# METEOROLOGICAL AND CLIMATOLOGICAL DATA FOR DECEMBER 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 December 1947*

STATIONS AND MEAN SURFACE PRESSURES

| Standard pressure surface (mb.) | Albany, N. Y. (1,006.5 mb.) | | | | Albuquerque, N. Mex. (838.2 mb.) | | | | Apalachicola, Fla. (1,019.5 mb.) | | | | Atlanta, Ga. (985.3 mb.) | | | | Auburn, Calif. (960.6 mb.) | | | | Big Spring, Tex. (928.7 mb.) | | | | Bismarck, N. Dak. (957.0 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 | −5.4 | 75 | 31 | 1,620 | 2.2 | 51 | 30 | 5 | 12.8 | 87 | 31 | 300 | 5.8 | 77 | 31 | 501 | 6.8 | 74 | 31 | 774 | 7.0 | 64 | 31 | 505 | −9.0 | 89 |
| 1,000 | 31 | 136 | (*) | ---- | 31 | 169 | (*) | ---- | 30 | 168 | 13.8 | 81 | 31 | 177 | (*) | ---- | 31 | 167 | (*) | ---- | 31 | 157 | (*) | ---- | 31 | 162 | (*) | ---- |
| 950 | 31 | 544 | −6.5 | 75 | 31 | 601 | (*) | ---- | 30 | 604 | 12.6 | 75 | 31 | 605 | 8.3 | 63 | 31 | 596 | 8.8 | 64 | 31 | 588 | (*) | ---- | 31 | 563 | −8.7 | 88 |
| 900 | 31 | 960 | −7.4 | 76 | 31 | 1,045 | (*) | ---- | 30 | 1,053 | 11.3 | 69 | 31 | 1,046 | 7.4 | 56 | 31 | 1,040 | 7.7 | 51 | 31 | 1,033 | 8.7 | 54 | 31 | 984 | −5.8 | 76 |
| 850 | 31 | 1,404 | −8.5 | 75 | 31 | 1,506 | (*) | ---- | 30 | 1,530 | 9.7 | 61 | 31 | 1,516 | 6.5 | 52 | 31 | 1,508 | 5.3 | 46 | 31 | 1,505 | 7.1 | 48 | 31 | 1,433 | −5.1 | 67 |
| 800 | 31 | 1,873 | −9.8 | 71 | 31 | 1,996 | 1.3 | 49 | 30 | 2,032 | 8.4 | 56 | 31 | 2,012 | 4.4 | 46 | 31 | 2,001 | 2.3 | 45 | 31 | 2,001 | 4.5 | 44 | 31 | 1,908 | −6.4 | 63 |
| 750 | 31 | 2,377 | −11.3 | 69 | 31 | 2,518 | −1.5 | 51 | 30 | 2,572 | 6.3 | 49 | 31 | 2,540 | 2.2 | 44 | 31 | 2,521 | −.9 | 46 | 31 | 2,527 | 1.8 | 40 | 31 | 2,418 | −8.2 | 68 |
| 700 | 31 | 2,898 | −12.7 | 64 | 31 | 3,059 | −4.7 | 53 | 30 | 3,126 | 3.4 | 48 | 31 | 3,090 | .1 | 40 | 31 | 3,066 | −4.1 | 45 | 31 | 3,077 | −1.2 | 38 | 31 | 2,944 | −10.8 | 59 |
| 650 | 31 | 3,469 | −15.0 | 62 | 31 | 3,645 | −8.1 | 52 | 30 | 3,727 | .2 | ---- | 31 | 3,686 | −2.7 | 39 | 31 | 3,650 | −7.2 | 38 | 31 | 3,665 | −4.4 | 35 | 31 | 3,518 | −13.5 | 56 |
| 600 | 31 | 4,064 | −17.8 | 62 | 31 | 4,257 | −11.5 | 47 | 30 | 4,361 | −3.4 | ---- | 30 | 4,311 | −6.0 | 34 | 31 | 4,267 | −11.0 | 39 | 31 | 4,290 | −8.2 | ---- | 31 | 4,116 | −16.9 | 53 |
| 550 | 31 | 4,714 | −21.6 | ---- | 31 | 4,918 | −15.6 | 45 | 30 | 5,046 | −7.2 | ---- | 30 | 4,991 | −9.5 | ---- | 31 | 4,929 | −15.4 | 43 | 30 | 4,960 | −12.6 | ---- | 31 | 4,767 | −20.9 | ---- |
| 500 | 31 | 5,405 | −26.1 | ---- | 31 | 5,630 | −20.4 | 44 | 30 | 5,781 | −11.8 | ---- | 30 | 5,718 | −13.9 | ---- | 31 | 5,643 | −20.3 | 46 | 30 | 5,683 | −17.5 | ---- | 30 | 5,468 | −25.1 | ---- |
