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## METEOROLOGICAL AND CLIMATOLOGICAL DATA FOR JANUARY 1947

### AEROLOGICAL OBSERVATIONS

[For description of change in Table 1 and charts, see REVIEW, January 1946, p. 6]

TABLE 1.—*Mean dynamic height (geopotential) in units of 0.98 dynamic meters, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during January 1947*

STATIONS AND MEAN SURFACE PRESSURES

| Standard pressure surface (mb.) | Albany, N. Y. (1,006.5 mb.) | | | | Albuquerque, N. Mex. (836.9 mb.) | | | | Apalachicola, Fla. (1,019.4 mb.) | | | | Atlanta, Ga. (985.0 mb.) | | | | Auburn, Calif. (961.6 mb.) | | | | Big Spring, Tex. (928.5 mb.) | | | | Bismarck, N. Dak. (952.5 mb.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity |
| Surface | 31 | 86 | −3.4 | 82 | 31 | 1,620 | 1.1 | 46 | 31 | 5 | 14.8 | 88 | 31 | 300 | 7.2 | 82 | 31 | 501 | 5.5 | 72 | 31 | 774 | 3.6 | 66 | 31 | 505 | −6.9 | 80 |
| 1,000 | 31 | 136 | −4.4 | 81 | 31 | 159 | (*) | ---- | 31 | 168 | 15.7 | 83 | 31 | 175 | (*) | ---- | 31 | 178 | (*) | ---- | 31 | 162 | (*) | ---- | 31 | 120 | (*) | ---- |
| 950 | 31 | 546 | −3.8 | 81 | 31 | 591 | (*) | ---- | 31 | 606 | 15.0 | 73 | 31 | 603 | 8.0 | 75 | 31 | 606 | 7.9 | 61 | 31 | 585 | (*) | ---- | 31 | 523 | (*) | ---- |
| 900 | 31 | 968 | −4.8 | 81 | 31 | 1,033 | (*) | ---- | 31 | 1,061 | 13.8 | 65 | 31 | 1,046 | 8.8 | 66 | 31 | 1,046 | 7.7 | 43 | 31 | 1,026 | 5.8 | 56 | 31 | 946 | −6.7 | 73 |
| 850 | 31 | 1,417 | −5.5 | 74 | 31 | 1,495 | (*) | ---- | 30 | 1,540 | 11.2 | 62 | 31 | 1,518 | 7.5 | 62 | 31 | 1,516 | 5.7 | 37 | 31 | 1,493 | 4.3 | 49 | 31 | 1,393 | −6.2 | 65 |
| 800 | 31 | 1,891 | −6.8 | 73 | 31 | 1,982 | −.1 | 48 | 30 | 2,044 | 9.0 | 53 | 31 | 2,016 | 5.7 | 61 | 31 | 2,009 | 3.3 | 33 | 31 | 1,985 | 2.7 | 46 | 31 | 1,866 | −7.5 | 62 |
| 750 | 31 | 2,401 | −8.3 | 73 | 31 | 2,501 | −2.9 | 49 | 30 | 2,583 | 6.7 | 43 | 31 | 2,550 | 3.4 | 59 | 31 | 2,533 | .4 | 33 | 31 | 2,509 | .9 | 44 | 31 | 2,370 | −9.8 | 62 |
| 700 | 31 | 2,927 | −10.4 | 67 | 31 | 3,039 | −5.7 | 53 | 30 | 3,140 | 3.7 | 42 | 31 | 3,100 | .8 | 53 | 31 | 3,079 | −2.9 | 33 | 31 | 3,057 | −1.4 | 43 | 31 | 2,897 | −12.3 | 62 |
| 650 | 31 | 3,498 | −12.7 | 62 | 31 | 3,621 | −8.3 | 52 | 30 | 3,743 | .7 | 38 | 31 | 3,697 | −2.3 | 51 | 31 | 3,664 | −6.6 | 31 | 30 | 3,646 | −3.8 | 27 | 31 | 3,469 | −15.3 | 60 |
| 600 | 31 | 4,103 | −15.9 | 57 | 31 | 4,234 | −11.8 | 49 | 30 | 4,377 | −2.9 | ---- | 30 | 4,322 | −5.9 | 50 | 30 | 4,280 | −10.7 | 35 | 30 | 4,272 | −7.8 | ---- | 31 | 4,061 | −18.5 | 56 |
| 550 | 30 | 4,756 | −19.3 | 55 | 31 | 4,897 | −15.6 | 43 | 30 | 5,062 | −7.0 | ---- | 30 | 5,002 | −9.9 | 50 | 30 | 4,945 | −14.9 | 37 | 28 | 4,942 | −12.5 | ---- | 31 | 4,706 | −22.4 | ---- |
| 500 | 30 | 5,468 | −22.9 | ---- | 31 | 5,607 | −20.2 | ---- | 30 | 5,798 | −11.2 | ---- | 29 | 5,726 | −14.4 | 48 | 30 | 5,659 | −19.7 | ---- | 27 | 5,661 | −17.5 | ---- | 29 | 5,404 | −26.5 | ---- |
| 450 | 29 | 6,242 | −27.8 | ---- | 31 | 6,384 | −25.8 | ---- | 30 | 6,604 | −16.9 | ---- | 29 | 6,523 | −19.9 | 50 | 30 | 6,439 | −25.2 | ---- | 24 | 6,452 | −23.3 | ---- | 27 | 6,159 | −31.6 | ---- |
| 400 | 29 | 7,071 | −32.9 | ---- | 31 | 7,222 | −32.1 | ---- | 30 | 7,472 | −23.3 | ---- | 29 | 7,380 | −26.2 | ---- | 30 | 7,278 | −31.3 | ---- | 23 | 7,295 | −29.6 | ---- | 26 | 6,982 | −37.1 | ---- |
| 350 | 29 | 7,997 | −39.1 | ---- | 31 | 8,150 | −39.0 | ---- | 30 | 8,434 | −30.3 | ---- | 28 | 8,336 | −33.2 | ---- | 30 | 8,209 | −38.6 | ---- | 23 | 8,234 | −36.3 | ---- | 24 | 7,885 | −43.5 | ---- |
| 300 | 28 | 9,034 | −46.6 | ---- | 31 | 9,190 | −46.4 | ---- | 30 | 9,512 | −38.3 | ---- | 28 | 9,401 | −41.5 | ---- | 29 | 9,257 | −46.5 | ---- | 18 | 9,288 | −43.0 | ---- | 23 | 8,911 | −50.1 | ---- |
| 250 | 28 | 10,222 | −54.4 | ---- | 31 | 10,381 | −53.7 | ---- | 30 | 10,739 | −48.2 | ---- | 28 | 10,610 | −51.2 | ---- | 29 | 10,442 | −55.1 | ---- | 14 | 10,480 | −50.5 | ---- | 17 | 10,125 | −55.4 | ---- |
| 200 | 24 | 11,619 | −60.0 | ---- | 18 | 11,802 | −57.9 | ---- | 29 | 12,178 | −57.9 | ---- | 26 | 12,023 | −60.0 | ---- | 26 | 11,828 | −61.4 | ---- | 7 | 11,937 | −57.2 | ---- | ---- | ---- | ---- | ---- |
| 175 | 21 | 12,427 | −59.1 | ---- | 5 | 12,611 | −57.1 | ---- | 25 | 13,025 | −60.5 | ---- | 22 | 12,849 | −60.9 | ---- | 18 | 12,644 | −59.4 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| 150 | 14 | 13,381 | −57.4 | ---- | ---- | ---- | ---- | ---- | 24 | 13,988 | −63.4 | ---- | 19 | 13,810 | −62.4 | ---- | 10 | 13,549 | −58.0 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| 125 | 11 | 14,531 | −58.6 | ---- | ---- | ---- | ---- | ---- | 18 | 15,098 | −67.8 | ---- | 7 | 14,900 | −65.4 | ---- | 6 | 14,681 | −56.7 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| 100 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 9 | 16,449 | −72.1 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |

