Криптон (Kr)                  | $114,0 \cdot 10^{-6}$          | 83,80000                         |
| Ксенон (Xe)                   | $8,7 \cdot 10^{-6}$            | 131,30000                        |
| Водород ( $H_2$ )             | $50,0 \cdot 10^{-6}$           | 2,01594                          |
| Оксид азота ( $N_2O$ )        | $50,0 \cdot 10^{-6}$ *         | 44,01280                         |
| Метан ( $CH_4$ )              | $200 \cdot 10^{-6}$            | 16,04303                         |
| Озон ( $O_3$ )                | Летом до $7,0 \cdot 10^{-6}$ * | 47,99820                         |
|                               | Зимой до $2,0 \cdot 10^{-6}$ * |                                  |
| Сернистый ангидрид ( $SO_2$ ) | До $100 \cdot 10^{-6}$ *       | 64,06280                         |
| Перекись азота ( $NO_2$ )     | До $2,0 \cdot 10^{-6}$ *       | 46,00550                         |
| Йод ( $I_2$ )                 | До $1,0 \cdot 10^{-6}$ *       | 253,80880                        |

Продолжение табл. 2

| Газ    | Объемное содержание, % | Молярная масса $M$ ,<br>кг/кмоль |
|--------|------------------------|----------------------------------|
| Воздух | 100                    | 28,96442**                       |

\* Содержание газа может подвергаться существенным изменениям, в зависимости от места и времени.

\*\* Рассчитано по уравнению состояния идеального газа (2).

Молярная масса воздуха определена из уравнения состояния идеального газа (2) при подстановке принятых значений стандартных давлений  $p_c$ , плотности  $\rho_c$  и температур  $T_c$  на среднем уровне моря и универсальной газовой постоянной  $R$ .

Молярная масса до высоты 94 км постоянная и равна  $M=M_c$ . Далее с увеличением высоты она уменьшается до 28,91 кг/кмоль на высоте 97000 м в соответствии с выражением

$$M = 28,82 + 0,158 [1 - 7,5 \cdot 10^{-8} (h - 94000)]^{1/2} - 2,479 \cdot 10^{-4} (97000 - h)^{1/2}.$$

Дальнейшее уменьшение до  $h = 97500$  и для  $97500 < h \leq 120000$  м происходит по линейному закону с градиентами  $\frac{dM}{dh}$  соответственно равными  $-0,00012$  и  $-0,0001511$  кг/(м·кмоль).

Интервал высот от 120000 до 1200000 м разбит на шесть участков, в каждом из которых молярная масса аппроксимируется полиномом третьей степени:

$$M = B_0 + B_1 h + B_2 h^2 + B_3 h^3,$$

где  $B_0-B_3$  — коэффициенты полинома, представленные в табл. 3.

Таблица 3

| Номера участков | Диапазон высот, $h$ , м | $B_0$    | $B_1$                     | $B_2$                     | $B_3$                     |
|-----------------|-------------------------|----------|---------------------------|---------------------------|---------------------------|
| 1               | 120000—250000           | 46,9083  | $-29,71210 \cdot 10^{-5}$ | $12,08693 \cdot 10^{-10}$ | $-1,85675 \cdot 10^{-15}$ |
| 2               | 250000—400000           | 40,4668  | $-15,52722 \cdot 10^{-5}$ | $3,55735 \cdot 10^{-10}$  | $-3,02340 \cdot 10^{-16}$ |
| 3               | 400000—650000           | 6,3770   | $6,25497 \cdot 10^{-5}$   | $-1,10144 \cdot 10^{-10}$ | $3,36907 \cdot 10^{-17}$  |
| 4               | 650000—900000           | 75,6896  | $-17,61243 \cdot 10^{-5}$ | $1,33603 \cdot 10^{-10}$  | $-2,87884 \cdot 10^{-17}$ |
| 5               | 900000—1050000          | 112,4838 | $-30,68086 \cdot 10^{-5}$ | $2,90329 \cdot 10^{-10}$  | $-9,20516 \cdot 10^{-17}$ |
| 6               | 1050000—1200000         | 9,8970   | $-1,19732 \cdot 10^{-5}$  | $7,78247 \cdot 10^{-12}$  | $-1,77541 \cdot 10^{-18}$ |

(Измененная редакция, Изм. № 1).

### 5. Параметры атмосферы на среднем уровне моря

В расчетах параметров стандартной атмосферы средний уровень моря принят за нулевую высоту, для которой значения необходимых расчетных параметров представлены в табл. 4.

Исходными для расчетов являются стандартное ускорение свободного падения  $g_c$ , эффективный диаметр  $\sigma$  молекул воздуха при столкновениях и стандартные: давление  $p_c$ , температура  $T_c$  и плотность  $\rho_c$ .