| 450 | 31 | 6,165 | −31.0 | ---- | 31 | 6,406 | −25.8 | ---- | 29 | 6,583 | −17.1 | ---- | 30 | 6,514 | −19.4 | ---- | 31 | 6,420 | −25.6 | ---- | 30 | 6,471 | −22.7 | ---- | 30 | 6,231 | −30.3 | ---- |
| 400 | 31 | 6,986 | −36.2 | ---- | 31 | 7,245 | −31.8 | ---- | 29 | 7,453 | −22.8 | ---- | 30 | 7,375 | −26.1 | ---- | 31 | 7,259 | −31.9 | ---- | 30 | 7,320 | −28.5 | ---- | 30 | 7,053 | −36.1 | ---- |
| 350 | 28 | 7,901 | −41.9 | ---- | 31 | 8,175 | −38.3 | ---- | 29 | 8,417 | −30.1 | ---- | 30 | 8,327 | −33.2 | ---- | 31 | 8,188 | −38.6 | ---- | 29 | 8,263 | −35.3 | ---- | 29 | 7,972 | −42.6 | ---- |
| 300 | 26 | 8,940 | −47.5 | ---- | 29 | 9,225 | −45.1 | ---- | 29 | 9,496 | −38.1 | ---- | 30 | 9,392 | −40.8 | ---- | 30 | 9,232 | −45.8 | ---- | 28 | 9,324 | −42.3 | ---- | 28 | 8,990 | −49.3 | ---- |
| 250 | 24 | 10,137 | −52.0 | ---- | 28 | 10,419 | −51.4 | ---- | 28 | 10,725 | −47.6 | ---- | 30 | 10,609 | −49.7 | ---- | 30 | 10,425 | −52.8 | ---- | 28 | 10,538 | −49.1 | ---- | 25 | 10,154 | −54.9 | ---- |
| 200 | 16 | 11,553 | −53.3 | ---- | 17 | 11,868 | −53.7 | ---- | 28 | 12,164 | −58.0 | ---- | 28 | 12,047 | −57.7 | ---- | 25 | 11,848 | −57.5 | ---- | 23 | 11,979 | −54.6 | ---- | 18 | 11,580 | −55.0 | ---- |
| 175 | 10 | 12,363 | −51.5 | ---- | 7 | 12,674 | −51.4 | ---- | 24 | 12,987 | −62.1 | ---- | 20 | 12,893 | −60.0 | ---- | 25 | 12,689 | −58.2 | ---- | 20 | 12,813 | −55.6 | ---- | 12 | 12,441 | −53.3 | ---- |
| 150 | 7 | 13,353 | −53.2 | ---- | ---- | ---- | ---- | ---- | 23 | 13,941 | −64.6 | ---- | 9 | 13,844 | −60.5 | ---- | 18 | 13,635 | −58.1 | ---- | 14 | 13,800 | −57.9 | ---- | 10 | 13,463 | −53.9 | ---- |
| 125 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 18 | 15,040 | −68.4 | ---- | ---- | ---- | ---- | ---- | 9 | 14,782 | −59.5 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |

| Standard pressure surface (mb.) | Boise, Idaho (919.8 mb.) | | | | Brownsville, Tex. (1,017.1 mb.) | | | | Buffalo, N. Y. (991.6 mb.) | | | | Caribou, Maine (988.4 mb.) | | | | Charleston, S. C. (1,018.4 mb.) | | | | Ciudad Victoria, Mexico (978.0 mb.) | | | | Columbia, Mo. (990.8 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 | 868 | −0.3 | 84 | 31 | 6 | 15.4 | 89 | 29 | 221 | −3.0 | 76 | 31 | 191 | −10.5 | 86 | 31 | 13 | 8.3 | 79 | 31 | 335 | 17.5 | 72 | 31 | 239 | 2.0 | 69 |
| 1,000 | 31 | 193 | (*) | ---- | 31 | 150 | 16.1 | 84 | 29 | 152 | (*) | ---- | 31 | 100 | (*) | ---- | 31 | 164 | 10.3 | 71 | 31 | 143 | (*) | ---- | 31 | 163 | (*) | ---- |