| Standard pressure surface (mb.) | Boise, Idaho (921.3 mb.) | | | | Brownsville, Tex. (1,017.7 mb.) | | | | Buffalo, N. Y. (989.1 mb.) | | | | Caribou, Maine (990.5 mb.) | | | | Charleston, S. C. (1,019.1 mb.) | | | | Ciudad Victoria, Mexico (977.7 mb.) | | | | Columbia, Mo. (989.1 mb.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Surface | 31 | 868 | −5.5 | 82 | 30 | 6 | 12.7 | 83 | 30 | 221 | −1.2 | 79 | 31 | 191 | −13.2 | 85 | 31 | 14 | 11.5 | 84 | 31 | 335 | 16.0 | 58 | 31 | 239 | 0.6 | 73 |
| 1,000 | 31 | 217 | (*) | ---- | 30 | 152 | 12.4 | 82 | 30 | 132 | (*) | ---- | 31 | 116 | (*) | ---- | 31 | 172 | 12.7 | 80 | 31 | 141 | (*) | ---- | 31 | 148 | (*) | ---- |
| 950 | 31 | 630 | (*) | ---- | 30 | 588 | 12.3 | 74 | 30 | 542 | −2.8 | 77 | 31 | 512 | −12.6 | 84 | 31 | 611 | 12.8 | 73 | 31 | 582 | 15.0 | 59 | 31 | 567 | .6 | 68 |
| 900 | 31 | 1,052 | −2.9 | 75 | 30 | 1,037 | 12.5 | 63 | 30 | 968 | −4.1 | 74 | 31 | 920 | −13.0 | 80 | 31 | 1,058 | 11.1 | 69 | 31 | 1,031 | 12.7 | 65 | 31 | 995 | .1 | 65 |
| 850 | 31 | 1,504 | −4.3 | 70 | 30 | 1,516 | 11.8 | 58 | 30 | 1,417 | −5.4 | 72 | 31 | 1,355 | −13.4 | 70 | 31 | 1,533 | 8.8 | 65 | 31 | 1,512 | 11.2 | 69 | 31 | 1,452 | −.6 | 56 |
| 800 | 31 | 1,981 | −5.4 | 66 | 30 | 2,023 | 10.4 | 55 | 30 | 1,893 | −6.2 | 71 | 31 | 1,816 | −13.7 | 64 | 31 | 2,034 | 7.0 | 58 | 31 | 2,019 | 10.9 | 63 | 31 | 1,936 | −1.8 | 54 |
| 750 | 31 | 2,492 | −7.2 | 66 | 30 | 2,566 | 9.2 | 48 | 30 | 2,404 | −8.0 | 66 | 31 | 2,312 | −14.6 | 59 | 31 | 2,567 | 4.6 | 52 | 31 | 2,557 | 9.2 | 57 | 31 | 2,454 | −3.0 | 47 |
| 700 | 31 | 3,021 | −10.0 | 64 | 30 | 3,129 | 6.2 | 40 | 30 | 2,931 | −10.0 | 65 | 31 | 2,827 | −15.9 | 54 | 31 | 3,122 | 1.9 | 47 | 31 | 3,126 | 6.2 | 52 | 31 | 2,992 | −5.7 | 45 |
| 650 | 31 | 3,593 | −13.0 | 59 | 30 | 3,732 | 2.6 | 36 | 30 | 3,506 | −12.6 | 62 | 31 | 3,388 | −18.2 | ---- | 31 | 3,722 | −1.1 | 39 | 31 | 3,728 | 2.5 | 45 | 31 | 3,575 | −8.7 | 45 |
| 600 | 31 | 4,195 | −16.5 | 53 | 30 | 4,375 | −1.7 | 37 | 30 | 4,107 | −15.9 | 60 | 30 | 3,970 | −21.5 | ---- | 31 | 4,351 | −4.9 | 40 | 30 | 4,372 | −1.3 | 35 | 31 | 4,187 | −11.9 | 38 |
| 550 | 31 | 4,846 | −20.7 | 52 | 30 | 5,062 | −6.1 | 35 | 29 | 4,756 | −19.5 | 57 | 28 | 4,613 | −24.9 | ---- | 30 | 5,032 | −8.9 | 42 | 29 | 5,059 | −5.5 | 34 | 31 | 4,849 | −16.0 | 36 |
| 500 | 31 | 5,542 | −25.5 | ---- | 30 | 5,801 | −10.7 | 36 | 28 | 5,461 | −23.9 | ---- | 28 | 5,297 | −28.5 | ---- | 30 | 5,762 | −13.6 | 44 | 27 | 5,806 | −10.2 | 38 | 31 | 5,560 | −20.5 | ---- |
| 450 | 31 | 6,305 | −30.5 | ---- | 30 | 6,609 | −16.0 | 40 | 27 | 6,232 | −28.6 | ---- | 28 | 6,054 | −32.5 | ---- | 30 | 6,563 | −19.0 | 49 | 25 | 6,614 | −15.6 | 36 | 30 | 6,334 | −25.9 | ---- |
| 400 | 31 | 7,127 | −36.3 | ---- | 30 | 7,481 | −22.1 | ---- | 24 | 7,062 | −33.8 | ---- | 27 | 6,869 | −37.6 | ---- | 30 | 7,423 | −25.1 | ---- | 24 | 7,495 | −21.8 | ---- | 30 | 7,173 | −31.6 | ---- |
| 350 | 31 | 8,040 | −42.7 | ---- | 30 | 8,448 | −29.3 | ---- | 24 | 7,986 | −39.8 | ---- | 26 | 7,775 | −43.3 | ---- | 30 | 8,379 | −32.2 | ---- | 24 | 8,469 | −28.9 | ---- | 30 | 8,104 | −37.8 | ---- |
| 300 | 31 | 9,064 | −49.5 | ---- | 29 | 9,528 | −37.7 | ---- | 22 | 9,019 | −46.6 | ---- | 25 | 8,812 | −49.0 | ---- | 30 | 9,449 | −40.3 | ---- | 24 | 9,547 | −37.5 | ---- | 28 | 9,149 | −44.6 | ---- |
| 250 | 30 | 10,251 | −56.5 | ---- | 27 | 10,764 | −46.8 | ---- | 16 | 10,177 | −54.0 | ---- | 20 | 10,020 | −54.1 | ---- | 29 | 10,664 | −50.1 | ---- | 22 | 10,775 | −46.9 | ---- | 23 | 10,368 | −52.4 | ---- |
| 200 | 26 | 11,646 | −60.3 | ---- | 24 | 12,212 | −56.8 | ---- | 14 | 11,619 | −58.3 | ---- | 8 | 11,363 | −53.2 | ---- | 28 | 12,087 | −59.6 | ---- | 17 | 12,204 | −57.5 | ---- | 13 | 11,787 | −58.6 | ---- |
| 175 | 21 | 12,474 | −59.1 | ---- | 19 | 13,047 | −60.0 | ---- | 8 | 12,416 | −56.8 | ---- | ---- | ---- | ---- | ---- | 27 | 12,913 | −61.6 | ---- | 11 | 13,045 | −61.1 | ---- | 5 | 12,602 | −56.3 | ---- |
| 150 | 14 | 13,424 | −57.5 | ---- | 16 | 13,999 | −62.9 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 22 | 13,850 | −62.7 | ---- | 6 | 14,016 | −66.0 | ---- | ---- | ---- | ---- | ---- |
| 125 | 10 | 14,577 | −56.3 | ---- | 7 | 15,122 | −67.5 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 16 | 14,944 | −66.3 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| 100 | 5 | 15,986 | −58.2 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 11 | 16,274 | −68.9 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| 80 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 5 | 17,585 | −68.6 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |

See footnotes at end of table.

TABLE 1.—*Mean dynamic height (geopotential) in units of 0.98 dynamic meters, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during January 1947*—Continued

| Standard pressure surface (mb.) | Dodge City, Kans. (924.2 mb.) | | | | El Paso, Tex. (883.0 mb.) | | | | Ely, Nev. (809.6 mb.) | | | | Fort Worth, Tex. (994.2 mb.) | | | | Glasgow, Mont. (936.5 mb.) | | | | Grand Junction, Colo. (854.0 mb.) | | | | Great Falls, Mont. (883.6 mb.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity |
| Surface | 31 | 787 | −1.6 | 68 | 31 | 1,195 | 4.8 | 57 | 31 | 1,908 | −7.5 | 78 | 31 | 211 | 6.7 | 71 | 31 | 648 | −6.5 | 80 | 30 | 1,474 | −5.9 | 71 | 31 | 1,128 | −3.2 | 58 |
| 1,000 | 31 | 149 | (*) | ---- | 31 | 164 | (*) | ---- | 31 | 218 | (*) | ---- | 31 | 160 | (*) | ---- | 31 | 135 | (*) | ---- | 30 | 214 | (*) | ---- | 31 | 135 | (*) | ---- |
| 950 | 31 | 568 | (*) | ---- | 31 | 599 | (*) | ---- | 31 | 638 | (*) | ---- | 31 | 587 | 6.5 | 65 | 31 | 536 | (*) | ---- | 30 | 634 | (*) | ---- | 31 | 554 | (*) | ---- |
| 900 | 31 | 999 | 1.3 | 56 | 31 | 1,042 | (*) | ---- | 31 | 1,069 | (*) | ---- | 31 | 1,025 | 5.4 | 55 | 31 | 958 | −4.3 | 76 | 30 | 1,061 | (*) | ---- | 31 | 987 | (*) | ---- |
| 850 | 31 | 1,458 | .7 | 43 | 31 | 1,505 | 4.5 | 52 | 31 | 1,522 | (*) | ---- | 31 | 1,492 | 4.6 | 48 | 31 | 1,408 | −4.8 | 72 | 30 | 1,510 | −5.0 | 64 | 31 | 1,436 | −2.9 | 49 |
| 800 | 31 | 1,944 | −.3 | 35 | 31 | 1,996 | 1.9 | 50 | 31 | 2,002 | −3.3 | 61 | 31 | 1,984 | 3.2 | 48 | 31 | 1,884 | −6.7 | 66 | 30 | 1,989 | −3.8 | 53 | 31 | 1,914 | −5.2 | 50 |
| 750 | 31 | 2,465 | −2.6 | 36 | 31 | 2,521 | −.8 | 52 | 31 | 2,520 | −4.0 | 45 | 31 | 2,512 | 1.5 | 44 | 31 | 2,386 | −9.5 | 67 | 30 | 2,503 | −5.7 | 55 | 31 | 2,422 | −8.4 | 56 |
| 700 | 31 | 3,002 | −5.3 | 38 | 31 | 3,062 | −2.9 | 47 | 31 | 3,054 | −6.9 | 46 | 31 | 3,060 | −.8 | 48 | 31 | 2,915 | −12.6 | 70 | 30 | 3,035 | −8.0 | 53 | 31 | 2,950 | −11.2 | 59 |
| 650 | 31 | 3,587 | −8.6 | 40 | 31 | 3,651 | −6.0 | 44 | 31 | 3,633 | −10.1 | 47 | 30 | 3,650 | −3.9 | 43 | 31 | 3,480 | −16.1 | 72 | 30 | 3,610 | −11.2 | 57 | 31 | 3,519 | −14.6 | 57 |
| 600 | 31 | 4,196 | −12.4 | 45 | 31 | 4,268 | −9.8 | 41 | 31 | 4,241 | −13.9 | 51 | 30 | 4,275 | −7.5 | 40 | 31 | 4,075 | −19.8 | 73 | 30 | 4,217 | −14.9 | 55 | 31 | 4,118 | −18.6 | 56 |
| 550 | 31 | 4,859 | −16.3 | 46 | 31 | 4,937 | −14.2 | ---- | 31 | 4,900 | −17.7 | 47 | 30 | 4,949 | −12.2 | 42 | 31 | 4,717 | −23.8 | ---- | 30 | 4,869 | −19.0 | 50 | 31 | 4,760 | −23.2 | ---- |
| 500 | 31 | 5,567 | −20.8 | ---- | 31 | 5,650 | −19.1 | ---- | 31 | 5,604 | −21.9 | ---- | 30 | 5,670 | −17.0 | ---- | 31 | 5,406 | −28.3 | ---- | 29 | 5,572 | −23.5 | ---- | 31 | 5,453 | −28.0 | ---- |
| 450 | 31 | 6,345 | −26.0 | ---- | 31 | 6,434 | −24.8 | ---- | 31 | 6,380 | −27.3 | ---- | 29 | 6,455 | −22.5 | ---- | 31 | 6,156 | −33.7 | ---- | 29 | 6,345 | −28.4 | ---- | 31 | 6,206 | −33.5 | ---- |
| 400 | 31 | 7,179 | −31.9 | ---- | 31 | 7,272 | −30.7 | ---- | 30 | 7,217 | −33.4 | ---- | 29 | 7,305 | −28.4 | ---- | 30 | 6,977 | −39.5 | ---- | 29 | 7,170 | −34.4 | ---- | 30 | 7,009 | −39.5 | ---- |
| 350 | 30 | 8,111 | −38.9 | ---- | 31 | 8,207 | −37.0 | ---- | 30 | 8,141 | −40.1 | ---- | 25 | 8,255 | −34.7 | ---- | 30 | 7,878 | −46.0 | ---- | 25 | 8,092 | −41.1 | ---- | 28 | 7,017 | −45.5 | ---- |
| 300 | 29 | 9,148 | −46.3 | ---- | 31 | 9,257 | −44.1 | ---- | 29 | 9,178 | −47.6 | ---- | 22 | 9,324 | −41.9 | ---- | 28 | 8,883 | −52.1 | ---- | 22 | 9,123 | −48.4 | ---- | 28 | 8,931 | −51.4 | ---- |
| 250 | 28 | 10,345 | −53.9 | ---- | 27 | 10,466 | −51.7 | ---- | 23 | 10,374 | −55.2 | ---- | 19 | 10,522 | −50.7 | ---- | 25 | 10,067 | −56.0 | ---- | 15 | 10,317 | −54.4 | ---- | 26 | 10,095 | −55.6 | ---- |
| 200 | 23 | 11,772 | −58.5 | ---- | 20 | 11,895 | −56.8 | ---- | 11 | 11,734 | −61.2 | ---- | 14 | 11,956 | −57.7 | ---- | 20 | 11,469 | −57.3 | ---- | 8 | 11,650 | −53.7 | ---- | 23 | 11,515 | −57.9 | ---- |
| 175 | 18 | 12,609 | −57.0 | ---- | 10 | 12,735 | −56.7 | ---- | ---- | ---- | ---- | ---- | 10 | 12,784 | −59.2 | ---- | 16 | 12,303 | −54.1 | ---- | 5 | 12,490 | −52.9 | ---- | 14 | 12,306 | −54.1 | ---- |
| 150 | 17 | 13,596 | −55.9 | ---- | 5 | 13,719 | −58.5 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 11 | 13,279 | −53.2 | ---- | ---- | ---- | ---- | ---- | 9 | 13,254 | −51.8 | ---- |
| 125 | 6 | 14,756 | −56.6 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 5 | 14,438 | −55.1 | ---- | ---- | ---- | ---- | ---- | 5 | 14,388 | −50.3 | ---- |