Таблица 4

| Наименование параметров                         | Обозначение | Значение в единицах СИ                    |
|-------------------------------------------------|-------------|-------------------------------------------|
| Скорость звука                                  | $a_c$       | 340,294 м/с                               |
| Ускорение свободного падения                    | $g_c$       | 9,80665 м/с <sup>2</sup>                  |
| Масштаб высоты по давлению                      | $H_{pc}$    | 8434,5 м                                  |
| Средняя длина свободного пробега частиц воздуха | $l_c$       | 66,328·10 <sup>-9</sup> м                 |
| Молярная масса                                  | $M_c$       | 28,964420 кг/кмоль                        |
| Концентрация частиц                             | $n_c$       | 25,471·10 <sup>24</sup> м <sup>-3</sup>   |
| Давление                                        | $P_c$       | 101325,0 Па                               |
| Температура Кельвина                            | $T_c$       | 288,15 К                                  |
| Средняя скорость частиц воздуха                 | $v_c$       | 458,94 м/с                                |
| Удельный вес                                    | $\gamma_c$  | 12,013 Н/м <sup>3</sup>                   |
| Кинематическая вязкость                         | $\nu_c$     | 14,607·10 <sup>-6</sup> м <sup>2</sup> /с |
| Динамическая вязкость                           | $\mu_c$     | 17,894·10 <sup>-6</sup> Па·с              |
| Теплопроводность                                | $\lambda_c$ | 25,343·10 <sup>-3</sup> Вт/(м·К)          |
| Частота соударений частиц воздуха               | $\omega_c$  | 6,9193·10 <sup>9</sup> с <sup>-1</sup>    |
| Плотность                                       | $\rho_c$    | 1,2250 кг/м <sup>3</sup>                  |

#### 6. Температура, вертикальный градиент температуры

Соотношение между термодинамическими температурами Кельвина —  $T$  и Цельсия —  $t$  выражаются формулой

$$T = T_0 + t, \quad (5)$$

где  $T_0 = 273,15$  К — термодинамическая температура Кельвина для точки таяния льда при давлении 101325 Па.

По характеру изменения температуры с высотой атмосферу принято делить на несколько слоев: тропосферу, стратосферу, мезосферу, термосферу и экзосферу. Для расчета параметров атмосферы на высотах до  $h = 94000$  м температура каждого слоя аппроксимируется линейной функцией геопотенциальной высоты

$$T = T_* + \beta(H - H_*), \quad (6)$$

где  $\beta = dT/dH$  — градиент термодинамической температуры по геопотенциальной высоте (здесь и далее значения параметров с индексом «\*» относятся к нижней границе рассматриваемого слоя).

Для удобства расчетов вводится понятие так называемой молярной температуры  $T_M$

$$T_M = \frac{TM_c}{M}, \quad (7)$$

которая изменяется линейно по геопотенциальной высоте и уравнение (6) соответственно принимает вид

$$T_M = T_{M*} + \beta_M(H - H_*), \quad (8)$$

где  $\beta_m = \frac{dT_m}{dH}$  —градиент молярной температуры по геопотенциальной высоте.

Значения температуры и ее вертикальных градиентов, принятые для расчета параметров стандартной атмосферы до высоты  $h=120$  км даны в табл. 5.

Выше 120 км принято кусочно-линейное изменение термодинамической температуры по геометрической высоте

$$T = T_* + \beta'(h - h_*) \text{, где } \beta' = dT/dh \text{ (см. табл. 6).}$$

Таблица 5

| Высота                    |                        | Температура          |                    | Градиент температуры             |                         | Молярная масса $M$ , кг/кмоль |
|---------------------------|------------------------|----------------------|--------------------|----------------------------------|-------------------------|-------------------------------|
| геопотенциальная $H$ , м' | геометрическая $h$ , м | кинетическая $T$ , К | молярная $T_m$ , К | термодинамической $\beta$ , К/м' | молярной $\beta$ , К/м' |                               |
| -2000                     | -1999                  | 301,15               | 301,15             |                                  |                         | 28,964420                     |
| 0                         | 0                      | 288,15               | 288,15             | -0,0065                          | -0,0065                 | —                             |
| 11800                     | 11019                  | 216,65               | 216,65             | -0,0065                          | -0,0065                 | —                             |
| 20000                     | 20063                  | 216,65               | 216,65             | 0,0000                           | 0,0000                  | —                             |
| 32000                     | 32162                  | 228,65               | 228,65             | +0,0010                          | +0,0010                 | —                             |
| 47000                     | 47350                  | 270,65               | 270,65             | +0,0028                          | +0,0028                 | —                             |
| 51000                     | 51412                  | 270,65               | 270,65             | 0,0000                           | 0,0000                  | —                             |
| 71000                     | 71802                  | 214,65               | 214,65             | -0,0028                          | -0,0028                 | —                             |
| 85000                     | 86152                  | 186,65               | 186,65             | -0,0020                          | -0,0020                 | —                             |
| 94000                     | 95411                  | 186,525              | 186,65             | 0,0000                           | 0,0000                  | 28,964420                     |
| 102450                    | 104128                 | 203,81               | 212,00             |                                  | +0,0030                 | 27,846000                     |
| 117777                    | 120000                 | 334,417              | 380,60             |                                  | +0,0110                 | 25,450000                     |