| 950 | 31 | 609 | (*) | ---- | 31 | 588 | 14.3 | 76 | 29 | 561 | −4.4 | 76 | 31 | 497 | −10.4 | 87 | 31 | 600 | 9.9 | 64 | 31 | 584 | 16.3 | 70 | 31 | 583 | 2.2 | 65 |
| 900 | 31 | 1,043 | 1.4 | 76 | 31 | 1,041 | 12.8 | 67 | 29 | 983 | −6.2 | 76 | 31 | 910 | −11.2 | 85 | 31 | 1,040 | 9.2 | 64 | 31 | 1,040 | 13.4 | 72 | 31 | 1,015 | 2.0 | 57 |
| 850 | 31 | 1,502 | −.4 | 70 | 31 | 1,521 | 11.2 | 63 | 29 | 1,429 | −7.8 | 74 | 31 | 1,349 | −11.6 | 79 | 31 | 1,513 | 7.5 | 61 | 31 | 1,520 | 10.7 | 77 | 31 | 1,475 | .9 | 54 |
| 800 | 31 | 1,985 | −2.7 | 69 | 31 | 2,026 | 9.5 | 60 | 29 | 1,899 | −9.0 | 70 | 31 | 1,811 | −13.3 | 73 | 31 | 2,010 | 5.3 | 51 | 31 | 2,024 | 9.1 | 77 | 31 | 1,961 | −.2 | 45 |
| 750 | 31 | 2,497 | −5.5 | 72 | 31 | 2,566 | 7.2 | 57 | 29 | 2,403 | −10.5 | 59 | 31 | 2,304 | −15.0 | 67 | 31 | 2,541 | 3.5 | 45 | 31 | 2,565 | 7.1 | 72 | 31 | 2,481 | −1.9 | 40 |
| 700 | 31 | 3,033 | −8.5 | 73 | 31 | 3,125 | 4.3 | 53 | 29 | 2,927 | −12.1 | 58 | 31 | 2,821 | −16.8 | 62 | 31 | 3,094 | 1.0 | ---- | 31 | 3,123 | 4.4 | 69 | 31 | 3,023 | −4.4 | 40 |
| 650 | 31 | 3,608 | −11.5 | 73 | 31 | 3,727 | 1.4 | 49 | 29 | 3,498 | −14.6 | 54 | 31 | 3,380 | −19.7 | 60 | 31 | 3,690 | −1.7 | ---- | 31 | 3,728 | 1.4 | 58 | 31 | 3,608 | −7.2 | 37 |
| 600 | 31 | 4,214 | −15.1 | 67 | 31 | 4,366 | −2.3 | 43 | 29 | 4,094 | −17.2 | 55 | 29 | 3,972 | −23.2 | ---- | 31 | 4,320 | −5.5 | ---- | 31 | 4,365 | −2.2 | 49 | 31 | 4,224 | −10.8 | ---- |
| 550 | 31 | 4,869 | −19.5 | 66 | 30 | 5,054 | −6.6 | 42 | 29 | 4,746 | −20.9 | ---- | 29 | 4,606 | −26.8 | ---- | 29 | 4,999 | −9.7 | ---- | 31 | 5,054 | −6.3 | 46 | 30 | 4,891 | −15.1 | ---- |
| 500 | 31 | 5,568 | −24.2 | ---- | 30 | 5,792 | −11.5 | 47 | 29 | 5,441 | −25.2 | ---- | 29 | 5,287 | −30.5 | ---- | 28 | 5,728 | −14.5 | ---- | 31 | 5,791 | −11.1 | 47 | 30 | 5,603 | −20.0 | ---- |
| 450 | 31 | 6,335 | −29.7 | ---- | 29 | 6,602 | −16.8 | 53 | 27 | 6,197 | −30.4 | ---- | 29 | 6,033 | −35.3 | ---- | 28 | 6,525 | −19.7 | ---- | 30 | 6,602 | −16.3 | 49 | 29 | 6,379 | −25.6 | ---- |
| 400 | 31 | 7,158 | −35.6 | ---- | 28 | 7,468 | −22.7 | ---- | 26 | 7,020 | −36.2 | ---- | 29 | 6,840 | −40.9 | ---- | 27 | 7,387 | −25.4 | ---- | 30 | 7,470 | −22.0 | ---- | 29 | 7,216 | −31.7 | ---- |
| 350 | 30 | 8,076 | −42.0 | ---- | 28 | 8,434 | −29.5 | ---- | 24 | 7,947 | −42.2 | ---- | 28 | 7,742 | −46.6 | ---- | 27 | 8,342 | −31.9 | ---- | 30 | 8,437 | −29.5 | ---- | 29 | 8,147 | −38.4 | ---- |
| 300 | 27 | 9,119 | −48.7 | ---- | 28 | 9,516 | −37.6 | ---- | 23 | 8,971 | −48.7 | ---- | 25 | 8,764 | −50.3 | ---- | 24 | 9,415 | −39.6 | ---- | 30 | 9,519 | −37.7 | ---- | 25 | 9,209 | −45.4 | ---- |