| Standard pressure surface (mb.) | Greensboro, N. C. (987.8 mb.) | | | | Hatteras, N. C. (1,019.4 mb.) | | | | Havana, Cuba (1,011.7 mb.) | | | | Honolulu, T. H. (1,013.7 mb.) | | | | Huntington, W. Va. (998.9 mb.) | | | | International Falls, Minn. (970.6 mb.) | | | | Joliet, Ill. (995.7 mb.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity |
| Surface | 31 | 273 | 5.9 | 79 | 27 | 3 | 11.3 | 81 | 29 | 50 | 22.2 | 89 | 31 | 3 | 22.9 | 64 | 29 | 172 | 3.6 | 75 | 31 | 360 | −12.3 | 83 | 30 | 178 | −3.5 | 85 |
| 1,000 | 31 | 171 | (*) | ---- | 27 | 163 | 12.2 | 77 | 29 | 151 | 22.0 | 88 | 31 | 121 | 21.5 | 64 | 29 | 162 | (*) | ---- | 31 | 128 | (*) | ---- | 30 | 142 | (*) | ---- |
| 950 | 31 | 595 | 6.5 | 74 | 27 | 596 | 10.6 | 71 | 29 | 598 | 19.9 | 83 | 31 | 569 | 17.8 | 70 | 29 | 581 | 2.3 | 76 | 31 | 521 | −12.1 | 84 | 30 | 550 | −2.5 | 74 |
| 900 | 31 | 1,036 | 5.5 | 73 | 27 | 1,041 | 8.5 | 65 | 29 | 1,062 | 17.1 | 80 | 31 | 1,024 | 14.2 | 74 | 29 | 1,014 | 1.2 | 77 | 31 | 934 | −12.9 | 80 | 30 | 977 | −2.9 | 57 |
| 850 | 31 | 1,502 | 4.1 | 71 | 27 | 1,512 | 6.4 | 59 | 29 | 1,549 | 14.2 | 75 | 31 | 1,505 | 11.6 | 66 | 29 | 1,472 | −.3 | 68 | 31 | 1,370 | −12.4 | 78 | 30 | 1,428 | −4.4 | 51 |
| 800 | 31 | 1,994 | 2.4 | 68 | 27 | 2,008 | 4.3 | 56 | 29 | 2,059 | 11.9 | 55 | 31 | 2,012 | 11.0 | 36 | 29 | 1,956 | −1.8 | 64 | 31 | 1,833 | −13.1 | 72 | 30 | 1,905 | −5.5 | 54 |
| 750 | 31 | 2,518 | .7 | 60 | 27 | 2,537 | 2.3 | 51 | 29 | 2,602 | 9.4 | 45 | 31 | 2,553 | 8.9 | ---- | 29 | 2,473 | −3.7 | 60 | 31 | 2,329 | −14.7 | 68 | 30 | 2,414 | −6.7 | 53 |
| 700 | 31 | 3,066 | −1.6 | 55 | 27 | 3,087 | −.4 | 49 | 29 | 3,167 | 6.5 | 36 | 31 | 3,116 | 6.1 | ---- | 29 | 3,011 | −5.6 | 52 | 31 | 2,843 | −17.1 | 68 | 30 | 2,947 | −9.0 | 53 |
| 650 | 31 | 3,656 | −4.0 | 53 | 27 | 3,680 | −3.6 | 47 | 29 | 3,777 | 3.4 | 33 | 31 | 3,722 | 2.5 | ---- | 29 | 3,593 | −8.4 | 52 | 31 | 3,403 | −19.3 | 62 | 30 | 3,523 | −12.0 | 48 |
| 600 | 30 | 4,282 | −7.8 | 51 | 27 | 4,306 | −6.9 | 42 | 29 | 4,418 | .2 | ---- | 31 | 4,360 | −1.4 | ---- | 29 | 4,206 | −11.6 | 51 | 31 | 3,988 | −22.0 | ---- | 30 | 4,125 | −15.2 | 42 |
| 550 | 30 | 4,954 | −11.9 | 50 | 26 | 4,990 | −10.7 | ---- | 29 | 5,112 | −3.1 | ---- | 31 | 5,049 | −5.6 | ---- | 29 | 4,874 | −14.8 | 51 | 29 | 4,626 | −25.3 | ---- | 30 | 4,782 | −19.1 | 39 |
| 500 | 30 | 5,677 | −16.5 | 53 | 26 | 5,713 | −15.7 | ---- | 29 | 5,861 | −7.7 | ---- | 31 | 5,787 | −10.7 | ---- | 29 | 5,585 | −19.0 | 53 | 27 | 5,308 | −29.7 | ---- | 30 | 5,481 | −23.7 | ---- |
| 450 | 30 | 6,466 | −22.0 | ---- | 25 | 6,504 | −21.2 | ---- | 29 | 6,679 | −13.4 | ---- | 30 | 6,598 | −16.6 | ---- | 29 | 6,368 | −23.9 | ---- | 27 | 6,060 | −34.7 | ---- | 29 | 6,244 | −29.0 | ---- |
| 400 | 30 | 7,318 | −28.1 | ---- | 25 | 7,357 | −27.1 | ---- | 29 | 7,560 | −19.9 | ---- | 29 | 7,463 | −23.2 | ---- | 27 | 7,212 | −30.1 | ---- | 24 | 6,861 | −40.2 | ---- | 29 | 7,093 | −34.9 | ---- |
| 350 | 30 | 8,262 | −34.9 | ---- | 24 | 8,300 | −34.2 | ---- | 29 | 8,535 | −27.7 | ---- | 28 | 8,426 | −30.0 | ---- | 27 | 8,149 | −36.9 | ---- | 21 | 7,760 | −47.0 | ---- | 29 | 7,993 | −40.6 | ---- |
| 300 | 30 | 9,320 | −43.1 | ---- | 24 | 9,360 | −42.3 | ---- | 29 | 9,622 | −36.8 | ---- | 27 | 9,504 | −37.1 | ---- | 24 | 9,196 | −44.5 | ---- | 21 | 8,766 | −53.2 | ---- | 29 | 9,028 | −47.1 | ---- |
| 250 | 30 | 10,525 | −52.4 | ---- | 21 | 10,571 | −51.5 | ---- | 27 | 10,857 | −46.8 | ---- | 27 | 10,743 | −44.4 | ---- | 17 | 10,469 | −51.9 | ---- | 16 | 9,910 | −56.3 | ---- | 28 | 10,226 | −53.6 | ---- |
| 200 | 26 | 11,932 | −60.4 | ---- | 17 | 12,010 | −60.4 | ---- | 19 | 12,309 | −54.6 | ---- | 22 | 12,216 | −51.5 | ---- | 10 | 11,884 | −60.8 | ---- | 8 | 11,346 | −54.1 | ---- | 27 | 11,647 | −57.9 | ---- |
| 175 | 21 | 12,731 | −61.3 | ---- | 12 | 12,810 | −61.1 | ---- | 10 | 13,125 | −59.2 | ---- | 19 | 13,074 | −55.6 | ---- | ---- | ---- | ---- | ---- | 6 | 12,241 | −51.2 | ---- | 22 | 12,477 | −57.8 | ---- |
| 150 | 15 | 13,654 | −61.8 | ---- | 9 | 13,768 | −61.6 | ---- | 6 | 14,068 | −64.5 | ---- | 15 | 14,045 | −60.4 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 14 | 13,414 | −56.8 | ---- |
| 125 | 8 | 14,733 | −63.1 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 8 | 15,209 | −64.2 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 5 | 14,563 | −57.3 | ---- |