Таблица 6

| $h$ , м | $T$ , К | $\beta'$ , К/м | $h$ , м | $T$ , К | $\beta'$ , К/м |
|---------|---------|----------------|---------|---------|----------------|
| 120000  | 334,42  | 0,011259       | 325000  | 984,65  | 0,0001500      |
| 140000  | 559,60  | 0,006800       | 400000  | 995,90  | 0,0000200      |
| 160000  | 695,60  | 0,003970       | 600000  | 999,90  | 0,0000005      |
| 200000  | 834,40  | 0,001750       | 800000  | 1000,00 | 0,0000000      |
| 250000  | 941,90  | 0,000570       | 1200000 | 1000,00 |                |
| 325000  | 984,65  |                |         |         |                |

(Измененная редакция, Изм. № 1).

## 7. Давление

### 7.1. Высоты от минус 2000 до 120000 м

При линейном изменении молярной температуры по геопотенциальной высоте (см. табл. 5) решение уравнения статики атмосферы (1) и уравнения сос-

тояния газа (2) с использованием соотношений (7) и (8) дает следующие расчетные формулы:

$$\lg p = \lg p_* - \frac{g_c}{\beta_m R} \lg \frac{T_{m*} + \beta_m (H - H_*)}{T_{m*}} \quad \text{для } \beta_m \neq 0$$

$$\text{и } \lg p = \lg p_* - \frac{0,434294 \cdot g_c}{R \cdot T} (H - H_*) \quad \text{для } \beta_m = 0.$$

7.2. Высоты от 120000 до 1200000 м.

На высотах более 120 км, где принято кусочно-линейное изменение кинетической температуры по геометрической высоте (табл. 6), давление  $p$ , Па, удобно рассчитывать как функцию концентрации нейтральных частиц воздуха  $n$  и кинетической температуры  $T$ :

$$p = \frac{n R^* T}{N_A}.$$

## 8. Плотность и удельный вес

Плотность  $\rho$ , кг·м<sup>-3</sup>, рассчитывается по давлению и температуре с помощью уравнения состояния

$$\rho = \frac{p \cdot M}{R^* T}.$$

Удельный вес  $\gamma$ , Н·м<sup>-3</sup>, есть отношение веса воздуха к его объему, то есть

$$\gamma = \frac{P}{V} = \frac{mg}{V} = \rho g.$$

## 9. Масштаб высоты по давлению

Масштаб высоты или шкала высоты  $H_p$ , м, по давлению определяется уравнением

$$H_p = \frac{P^*}{M} \cdot \frac{T}{g}.$$

## 10. Концентрация частиц воздуха

10.1. На высотах до 120000 м концентрация частиц  $n$ , м<sup>-3</sup>, т. е. количество нейтральных частиц воздуха в единице объема, находится по уравнению

$$n = \frac{N_A P}{R^* T} = 7,243611 \cdot 10^{21} \frac{P}{T}.$$

(Измененная редакция, Изм. № 1).

10.2. На высотах более 120000 м концентрация частиц аппроксимируется полиномом четвертой степени вида

$$n = (A_0 + A_1 h + A_2 h^2 + A_3 h^3 + A_4 h^4) \cdot 10^m, \quad (9)$$

где коэффициенты  $A_0$ — $A_4$  и показатель степени  $m$  в указанных интервалах высот приведены в табл. 7.