| Standard pressure surface (mb.) | Lake Charles, La. (1,018.9 mb.) | | | | Lander, Wyo. (825.9 mb.) | | | | Las Vegas, Nev. (951.7 mb.) | | | | Little Rock, Ark. (1,009.4 mb.) | | | | Mazatlan, Mexico [1] | | | | Medford, Oreg. (974.8 mb.) | | | | Merida, Mexico (1,012.1 mb.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity |
| Surface | 31 | 5 | 10.2 | 85 | 31 | 1,696 | −7.1 | 66 | 31 | 574 | 6.2 | 37 | 29 | 79 | 6.5 | 77 | ---- | ---- | ---- | ---- | 31 | 401 | 1.8 | 82 | 31 | 27 | 25.1 | 75 |
| 1,000 | 31 | 160 | 10.2 | 80 | 31 | 171 | (*) | ---- | 31 | 162 | (*) | ---- | 29 | 154 | (*) | ---- | ---- | ---- | ---- | ---- | 31 | 194 | (*) | ---- | 31 | 133 | 24.3 | 75 |
| 950 | 31 | 592 | 10.3 | 72 | 31 | 590 | (*) | ---- | 31 | 588 | (*) | ---- | 29 | 580 | 5.8 | 72 | ---- | ---- | ---- | ---- | 31 | 616 | 3.4 | 71 | 31 | 582 | 21.4 | 74 |
| 900 | 31 | 1,038 | 10.6 | 63 | 31 | 1,022 | (*) | ---- | 31 | 1,036 | 8.3 | 27 | 29 | 1,017 | 5.0 | 68 | ---- | ---- | ---- | ---- | 31 | 1,048 | 3.1 | 62 | 31 | 1,048 | 18.4 | 75 |
| 850 | 31 | 1,514 | 9.4 | 58 | 31 | 1,468 | (*) | ---- | 31 | 1,505 | 5.7 | 28 | 29 | 1,483 | 4.2 | 64 | ---- | ---- | ---- | ---- | 31 | 1,510 | 1.4 | 59 | 31 | 1,537 | 15.1 | 76 |
| 800 | 31 | 2,016 | 7.9 | 59 | 31 | 1,947 | −2.9 | 51 | 31 | 1,998 | 2.6 | 29 | 29 | 1,975 | 3.2 | 54 | ---- | ---- | ---- | ---- | 31 | 1,996 | −.7 | 55 | 31 | 2,048 | 12.2 | 71 |
| 750 | 31 | 2,550 | 5.4 | 57 | 31 | 2,463 | −5.5 | 48 | 31 | 2,520 | −.6 | 29 | 29 | 2,501 | 1.4 | 50 | ---- | ---- | ---- | ---- | 31 | 2,517 | −3.0 | 51 | 31 | 2,591 | 9.9 | 60 |
| 700 | 31 | 3,108 | 2.9 | 51 | 31 | 2,994 | −9.0 | 53 | 31 | 3,065 | −3.7 | 30 | 29 | 3,050 | −1.1 | 47 | ---- | ---- | ---- | ---- | 31 | 3,053 | −5.8 | 48 | 31 | 3,159 | 7.4 | 53 |
| 650 | 31 | 3,710 | −.4 | 44 | 31 | 3,570 | −12.5 | 51 | 31 | 3,647 | −7.5 | 31 | 28 | 3,684 | −4.1 | 41 | ---- | ---- | ---- | ---- | 31 | 3,635 | −9.3 | 42 | 31 | 3,770 | 4.1 | 44 |
| 600 | 31 | 4,340 | −4.3 | 44 | 31 | 4,170 | −16.3 | 52 | 31 | 4,265 | −11.1 | ---- | 28 | 4,267 | −7.6 | ---- | ---- | ---- | ---- | ---- | 31 | 4,244 | −13.0 | 47 | 31 | 4,413 | .4 | ---- |
| 550 | 31 | 5,023 | −8.7 | 44 | 31 | 4,823 | −20.4 | 52 | 31 | 4,930 | −15.0 | ---- | 27 | 4,940 | −12.0 | ---- | ---- | ---- | ---- | ---- | 31 | 4,904 | −17.3 | 49 | 30 | 5,105 | −3.2 | ---- |
| 500 | 31 | 5,750 | −13.3 | 45 | 31 | 5,518 | −25.7 | ---- | 31 | 5,643 | −19.9 | ---- | 26 | 5,661 | −16.8 | ---- | ---- | ---- | ---- | ---- | 31 | 5,609 | −21.8 | ---- | 30 | 5,854 | −7.6 | ---- |
| 450 | 31 | 6,552 | −18.0 | 46 | 31 | 6,279 | −31.3 | ---- | 31 | 6,415 | −25.5 | ---- | 26 | 6,450 | −21.9 | ---- | ---- | ---- | ---- | ---- | 30 | 6,384 | −27.0 | ---- | 30 | 6,669 | −13.2 | ---- |
| 400 | 31 | 7,416 | −24.5 | ---- | 31 | 7,098 | −37.1 | ---- | 31 | 7,259 | −31.9 | ---- | 25 | 7,301 | −28.2 | ---- | ---- | ---- | ---- | ---- | 30 | 7,220 | −33.0 | ---- | 29 | 7,554 | −20.1 | ---- |
| 350 | 31 | 8,375 | −31.1 | ---- | 31 | 8,007 | −43.6 | ---- | 31 | 8,189 | −39.0 | ---- | 25 | 8,244 | −35.0 | ---- | ---- | ---- | ---- | ---- | 30 | 8,145 | −39.7 | ---- | 29 | 8,528 | −27.8 | ---- |
| 300 | 31 | 9,451 | −38.7 | ---- | 30 | 9,041 | −50.6 | ---- | 31 | 9,228 | −46.9 | ---- | 23 | 9,308 | −42.9 | ---- | ---- | ---- | ---- | ---- | 29 | 9,179 | −47.5 | ---- | 29 | 9,615 | −37.0 | ---- |
| 250 | 31 | 10,678 | −48.0 | ---- | 29 | 10,208 | −56.5 | ---- | 28 | 10,424 | −54.5 | ---- | 22 | 10,516 | −51.2 | ---- | ---- | ---- | ---- | ---- | 28 | 10,376 | −55.5 | ---- | 29 | 10,848 | −47.1 | ---- |
| 200 | 28 | 12,118 | −56.8 | ---- | 18 | 11,572 | −57.4 | ---- | 19 | 11,808 | −59.0 | ---- | 12 | 11,907 | −58.4 | ---- | ---- | ---- | ---- | ---- | 25 | 11,768 | −61.9 | ---- | 28 | 12,291 | −56.2 | ---- |
| 175 | 17 | 12,991 | −58.7 | ---- | 11 | 12,386 | −53.3 | ---- | 12 | 12,695 | −58.3 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 23 | 12,579 | −61.1 | ---- | 25 | 13,130 | −60.9 | ---- |
| 150 | 10 | 13,928 | −60.9 | ---- | 7 | 13,370 | −52.6 | ---- | 6 | 13,639 | −55.6 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 16 | 13,524 | −57.5 | ---- | 20 | 14,074 | −66.0 | ---- |
| 125 | 5 | 15,058 | −64.7 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 8 | 14,658 | −56.5 | ---- | 6 | 15,148 | −71.4 | ---- |

See footnotes at end of table.

TABLE 1.—*Mean dynamic height (geopotential) in units of 0.98 dynamic meters, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during January 1947*—Continued

| Standard pressure surface (mb.) | Miami, Fla. (1,019.2 mb.) | | | | Nantucket, Mass. (1,015.9 mb.) | | | | Nashville, Tenn. (997.7 mb.) | | | | New Orleans, La. (1,019.1 mb.) | | | | North Platte, Nebr. (916.0 mb.) | | | | Oakland, Calif. (1,021.4 mb.) | | | | Ogden, Utah (867.5 mb.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity |
| Surface | 31 | 4 | 21.2 | 86 | 30 | 14 | 1.4 | 82 | 31 | 180 | 6.0 | 79 | 30 | 2 | 12.4 | 84 | 31 | 849 | −3.0 | 69 | 31 | 6 | 7.3 | 75 | 31 | 1,355 | −5.7 | 78 |
| 1,000 | 31 | 169 | 21.4 | 83 | 30 | 140 | .7 | 77 | 31 | 159 | (*) | ---- | 30 | 160 | 12.2 | 81 | 31 | 142 | (*) | ---- | 31 | 181 | 7.9 | 67 | 31 | 223 | (*) | ---- |
| 950 | 31 | 615 | 18.8 | 81 | 30 | 550 | .5 | 71 | 31 | 582 | 4.9 | 77 | 29 | 595 | 12.0 | 75 | 31 | 559 | (*) | ---- | 31 | 606 | 8.0 | 51 | 31 | 636 | (*) | ---- |
| 900 | 31 | 1,076 | 15.8 | 78 | 30 | 986 | −.5 | 55 | 31 | 1,021 | 4.3 | 75 | 29 | 1,042 | 11.9 | 69 | 31 | 989 | .1 | 60 | 31 | 1,050 | 7.3 | 38 | 31 | 1,064 | (*) | ---- |
| 850 | 31 | 1,560 | 13.1 | 73 | 30 | 1,441 | −1.9 | 51 | 31 | 1,486 | 3.8 | 66 | 29 | 1,521 | 10.9 | 64 | 31 | 1,446 | −.6 | 46 | 31 | 1,518 | 6.1 | ---- | 31 | 1,515 | −4.4 | 68 |
| 800 | 31 | 2,068 | 11.0 | 58 | 30 | 1,922 | −3.6 | 54 | 31 | 1,978 | 2.8 | 62 | 29 | 2,025 | 8.8 | 57 | 31 | 1,928 | −3.1 | 45 | 31 | 2,013 | 4.3 | ---- | 31 | 1,991 | −5.7 | 63 |
| 750 | 31 | 2,608 | 8.4 | 52 | 30 | 2,434 | −4.7 | 55 | 31 | 2,502 | .6 | 60 | 28 | 2,565 | 6.1 | 52 | 31 | 2,444 | −5.8 | 43 | 31 | 2,541 | 1.9 | ---- | 31 | 2,501 | −7.4 | 62 |
| 700 | 31 | 3,172 | 5.6 | 42 | 30 | 2,971 | −7.1 | 56 | 31 | 3,050 | −1.7 | 55 | 28 | 3,122 | 3.1 | 50 | 31 | 2,974 | −8.9 | 46 | 31 | 3,089 | −1.1 | ---- | 31 | 3,031 | −9.4 | 60 |
| 650 | 30 | 3,777 | 2.9 | ---- | 30 | 3,545 | −9.8 | 47 | 31 | 3,639 | −4.7 | 52 | 28 | 3,722 | −.2 | 47 | 31 | 3,552 | −12.6 | 49 | 31 | 3,677 | −4.8 | ---- | 31 | 3,603 | −12.6 | 62 |
| 600 | 29 | 4,418 | .0 | ---- | 29 | 4,156 | −12.7 | 43 | 30 | 4,264 | −7.8 | 50 | 28 | 4,356 | −3.8 | ---- | 31 | 4,153 | −15.5 | 51 | 31 | 4,301 | −8.7 | ---- | 31 | 4,207 | −16.2 | 62 |
| 550 | 29 | 5,112 | −3.9 | ---- | 29 | 4,815 | −16.4 | ---- | 30 | 4,938 | −11.6 | 49 | 28 | 5,040 | −7.7 | ---- | 31 | 4,809 | −19.5 | 50 | 31 | 4,970 | −13.0 | ---- | 31 | 4,859 | −19.6 | 55 |
| 500 | 29 | 5,855 | −8.6 | ---- | 27 | 5,536 | −20.5 | ---- | 30 | 5,659 | −16.5 | 51 | 28 | 5,773 | −12.5 | ---- | 31 | 5,507 | −23.8 | ---- | 31 | 5,691 | −17.6 | ---- | 31 | 5,559 | −24.4 | ---- |
| 450 | 29 | 6,672 | −14.1 | ---- | 26 | 6,322 | −25.4 | ---- | 30 | 6,449 | −21.7 | ---- | 28 | 6,577 | −17.6 | ---- | 31 | 6,278 | −29.5 | ---- | 31 | 6,476 | −23.1 | ---- | 31 | 6,324 | −29.7 | ---- |
| 400 | 27 | 7,548 | −20.5 | ---- | 26 | 7,162 | −31.3 | ---- | 30 | 7,301 | −27.7 | ---- | 24 | 7,437 | −23.9 | ---- | 31 | 7,097 | −35.8 | ---- | 31 | 7,325 | −29.5 | ---- | 31 | 7,148 | −35.7 | ---- |
| 350 | 27 | 8,522 | −27.9 | ---- | 26 | 8,094 | −38.0 | ---- | 27 | 8,244 | −35.1 | ---- | 20 | 8,401 | −30.8 | ---- | 31 | 8,013 | −42.1 | ---- | 30 | 8,260 | −36.8 | ---- | 30 | 8,070 | −42.2 | ---- |
| 300 | 26 | 9,604 | −36.4 | ---- | 26 | 9,139 | −45.1 | ---- | 25 | 9,306 | −43.2 | ---- | 17 | 9,474 | −39.0 | ---- | 31 | 9,039 | −49.3 | ---- | 26 | 9,324 | −44.6 | ---- | 30 | 9,097 | −48.9 | ---- |
| 250 | 26 | 10,842 | −46.1 | ---- | 21 | 10,388 | −52.7 | ---- | 22 | 10,505 | −52.3 | ---- | 16 | 10,707 | −48.4 | ---- | 31 | 10,216 | −55.5 | ---- | 23 | 10,505 | −53.5 | ---- | 26 | 10,278 | −55.1 | ---- |
| 200 | 25 | 12,289 | −54.9 | ---- | 16 | 11,831 | −60.0 | ---- | 15 | 11,918 | −59.5 | ---- | 13 | 12,146 | −56.6 | ---- | 27 | 11,614 | −57.1 | ---- | 17 | 11,921 | −60.6 | ---- | 16 | 11,697 | −59.3 | ---- |
| 175 | 21 | 13,138 | −58.2 | ---- | 8 | 12,667 | −62.1 | ---- | 7 | 12,719 | −59.8 | ---- | 10 | 12,972 | −58.5 | ---- | 19 | 12,455 | −54.4 | ---- | 9 | 12,718 | −60.4 | ---- | 8 | 12,536 | −55.7 | ---- |
| 150 | 19 | 14,101 | −62.7 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 6 | 13,928 | −60.4 | ---- | 12 | 13,434 | −54.7 | ---- | ---- | ---- | ---- | ---- | 5 | 13,471 | −54.1 | ---- |
| 125 | 13 | 15,233 | −68.2 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |

| Standard pressure surface (mb.) | Oklahoma City, Okla. (972.2 mb.) | | | | Omaha, Nebr. (979.6 mb.) | | | | Phoenix, Ariz. (977.0 mb.) | | | | Pittsburgh, Pa. (971.9 mb.) | | | | Portland, Maine (1,014.4 mb.) | | | | Rapid City, S. Dak. (899.8 mb.) | | | | St. Paul, Minn. (987.8 mb.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Surface | 30 | 391 | 1.7 | 78 | 31 | 308 | −1.8 | 69 | 31 | 339 | 9.4 | 51 | 31 | 382 | 1.8 | 74 | 30 | 20 | −5.9 | 79 | 31 | 980 | −4.5 | 69 | 30 | 225 | −6.1 | 80 |
| 1,000 | 30 | 160 | (*) | ---- | 31 | 141 | (*) | ---- | 31 | 144 | (*) | ---- | 31 | 149 | (*) | ---- | 30 | 130 | −5.2 | 78 | 31 | 133 | (*) | ---- | 30 | 124 | (*) | ---- |
| 950 | 30 | 579 | 3.3 | 70 | 31 | 555 | −1.3 | 64 | 31 | 577 | 12.8 | 38 | 31 | 572 | 1.3 | 74 | 30 | 538 | −4.5 | 74 | 31 | 550 | (*) | ---- | 30 | 529 | −6.1 | 76 |
| 900 | 30 | 1,014 | 3.0 | 59 | 31 | 982 | −1.3 | 55 | 31 | 1,025 | 10.1 | 36 | 31 | 999 | −.3 | 75 | 30 | 959 | −6.0 | 72 | 31 | 979 | (*) | ---- | 30 | 949 | −6.5 | 70 |
| 850 | 30 | 1,477 | 1.9 | 53 | 31 | 1,437 | −2.0 | 52 | 31 | 1,497 | 6.7 | 40 | 31 | 1,455 | −1.6 | 72 | 30 | 1,406 | −6.6 | 66 | 31 | 1,431 | −2.4 | 55 | 30 | 1,396 | −6.9 | 61 |
| 800 | 30 | 1,984 | .3 | 49 | 31 | 1,917 | −3.7 | 51 | 31 | 1,991 | 3.3 | 44 | 31 | 1,936 | −3.3 | 66 | 30 | 1,879 | −7.1 | 60 | 31 | 1,910 | −4.9 | 58 | 30 | 1,868 | −8.0 | 56 |
| 750 | 30 | 2,487 | −1.3 | 41 | 31 | 2,431 | −5.8 | 52 | 31 | 2,519 | .1 | 47 | 31 | 2,455 | −5.2 | 63 | 30 | 2,388 | −7.6 | 59 | 31 | 2,417 | −7.7 | 59 | 30 | 2,372 | −10.1 | 53 |
| 700 | 30 | 3,028 | −3.7 | 40 | 31 | 2,963 | −7.9 | 50 | 31 | 3,061 | −2.8 | 43 | 31 | 2,984 | −7.7 | 58 | 30 | 2,916 | −9.7 | 57 | 31 | 2,948 | −10.5 | 57 | 30 | 2,897 | −12.7 | 56 |
| 650 | 30 | 3,614 | −6.7 | 42 | 31 | 3,543 | −11.0 | 49 | 31 | 3,651 | −5.9 | 36 | 31 | 3,566 | −10.4 | 52 | 30 | 3,492 | −12.3 | 57 | 31 | 3,521 | −13.4 | 57 | 29 | 3,478 | −15.2 | 59 |
| 600 | 29 | 4,232 | −10.2 | 41 | 31 | 4,147 | −14.5 | 48 | 31 | 4,268 | −9.7 | 39 | 30 | 4,171 | −13.5 | 50 | 30 | 4,094 | −15.3 | 59 | 31 | 4,120 | −16.8 | 56 | 29 | 4,068 | −18.5 | 61 |
| 550 | 29 | 4,906 | −14.1 | ---- | 31 | 4,802 | −18.7 | 49 | 31 | 4,939 | −13.9 | ---- | 30 | 4,833 | −16.7 | 49 | 30 | 4,749 | −19.2 | 55 | 31 | 4,771 | −20.8 | 54 | 29 | 4,716 | −22.1 | ---- |
| 500 | 29 | 5,614 | −19.0 | ---- | 31 | 5,505 | −23.4 | ---- | 31 | 5,652 | −19.1 | ---- | 29 | 5,539 | −20.8 | 48 | 30 | 5,449 | −23.6 | ---- | 31 | 5,467 | −25.4 | ---- | 29 | 5,408 | −26.0 | ---- |
| 450 | 29 | 6,397 | −24.3 | ---- | 31 | 6,270 | −28.5 | ---- | 31 | 6,437 | −25.0 | ---- | 29 | 6,320 | −25.2 | ---- | 30 | 6,219 | −28.7 | ---- | 30 | 6,241 | −30.3 | ---- | 29 | 6,171 | −31.0 | ---- |
| 400 | 29 | 7,240 | −30.0 | ---- | 31 | 7,102 | −34.4 | ---- | 31 | 7,272 | −31.7 | ---- | 29 | 7,158 | −30.7 | ---- | 30 | 7,045 | −34.5 | ---- | 30 | 7,064 | −36.2 | ---- | 29 | 6,991 | −36.6 | ---- |
| 350 | 29 | 8,177 | −36.9 | ---- | 31 | 8,025 | −40.2 | ---- | 29 | 8,204 | −38.1 | ---- | 29 | 8,096 | −37.0 | ---- | 30 | 7,965 | −40.8 | ---- | 30 | 7,977 | −43.0 | ---- | 29 | 7,902 | −43.2 | ---- |
| 300 | 27 | 9,227 | −44.3 | ---- | 31 | 9,062 | −46.7 | ---- | 26 | 9,254 | −45.2 | ---- | 29 | 9,146 | −44.4 | ---- | 30 | 8,999 | −47.6 | ---- | 27 | 9,017 | −49.7 | ---- | 29 | 8,925 | −49.9 | ---- |
| 250 | 25 | 10,440 | −52.1 | ---- | 31 | 10,252 | −53.3 | ---- | 20 | 10,468 | −52.8 | ---- | 28 | 10,362 | −52.6 | ---- | 28 | 10,216 | −55.7 | ---- | 24 | 10,209 | −55.6 | ---- | 29 | 10,099 | −55.8 | ---- |
| 200 | 13 | 11,843 | −58.7 | ---- | 26 | 11,678 | −56.7 | ---- | 13 | 11,883 | −57.4 | ---- | 25 | 11,771 | −59.8 | ---- | 23 | 11,541 | −59.3 | ---- | 8 | 11,696 | −58.1 | ---- | 20 | 11,500 | −55.7 | ---- |
| 175 | 8 | 12,657 | −57.5 | ---- | 21 | 12,524 | −55.0 | ---- | 6 | 12,658 | −55.7 | ---- | 18 | 12,588 | −59.6 | ---- | 18 | 12,461 | −58.5 | ---- | 5 | 12,552 | −58.1 | ---- | 14 | 12,329 | −52.8 | ---- |
| 150 | 5 | 13,625 | −58.3 | ---- | 13 | 13,528 | −54.4 | ---- | ---- | ---- | ---- | ---- | 11 | 13,573 | −58.6 | ---- | 12 | 13,477 | −58.8 | ---- | ---- | ---- | ---- | ---- | 11 | 13,337 | −52.2 | ---- |
| 125 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 8 | 14,696 | −57.5 | ---- | 7 | 14,627 | −58.9 | ---- | ---- | ---- | ---- | ---- | 7 | 14,500 | −53.6 | ---- |