Таблица 7

Коэффициенты полинома (9), аппроксимирующего концентрацию частиц

| Интервал высот<br>В, м | $A_0$         | $A_1$           | $A_2$          | $A_3$            | $A_4$           | $A_5$           | $n$ |
|------------------------|---------------|-----------------|----------------|------------------|-----------------|-----------------|-----|
| 120000—150000          | 0,210005867+4 | -0,5618444757-1 | 0,5663986231-5 | -0,2547466858-11 | 0,4309844119-17 | 0,4309844119-17 | 17  |
| 150000—200000          | 0,10163937+4  | -0,2119530830-1 | 0,1671627815-5 | -0,5894237088-12 | 0,7826684089-18 | 0,7826684089-18 | 18  |
| 200000—250000          | 0,7681575+3   | -0,1150600844-1 | 0,6612598428-7 | -0,1708736137-12 | 0,1669623114-18 | 0,1669623114-18 | 18  |
| 250000—300000          | 0,1882203+3   | -0,2285998519-2 | 0,1041726141-7 | -0,2155574922-13 | 0,1687430862-19 | 0,1687430862-19 | 19  |
| 300000—350000          | 0,2804823+3   | -0,2432231125-2 | 0,8055024663-8 | -0,1202418519-13 | 0,6805101379-20 | 0,6805101379-20 | 20  |
| 350000—400000          | 0,2804823+3   | -0,3711414392-2 | 0,3358870345-8 | -0,1058591881-13 | 0,4525531532-20 | 0,4525531532-20 | 20  |
| 400000—450000          | 0,5599362+3   | -0,3711414392-2 | 0,8252842065-8 | -0,7150127437-14 | 0,2335744331-20 | 0,2335744331-20 | 20  |
| 450000—500000          | 0,8358756+3   | -0,4285393073-2 | 0,8252842065-8 | -0,7150127437-14 | 0,2335744331-20 | 0,2335744331-20 | 20  |
| 500000—600000          | 0,8364965+2   | -0,3162492458-3 | 0,4602064246-9 | -0,3021658469-15 | 0,7512304301-22 | 0,7512304301-22 | 22  |
| 600000—800000          | 0,383220+2    | -0,50980-4      | 0,18100-10     | 0                | 0               | 0               | 11  |

Примечание. Однозначное или двузначное число со знаком плюс или минус, стоящее после значения параметра, является показателем степени десяти — сомножителя данного значения параметра.

(Измененная редакция, Изм. № 1).

**11. Средняя скорость частиц воздуха**

Средняя арифметическая скорость движения частиц воздуха  $\bar{v}$ , м·с<sup>-1</sup>, полученная исходя из максвелловского распределения скоростей молекул одноатомного идеального газа в условиях термодинамического равновесия и отсутствия внешнего силового воздействия

$$\bar{v} = \left( \frac{8}{\pi} \cdot \frac{R^* \cdot T}{M} \right)^{1/2} = 145,50685 \cdot T/M.$$

**12. Средняя длина свободного пробега частиц воздуха**

Между двумя последовательными соударениями частица воздуха движется прямолинейно и равномерно, проходя в среднем определенное расстояние, называемое средней длиной свободного пробега частицы воздуха  $l$ . С учетом распределения относительных скоростей соударяющихся частиц величина  $l$ , м, определяется выражением

$$l = \frac{R^*}{\sqrt{2} \pi N_A \sigma^2} \cdot \frac{T}{p} = 2,332376 \cdot 10^{-5} \frac{T}{p}$$

**13. Частота соударений частиц воздуха**

Средняя частота соударений частиц воздуха  $\omega$ , с<sup>-1</sup>, равна отношению средней скорости частиц воздуха к средней длине свободного пробега частиц на той же высоте, т. е.  $\omega = \frac{\bar{v}}{l}$ , откуда

$$\omega = 4 \pi^2 N_A \left( \frac{\pi}{R^* M} \right)^{1/2} \cdot \frac{p}{T} = 6,238629 \cdot 10^8 \cdot \frac{p}{\sqrt{T M}}$$

**14. Скорость звука**

Для скорости звука  $a$  (скорость распространения бесконечно малого возмущения в газе), м·с<sup>-1</sup>, принято следующее выражение

$$a = \left( \gamma \frac{R^* \cdot T}{M} \right)^{1/2} = 20,046796 \sqrt{T}.$$

**15. Динамическая вязкость**

Динамическая вязкость  $\mu$ , Па·с, характеризует величину внутреннего трения между двумя соседними слоями воздуха, движущимися с разными скоростями. Для расчета динамической вязкости используется следующее выражение

$$\mu = \frac{\beta_S \cdot T^{3/2}}{T + S}, \quad (10)$$

где  $\beta_S$  и  $S$  — эмпирические коэффициенты Сатерленда (см. табл. 1). Уравнение (10) неприменимо для высот более 90000 м.

**16. Кинематическая вязкость**

Кинематическая вязкость  $\nu$ ,  $\text{м}^2/\text{с}$ , определяется отношением динамической вязкости воздуха к его плотности, т. е.

$$\nu = \frac{\mu}{\rho}.$$

Ограничение этого уравнения аналогично ограничению, установленному для динамической вязкости.

**17. Теплопроводность**

Теплопроводность  $\lambda$ ,  $\text{Вт}/(\text{м} \cdot \text{К})$  рассчитывается по эмпирической формуле

$$\lambda = \frac{2,648151 \cdot 10^{-3} \cdot T^{1/2}}{T + 245,4 \cdot 10^{-(12/T)}}.$$

где  $T$  — термодинамическая температура, К.

Ограничение для теплопроводности аналогично ограничению, установленному для динамической и кинематической вязкости.



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