| Standard pressure surface (mb.) | San Antonio, Tex. (990.2 mb.) | | | | San Juan, P. R. (1,016.0 mb.) | | | | Santa Maria, Calif. (1,011.4 mb.) | | | | Sault Ste. Marie, Mich. (986.1 mb.) | | | | Spokane, Wash. (948.1 mb.) | | | | Swan Island, W. I. (1,014.4 mb.) | | | | Tacubaya, Mexico (773.7 mb.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Surface | 30 | 240 | 7.9 | 83 | 31 | 15 | 23.7 | 84 | 31 | 71 | 8.7 | 80 | 31 | 221 | −7.8 | 82 | 31 | 598 | −3.7 | 83 | 20 | 10 | 25.2 | 82 | 30 | 2,306 | 14.4 | 54 |
| 1,000 | 30 | 156 | (*) | ---- | 31 | 153 | 22.7 | 85 | 31 | 165 | 9.9 | 71 | 31 | 110 | (*) | ---- | 31 | 172 | (*) | ---- | 20 | 136 | 24.3 | 82 | 30 | 72 | (*) | ---- |
| 950 | 30 | 580 | 8.8 | 75 | 31 | 602 | 19.3 | 88 | 31 | 595 | 11.0 | 42 | 31 | 513 | −8.9 | 84 | 31 | 584 | (*) | ---- | 20 | 592 | 21.0 | 83 | 30 | 533 | (*) | ---- |
| 900 | 30 | 1,030 | 8.7 | 68 | 31 | 1,063 | 16.1 | 86 | 31 | 1,042 | 9.6 | 35 | 31 | 927 | −10.3 | 83 | 31 | 1,009 | −3.4 | 79 | 20 | 1,052 | 17.9 | 79 | 30 | 1,005 | (*) | ---- |
| 850 | 30 | 1,503 | 8.4 | 56 | 31 | 1,548 | 13.2 | 83 | 31 | 1,514 | 7.5 | ---- | 31 | 1,366 | −11.4 | 71 | 31 | 1,459 | −5.0 | 74 | 20 | 1,540 | 15.1 | 73 | 30 | 1,498 | (*) | ---- |
| 800 | 30 | 2,002 | 7.0 | 52 | 31 | 2,056 | 10.8 | 62 | 31 | 2,011 | 5.3 | ---- | 31 | 1,830 | −12.4 | 68 | 31 | 1,935 | −6.2 | 71 | 20 | 2,051 | 12.0 | 66 | 30 | 2,023 | (*) | ---- |
| 750 | 30 | 2,532 | 5.3 | 48 | 30 | 2,598 | 8.7 | 52 | 31 | 2,543 | 3.0 | ---- | 31 | 2,331 | −14.1 | 63 | 31 | 2,443 | −8.2 | 68 | 20 | 2,596 | 9.6 | 57 | 30 | 2,572 | 12.9 | 53 |
| 700 | 30 | 3,092 | 2.2 | 44 | 30 | 3,160 | 6.1 | 40 | 31 | 3,090 | .3 | ---- | 31 | 2,844 | −15.7 | 58 | 31 | 2,971 | −10.9 | 67 | 20 | 3,160 | 7.2 | 43 | 30 | 3,145 | 8.8 | 58 |
| 650 | 29 | 3,686 | −1.4 | 44 | 30 | 3,764 | 3.5 | ---- | 31 | 3,682 | −3.2 | ---- | 31 | 3,468 | −17.5 | 57 | 30 | 3,537 | −14.6 | 67 | 20 | 3,769 | 3.7 | ---- | 30 | 3,758 | 3.9 | 66 |
| 600 | 28 | 4,317 | −5.4 | ---- | 30 | 4,408 | .0 | ---- | 30 | 4,309 | −7.2 | ---- | 31 | 3,996 | −20.7 | 57 | 30 | 4,134 | −18.8 | 69 | 20 | 4,412 | .1 | ---- | 30 | 4,400 | −.8 | 67 |
| 550 | 27 | 4,999 | −9.7 | ---- | 30 | 5,096 | −3.9 | ---- | 30 | 4,982 | −11.5 | ---- | 31 | 4,638 | −24.1 | ---- | 30 | 4,778 | −23.0 | ---- | 19 | 5,106 | −2.6 | ---- | 30 | 5,095 | −4.2 | 47 |
| 500 | 25 | 5,727 | −14.2 | ---- | 30 | 5,844 | −0.0 | ---- | 29 | 5,702 | −16.7 | ---- | 29 | 5,323 | −27.6 | ---- | 30 | 5,468 | −27.5 | ---- | 19 | 5,856 | −6.2 | ---- | 30 | 5,838 | −8.8 | ---- |
| 450 | 25 | 6,520 | −19.6 | ---- | 30 | 6,660 | −15.0 | ---- | 29 | 6,487 | −22.5 | ---- | 29 | 6,083 | −32.4 | ---- | 30 | 6,223 | −32.5 | ---- | 19 | 6,679 | −11.6 | ---- | 30 | 6,653 | −13.8 | ---- |
| 400 | 25 | 7,382 | −25.5 | ---- | 30 | 7,532 | −21.4 | ---- | 29 | 7,339 | −29.0 | ---- | 28 | 6,894 | −37.7 | ---- | 29 | 7,040 | −37.9 | ---- | 19 | 7,563 | −18.4 | ---- | 30 | 7,533 | −20.1 | ---- |
| 350 | 25 | 8,338 | −32.0 | ---- | 30 | 8,502 | −28.6 | ---- | 28 | 8,276 | −36.3 | ---- | 25 | 7,795 | −43.8 | ---- | 29 | 7,948 | −44.1 | ---- | 19 | 8,544 | −25.9 | ---- | 29 | 8,507 | −28.0 | ---- |
| 300 | 23 | 9,403 | −40.0 | ---- | 30 | 9,588 | −36.3 | ---- | 27 | 9,332 | −43.8 | ---- | 24 | 8,818 | −49.9 | ---- | 28 | 8,963 | −50.0 | ---- | 19 | 9,641 | −34.5 | ---- | 27 | 9,593 | −36.6 | ---- |
| 250 | 22 | 10,621 | −49.0 | ---- | 29 | 10,834 | −43.5 | ---- | 22 | 10,521 | −52.6 | ---- | 18 | 10,038 | −54.3 | ---- | 28 | 10,138 | −55.5 | ---- | 19 | 10,890 | −44.4 | ---- | 24 | 10,826 | −46.7 | ---- |
| 200 | 19 | 12,062 | −56.2 | ---- | 28 | 12,309 | −51.8 | ---- | 16 | 11,937 | −59.5 | ---- | 14 | 11,469 | −55.3 | ---- | 26 | 11,527 | −58.4 | ---- | 18 | 12,354 | −53.9 | ---- | 17 | 12,257 | −56.8 | ---- |
| 175 | 13 | 12,880 | −58.4 | ---- | 26 | 13,167 | −56.6 | ---- | 12 | 12,742 | −58.8 | ---- | 8 | 12,299 | −52.9 | ---- | 16 | 12,346 | −56.2 | ---- | 16 | 13,202 | −59.3 | ---- | 16 | 13,082 | −59.6 | ---- |
| 150 | 8 | 13,856 | −60.7 | ---- | 20 | 14,134 | −62.4 | ---- | 7 | 13,708 | −58.0 | ---- | ---- | ---- | ---- | ---- | 8 | 13,306 | −55.1 | ---- | 10 | 14,144 | −65.8 | ---- | 7 | 14,032 | −64.9 | ---- |
| 125 | ---- | ---- | ---- | ---- | 11 | 15,252 | −69.1 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |

See footnotes at end of table

TABLE 1.—*Mean dynamic height (geopotential) in units of 0.98 dynamic meters, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during January 1947*—Continued

| Standard pressure surface (mb.) | Tampa, Fla. (1,019.0 mb.) | | | | Tatoosh Island, Wash. (1,014.1 mb.) | | | | Toledo, Ohio (993.5 mb.) | | | | Washington, D. C. (1,016.6 mb.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity |
| Surface | 31 | 9 | 18.7 | 84 | 31 | 31 | 4.1 | 82 | 31 | 191 | −1.2 | 84 | 31 | 25 | 5.0 | 70 |
| 1,000 | 31 | 171 | 19.4 | 80 | 31 | 145 | 3.6 | 78 | 31 | 137 | (*) | ---- | 31 | 158 | (*) | ---- |
| 950 | 31 | 613 | 17.5 | 76 | 31 | 561 | 1.7 | 76 | 31 | 547 | −2.0 | 77 | 31 | 578 | -3.9 | 64 |
| 900 | 31 | 1,073 | 14.8 | 74 | 31 | 994 | .3 | 74 | 31 | 975 | −3.2 | 69 | 31 | 1,014 | 2.2 | 66 |
| 850 | 31 | 1,555 | 12.2 | 74 | 31 | 1,450 | −2.1 | 70 | 31 | 1,427 | −3.8 | 65 | 31 | 1,475 | .8 | 69 |
| 800 | 31 | 2,061 | 9.6 | 67 | 31 | 1,930 | −4.2 | 65 | 31 | 1,905 | −4.8 | 64 | 31 | 1,961 | −.9 | 65 |
| 750 | 31 | 2,600 | 8.0 | 48 | 31 | 2,442 | −6.6 | 53 | 31 | 2,416 | −6.1 | 63 | 31 | 2,477 | −2.9 | 54 |
| 700 | 31 | 3,163 | 5.2 | 39 | 31 | 2,973 | −9.2 | 53 | 31 | 2,949 | −8.5 | 65 | 31 | 3,020 | −4.9 | 49 |
| 650 | 31 | 3,764 | 1.7 | ---- | 31 | 3,547 | −12.4 | 52 | 31 | 3,526 | −11.6 | 63 | 31 | 3,604 | −7.5 | 49 |
| 600 | 31 | 4,405 | −1.5 | ---- | 30 | 4,148 | −16.2 | 52 | 31 | 4,130 | −14.9 | 59 | 31 | 4,221 | −10.6 | 51 |
| 550 | 31 | 5,092 | −5.5 | ---- | 28 | 4,803 | −19.7 | 54 | 31 | 4,786 | −18.8 | 54 | 31 | 4,885 | −14.4 | 50 |
| 500 | 31 | 5,835 | −10.2 | ---- | 28 | 5,503 | −23.9 | ---- | 31 | 5,488 | −22.8 | ---- | 31 | 5,603 | −18.9 | 51 |
| 450 | 31 | 6,643 | −15.7 | ---- | 26 | 6,264 | −29.0 | ---- | 31 | 6,260 | −27.7 | ---- | 31 | 6,383 | −24.1 | ---- |
| 400 | 31 | 7,517 | −21.8 | ---- | 26 | 7,090 | −34.6 | ---- | 31 | 7,090 | −33.7 | ---- | 31 | 7,230 | −29.9 | ---- |
| 350 | 30 | 8,483 | −28.8 | ---- | 26 | 8,010 | −40.8 | ---- | 31 | 8,014 | −39.8 | ---- | 31 | 8,167 | −37.2 | ---- |
| 300 | 30 | 9,568 | −37.3 | ---- | 22 | 9,058 | −47.2 | ---- | 31 | 9,052 | −46.2 | ---- | 31 | 9,215 | −45.0 | ---- |
| 250 | 30 | 10,798 | −47.2 | ---- | 20 | 10,262 | −53.1 | ---- | 31 | 10,242 | −53.8 | ---- | 29 | 10,402 | −54.0 | ---- |
| 200 | 27 | 12,248 | −56.7 | ---- | 13 | 11,646 | −56.0 | ---- | 26 | 11,636 | −58.2 | ---- | 21 | 11,800 | −59.9 | ---- |
| 175 | 27 | 13,088 | −59.5 | ---- | 6 | 12,384 | −53.1 | ---- | 20 | 12,467 | −57.9 | ---- | 15 | 12,577 | −58.3 | ---- |
| 150 | 24 | 14,049 | −63.4 | ---- | 5 | 13,347 | −51.8 | ---- | 15 | 13,427 | −56.7 | ---- | 9 | 13,511 | −56.4 | ---- |
| 125 | 12 | 15,164 | −68.2 | ---- | ---- | ---- | ---- | ---- | 5 | 14,506 | −54.8 | ---- | 5 | 14,624 | −58.3 | ---- |

[1] Data not yet received.

*Temperature and relative humidity data for this level are not available or are available only for certain days. See note entitled "Change in Summarization of Radiosonde Data," p. 6, in the January 1946 issue of the MONTHLY WEATHER REVIEW.

NOTE.—All observations scheduled between 0300 and 0500. G. C. T., except at Ciudad Victoria, Mazatlan, and Merida, where they are taken near 0200, G. C. T. "Number of observations" refers to those of dynamic height only. (In a few cases temperature or humidity data may be missing for one or more standard pressure surfaces of some obser vations.) Relative humidity data are not published for standard pressure surfaces having a corresponding mean temperature below −20° C.

All relative humidity observations are obtained by electric hygrometer and have been adjusted to compensate for the values occurring below the operating range of the humidity element. For explanation of the adjustment see article entitled "Curve Method for Obtaining Monthly Means of Relative Humidity," p. 241, MONTHLY WEATHER REVIEW, December 1944.

None of the means included in these tables are based on less than 15 observations at the surface or 5 observations at a standard pressure level.

TABLE 2.—*Free-air resultant winds based on pilot balloon observations made near 5 p. m., E. S. T. (2200 G. C. T.) during January 1947. Directions given in degrees from north (N=360°, E=90°, S=180°, W=270°). Velocities in meters per second*

| Altitude (meters) m. s. l. | Abilene, Tex. (534 m.) | | | Albuquerque, N. Mex. (1,630 m.) | | | Atlanta, Ga. (299 m.) | | | Billings, Mont. (1,095 m.) | | | Bismarck, N. Dak. (512 m.) | | | Boise, Idaho (868 m.) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity |
| Surface | 29 | 237 | 2.4 | 31 | 293 | 2.3 | 21 | 268 | 4.2 | 31 | 258 | 4.1 | 30 | 279 | 3.1 | 30 | 315 | 1.5 |
| 500 | --- | --- | --- | --- | --- | --- | 21 | 268 | 3.9 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1,000 | 29 | 251 | 3.1 | --- | --- | --- | 21 | 262 | 6.0 | --- | --- | --- | 28 | 290 | 7.1 | 30 | 311 | 1.4 |
| 1,500 | 27 | 266 | 4.6 | --- | --- | --- | 20 | 266 | 7.7 | 31 | 269 | 9.7 | 26 | 296 | 10.3 | 29 | 290 | 2.8 |
| 2,000 | 25 | 267 | 7.0 | 31 | 286 | 3.0 | 20 | 264 | 11.0 | 29 | 284 | 11.4 | 20 | 296 | 14.3 | 28 | 286 | 5.4 |
| 2,500 | 22 | 260 | 9.1 | 31 | 294 | 3.5 | 17 | 268 | 13.8 | 28 | 285 | 11.9 | 17 | 295 | 16.3 | 24 | 297 | 8.0 |
| 3,000 | 20 | 263 | 12.2 | 31 | 299 | 5.6 | 16 | 266 | 14.3 | 26 | 294 | 12.3 | 16 | 298 | 16.8 | 22 | 304 | 8.7 |
| 4,000 | 19 | 257 | 15.5 | 26 | 297 | 8.4 | 13 | 269 | 18.2 | 23 | 301 | 15.0 | 14 | 305 | 18.3 | 17 | 314 | 10.8 |
| 5,000 | 19 | 257 | 18.9 | 23 | 288 | 13.2 | 10 | 263 | 20.7 | 18 | 302 | 17.2 | 12 | 306 | 20.4 | 15 | 307 | 14.3 |
| 6,000 | 15 | 256 | 22.2 | 22 | 282 | 14.7 | --- | --- | --- | 17 | 313 | 17.1 | 11 | 304 | 17.8 | 12 | 313 | 9.7 |
| 8,000 | --- | --- | --- | 17 | 271 | 13.9 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10,000 | --- | --- | --- | 11 | 259 | 15.2 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

| Altitude (meters) m. s. l. | Brownsville, Tex. (7 m.) | | | Buffalo, N. Y. (220 m.) | | | Burlington, Vt. (100 m.) | | | Charleston, S. C. (16 m.) | | | Cincinnati, Ohio (150 m.) | | | Denver, Colo. (1,627 m.) | | | El Paso, Tex. (1,198 m.) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity |
| Surface | 27 | 190 | 1.2 | 24 | 235 | 4.9 | 28 | 205 | 1.7 | 27 | 218 | 1.1 | 28 | 250 | 2.3 | 31 | 297 | 0.7 | 30 | 268 | 2.4 |
| 500 | 27 | 173 | 1.8 | 24 | 227 | 7.5 | 28 | 219 | 6.0 | 27 | 224 | 3.4 | 28 | 236 | 4.6 | --- | --- | --- | --- | --- | --- |
| 1,000 | 21 | 212 | 2.0 | 13 | 241 | 11.2 | 27 | 238 | 8.0 | 23 | 249 | 5.6 | 18 | 237 | 8.3 | --- | --- | --- | --- | --- | --- |
| 1,500 | 17 | 248 | 2.8 | 10 | 259 | 11.9 | 20 | 276 | 12.8 | 22 | 259 | 8.3 | 18 | 254 | 11.6 | --- | --- | --- | 30 | 278 | 2.4 |
| 2,000 | 13 | 245 | 5.4 | --- | --- | --- | 16 | 286 | 16.6 | 22 | 259 | 11.4 | 13 | 264 | 12.5 | 31 | 305 | 1.7 | 30 | 281 | 3.3 |
| 2,500 | 10 | 252 | 8.1 | --- | --- | --- | 16 | 287 | 19.6 | 20 | 255 | 14.7 | 11 | 263 | 13.2 | 31 | 299 | 3.5 | 27 | 277 | 6.1 |
| 3,000 | 10 | 258 | 8.9 | --- | --- | --- | 15 | 287 | 24.0 | 20 | 258 | 16.3 | --- | --- | --- | 31 | 294 | 6.3 | 24 | 281 | 9.1 |
| 4,000 | 10 | 263 | 11.1 | --- | --- | --- | --- | --- | --- | 16 | 264 | 17.6 | --- | --- | --- | 25 | 297 | 10.9 | 21 | 281 | 11.2 |
| 5,000 | 10 | 261 | 12.8 | --- | --- | --- | --- | --- | --- | 14 | 265 | 20.0 | --- | --- | --- | 21 | 293 | 13.8 | 21 | 282 | 11.7 |
| 6,000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 21 | 289 | 14.0 | 18 | 279 | 12.6 |
| 8,000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 16 | 298 | 19.2 | 15 | 267 | 14.5 |
| 10,000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10 | 287 | 17.1 | --- | --- | --- |

| Altitude (meters) m. s. l. | Ely, Nev. (1,910 m.) | | | Grand Junction, Colo. (1,475 m.) | | | Greensboro, N. C. (271 m.) | | | Havre, Mont. (767 m.) | | | Jacksonville, Fla. (16 m.) | | | Joliet, Ill. (178 m.) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity |
| Surface | 30 | 329 | 1.6 | 31 | 298 | 1.7 | 20 | 232 | 2.8 | 29 | 248 | 5.4 | 28 | 134 | 0.8 | 27 | 248 | 3.4 |
| 500 | --- | --- | --- | --- | --- | --- | 20 | 235 | 3.7 | --- | --- | --- | 28 | 200 | 3.3 | 27 | 258 | 5.3 |
| 1,000 | --- | --- | --- | --- | --- | --- | 20 | 245 | 5.5 | 29 | 252 | 9.8 | 27 | 220 | 5.2 | 23 | 279 | 8.9 |
| 1,500 | --- | --- | --- | 31 | 296 | 1.7 | 20 | 258 | 9.1 | 28 | 277 | 13.5 | 27 | 229 | 7.1 | 22 | 280 | 10.3 |
| 2,000 | 30 | 322 | 2.1 | 31 | 293 | 1.0 | 20 | 266 | 11.5 | 26 | 286 | 13.9 | 23 | 238 | 7.5 | 19 | 276 | 13.0 |
| 2,500 | 30 | 318 | 3.9 | 31 | 290 | 1.5 | 20 | 266 | 14.6 | 23 | 293 | 14.7 | 20 | 232 | 9.2 | 16 | 269 | 16.0 |
| 3,000 | 28 | 326 | 4.7 | 31 | 282 | 3.3 | 17 | 267 | 18.0 | 17 | 296 | 14.8 | 19 | 235 | 9.4 | 13 | 277 | 18.0 |
| 4,000 | 24 | 342 | 10.2 | 25 | 295 | 6.1 | 12 | 267 | 22.9 | 10 | 293 | 11.7 | 13 | 245 | 9.4 | 12 | 280 | 21.1 |
| 5,000 | 23 | 333 | 12.8 | 23 | 315 | 11.2 | 11 | 266 | 25.8 | --- | --- | --- | 11 | 259 | 12.9 | --- | --- | --- |
| 6,000 | 22 | 331 | 13.8 | 18 | 324 | 10.0 | --- | --- | --- | --- | --- | --- | 10 | 256 | 16.5 | --- | --- | --- |
| 8,000 | 17 | 337 | 15.8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10,000 | 14 | 336 | 16.4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

| Altitude (meters) m. s. l. | Las Vegas, Nev. (575 m.) | | | Little Rock, Ark. (88 m.) | | | Medford, Oreg. (416 m.) | | | Miami, Fla. (12 m.) | | | Mobile, Ala. (66 m.) | | | Nashville, Tenn. (194 m.) | | | New York, N. Y. (15 m.) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity |
| Surface | 31 | 45 | 1.1 | 27 | 268 | 0.7 | 27 | 304 | 1.0 | 30 | 124 | 3.4 | 22 | 233 | 0.8 | 23 | 246 | 2.4 | 24 | 264 | 3.2 |
| 500 | --- | --- | --- | 27 | 249 | 1.9 | 27 | 295 | 1.0 | 30 | 122 | 4.6 | 22 | 217 | 3.4 | 23 | 230 | 4.3 | 24 | 261 | 6.9 |
| 1,000 | 31 | 28 | 1.2 | 23 | 272 | 4.2 | 27 | 240 | 0.7 | 30 | 131 | 4.4 | 18 | 260 | 5.2 | 20 | 241 | 9.0 | 21 | 276 | 9.7 |
| 1,500 | 31 | 331 | 2.8 | 22 | 272 | 7.4 | 26 | 211 | 2.8 | 28 | 141 | 4.1 | 17 | 258 | 8.8 | 17 | 256 | 11.1 | 19 | 285 | 10.0 |
| 2,000 | 31 | 333 | 4.1 | 19 | 281 | 10.6 | 24 | 241 | 3.8 | 26 | 164 | 4.1 | 16 | 263 | 9.6 | 17 | 261 | 13.4 | 17 | 280 | 15.6 |
| 2,500 | 31 | 340 | 5.2 | 17 | 276 | 11.6 | 20 | 282 | 3.9 | 24 | 171 | 3.9 | 14 | 255 | 11.4 | 13 | 273 | 14.9 | 11 | 289 | 16.4 |
| 3,000 | 29 | 351 | 6.8 | 15 | 276 | 14.6 | 18 | 303 | 5.7 | 24 | 180 | 4.3 | 13 | 256 | 13.4 | 11 | 282 | 18.7 | --- | --- | --- |
| 4,000 | 28 | 334 | 8.8 | 12 | 267 | 18.5 | 16 | 317 | 8.0 | 23 | 198 | 3.4 | 10 | 264 | 16.8 | --- | --- | --- | --- | --- | --- |
| 5,000 | 24 | 321 | 12.9 | 11 | 262 | 23.0 | 12 | 280 | 8.4 | 21 | 217 | 4.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6,000 | 23 | 322 | 13.9 | --- | --- | --- | 10 | 296 | 7.5 | 19 | 232 | 5.6 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8,000 | 21 | 318 | 12.9 | --- | --- | --- | --- | --- | --- | 10 | 259 | 10.9 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10,000 | 14 | 330 | 13.6 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

TABLE 2.—*Free-air resultant winds based on pilot balloon observations made near 5 p. m., E. S. T. (2200 G. C. T.) during January 1947. Directions given in degrees from north (N=360°, E=90°, S=180°, W=270°). Velocities in meters per second*—Continued

| Altitude (meters) m. s. l. | Oakland, Calif. (8 m.) | | | Oklahoma City, Okla. (396 m.) | | | Omaha, Nebr. (306 m.) | | | Phoenix, Ariz. (338 m.) | | | Rapid City, S. Dak. (982 m.) | | | St. Louis, Mo. (181 m.) | | | St. Paul, Minn. (225 m.) | | | San Antonio, Tex. (240 m.) | | | San Diego, Calif. (13 m.) | | | Sault Ste. Marie, Mich. (225 m.) | | | Seattle, Wash. (116 m.) | | | Spokane, Wash. (603 m.) | | | Washington, D. C. (24 m.) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity |
| Surface | 30 | 266 | 1.6 | 28 | 263 | 1.6 | 28 | 245 | 1.9 | 31 | 92 | 0.7 | 29 | 330 | 4.3 | 27 | 247 | 1.7 | 30 | 258 | 2.3 | 25 | 235 | 1.4 | 31 | 256 | 2.7 | 22 | 250 | 2.1 | 26 | 207 | 2.2 | 30 | 216 | 2.2 | 24 | 238 | 2.7 |
| 500 | 30 | 356 | 2.7 | 28 | 260 | 1.8 | 28 | 247 | 2.9 | 31 | 86 | .6 | --- | --- | --- | 27 | 244 | 3.7 | 30 | 261 | 3.9 | 25 | 240 | 1.5 | 31 | 287 | 2.5 | 22 | 254 | 3.0 | 25 | 220 | 4.4 | --- | --- | --- | 24 | 248 | 5.4 |
| 1,000 | 28 | 355 | 4.9 | 27 | 266 | 2.3 | 26 | 268 | 5.6 | 31 | 63 | .6 | 29 | 328 | 4.5 | 25 | 258 | 6.1 | 30 | 271 | 7.2 | 25 | 252 | 2.7 | 29 | 352 | 1.2 | 17 | 284 | 6.4 | 18 | 216 | 4.8 | 30 | 212 | 5.5 | 22 | 258 | 8.1 |
| 1,500 | 28 | 338 | 5.4 | 25 | 279 | 4.4 | 25 | 274 | 9.2 | 30 | 36 | 1.1 | 29 | 310 | 7.5 | 23 | 273 | 10.3 | 27 | 279 | 8.9 | 21 | 261 | 6.4 | 27 | 30 | 3.2 | 12 | 282 | 6.5 | 14 | 231 | 3.5 | 27 | 231 | 8.9 | 22 | 260 | 10.7 |
| 2,000 | 27 | 336 | 6.4 | 24 | 273 | 7.4 | 24 | 283 | 11.5 | 29 | 8 | 1.7 | 27 | 302 | 10.2 | 22 | 283 | 12.8 | 25 | 281 | 11.9 | 20 | 262 | 8.5 | 26 | 11 | 5.7 | --- | --- | --- | 13 | 264 | 4.4 | 25 | 255 | 9.5 | 22 | 264 | 13.6 |
| 2,500 | 27 | 330 | 7.6 | 24 | 264 | 9.9 | 23 | 285 | 12.5 | 29 | 350 | 2.0 | 26 | 301 | 11.7 | 19 | 282 | 14.4 | 22 | 286 | 13.7 | 19 | 262 | 11.8 | 25 | 3 | 8.2 | --- | --- | --- | 13 | 270 | 6.2 | 22 | 272 | 10.9 | 20 | 268 | 16.6 |
| 3,000 | 27 | 325 | 8.4 | 23 | 263 | 11.6 | 23 | 284 | 13.5 | 28 | 330 | 3.0 | 26 | 302 | 12.9 | 19 | 280 | 16.7 | 19 | 290 | 17.5 | 18 | 260 | 13.8 | 24 | 359 | 9.7 | --- | --- | --- | 11 | 307 | 5.5 | 21 | 280 | 11.4 | 20 | 269 | 17.9 |
| 4,000 | 24 | 326 | 10.6 | 20 | 262 | 14.8 | 22 | 280 | 18.1 | 28 | 320 | 6.6 | 22 | 305 | 14.5 | 19 | 282 | 20.3 | 16 | 292 | 17.8 | 17 | 252 | 17.1 | 24 | 349 | 11.8 | --- | --- | --- | --- | --- | --- | 17 | 294 | 14.8 | 14 | 270 | 18.2 |
| 5,000 | 22 | 326 | 11.2 | 19 | 258 | 19.2 | 19 | 280 | 17.7 | 26 | 312 | 8.4 | 18 | 305 | 16.2 | 18 | 276 | 25.4 | 12 | 292 | 21.6 | 14 | 253 | 19.7 | 22 | 338 | 12.1 | --- | --- | --- | --- | --- | --- | 13 | 285 | 18.3 | 11 | 273 | 23.0 |
| 6,000 | 20 | 323 | 13.4 | 15 | 263 | 22.4 | 19 | 280 | 19.4 | 23 | 320 | 9.8 | 15 | 306 | 15.6 | 15 | 275 | 27.4 | --- | --- | --- | 12 | 264 | 19.0 | 21 | 333 | 14.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10 | 270 | 28.9 |
| 8,000 | 15 | 324 | 11.4 | --- | --- | --- | --- | --- | --- | 15 | 315 | 8.8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 17 | 327 | 12.8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10,000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 12 | 300 | 11.4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10 | 314 | 11.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

TABLE 3.—*Maximum free-air wind velocities (m. p. s.) for different sections of the United States based on pilot balloon observations during January 1947*

| Section | Surface to 2,500 meters (m. s. l.) | | | | | Above 2,501 to 5,000 meters (m. s. l.) | | | | | Above 5,000 meters (m. s. l.) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Maximum velocity | Direction | Altitude (m.) m. s. l. | Date | Station | Maximum velocity | Direction | Altitude (m.) m. s. l. | Date | Station | Maximum velocity | Direction | Altitude (m.) m. s. l. | Date | Station |
| Northeast [1] | 60.0 | w. | 2,323 | 5 | Binghampton, N. Y. | 62.4 | w. | 4,997 | 18 | Portland, Maine | 84.0 | wnw. | 6,597 | 17 | Portland, Maine. |
| East-Central [2] | 49.2 | wsw. | 1,713 | 6 | Hatteras, N. C. | 52.8 | nw. | 5,000 | 9 | Greensboro, N. C. | 88.8 | w. | 11,734 | 25 | Raleigh, N. C. |
| Southeast [3] | 40.4 | nw. | 2,500 | 21 | Birmingham, Ala. | 46.4 | wsw. | 4,866 | 21 | Charleston, S. C. | 69.0 | w. | 11,906 | 23 | Jacksonville, Fla. |
| North-Central [4] | 44.4 | wsw. | 1,575 | 15 | Sault Ste. Marie, Mich. | 56.6 | w. | 4,620 | 15 | Sault Ste. Marie, Mich. | 83.4 | sw. | 7,828 | 14 | Green Bay, Wis. |
| Central [5] | 39.5 | wsw. | 2,463 | 13 | Goodland, Kans. | 53.8 | nw. | 4,693 | 20 | Goodland, Kans. | 76.0 | wsw. | 8,918 | 17 | Joliet, Ill. |
| South-Central [6] | 50.0 | sw. | 1,793 | 29 | Memphis, Tenn. | 58.0 | wsw. | 4,682 | 13 | Amarillo, Tex. | 96.4 | sw. | 10,530 | 18 | Little Rock, Ark. |
| Northwest [7] | 48.0 | w. | 2,500 | 26 | Havre, Mont. | 54.4 | wsw. | 5,000 | 25 | Spokane, Wash. | 59.0 | wnw. | 6,088 | 19 | Spokane, Wash. |
| West-Central [8] | 49.4 | w. | 2,489 | 24 | Cheyenne, Wyo. | 76.0 | nw. | 4,820 | 13 | Oakland, Calif. | 75.0 | w. | 8,132 | 26 | Salt Lake City, Utah. |
| Southwest [9] | 46.6 | sw. | 2,484 | 28 | Winslow, Ariz. | 55.0 | w. | 4,800 | 14 | Albuquerque, N. Mex. | 81.0 | sw. | 11,333 | 7 | El Paso, Tex. |

[1] Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, and northern Ohio.
[2] Delaware, Maryland, Virginia, West Virginia, southern Ohio, Kentucky, eastern Tennessee, and North Carolina.
[3] South Carolina, Georgia, Florida, and Alabama.
[4] Michigan, Wisconsin, Minnesota, North Dakota, and South Dakota.
[5] Indiana, Illinois, Iowa, Nebraska, Kansas, and Missouri.
[6] Mississippi, Arkansas, Louisiana, Oklahoma, Texas (except El Paso), and western Tennessee.
[7] Montana, Idaho, Washington, and Oregon.
[8] Wyoming, Colorado, Utah, northern Nevada, and northern California.
[9] Southern California, southern Nevada, Arizona, New Mexico, and extreme west Texas.