| 250 | 17 | 10,347 | −54.6 | ---- | 25 | 10,747 | −46.7 | ---- | 17 | 10,157 | −52.1 | ---- | 18 | 9,958 | −52.2 | ---- | 23 | 10,612 | −48.9 | ---- | 19 | 10,763 | −47.2 | ---- | 17 | 10,403 | −52.7 | ---- |
| 200 | 11 | 11,758 | −57.4 | ---- | 20 | 12,195 | −57.0 | ---- | 10 | 11,580 | −53.7 | ---- | 15 | 11,377 | −52.0 | ---- | 22 | 12,071 | −58.2 | ---- | 10 | 12,204 | −58.0 | ---- | 14 | 11,810 | −57.5 | ---- |
| 175 | 8 | 12,589 | −56.2 | ---- | 13 | 13,042 | −59.4 | ---- | 5 | 12,387 | −53.2 | ---- | 10 | 12,258 | −52.0 | ---- | 19 | 12,903 | −61.7 | ---- | 7 | 13,045 | −61.8 | ---- | 9 | 12,648 | −55.9 | ---- |
| 150 | ---- | ---- | ---- | ---- | 6 | 14,021 | −61.5 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 9 | 13,785 | −62.8 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |

| Standard pressure surface (mb.) | Dodge City, Kans. (925.8 mb.) | | | | El Paso, Tex. (882.8 mb.) | | | | Ely, Nev. (808.9 mb.) | | | | Fort Worth, Tex. (994.7 mb.) | | | | Glasgow, Mont. (939.1 mb.) | | | | Grand Junction, Colo. (854.6 mb.) | | | | Great Falls, Mont. (885.5 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 | 787 | −0.4 | 83 | 31 | 1,195 | 6.4 | 46 | 30 | 1,908 | −3.8 | 76 | 31 | 211 | 8.8 | 73 | 31 | 648 | −4.7 | 80 | 31 | 1,474 | −2.6 | 81 | 31 | 1,128 | 0.0 | 64 |
| 1,000 | 31 | 163 | (*) | ---- | 31 | 153 | (*) | ---- | 30 | 190 | (*) | ---- | 31 | 166 | (*) | ---- | 31 | 148 | (*) | ---- | 31 | 202 | (*) | ---- | 31 | 140 | (*) | ---- |
| 950 | 31 | 582 | (*) | ---- | 31 | 587 | (*) | ---- | 30 | 615 | (*) | ---- | 31 | 600 | 9.4 | 63 | 31 | 559 | (*) | ---- | 31 | 625 | (*) | ---- | 31 | 562 | (*) | ---- |
| 900 | 31 | 1,015 | 2.9 | 67 | 31 | 1,039 | (*) | ---- | 30 | 1,052 | (*) | ---- | 31 | 1,040 | 7.6 | 58 | 31 | 984 | −2.1 | 71 | 31 | 1,061 | (*) | ---- | 31 | 1,002 | (*) | ---- |
| 850 | 31 | 1,477 | 2.8 | 51 | 31 | 1,506 | 7.0 | 39 | 30 | 1,511 | (*) | ---- | 31 | 1,510 | 6.0 | 51 | 31 | 1,438 | −3.0 | 68 | 31 | 1,516 | (*) | ---- | 31 | 1,456 | .0 | 57 |
| 800 | 31 | 1,967 | 1.9 | 40 | 31 | 2,002 | 4.1 | 39 | 30 | 1,996 | −1.5 | 70 | 31 | 2,004 | 3.8 | 44 | 31 | 1,916 | −4.9 | 67 | 31 | 1,998 | −2.7 | 70 | 31 | 1,940 | −2.8 | 59 |
| 750 | 31 | 2,489 | −.6 | 39 | 31 | 2,531 | 1.2 | 37 | 30 | 2,512 | −3.5 | 65 | 31 | 2,533 | 1.7 | 43 | 31 | 2,426 | −7.4 | 65 | 31 | 2,512 | −4.6 | 67 | 31 | 2,453 | −6.1 | 64 |
| 700 | 31 | 3,034 | −3.5 | 36 | 31 | 3,075 | −2.4 | 39 | 30 | 3,050 | −6.6 | 63 | 31 | 3,077 | −.9 | 41 | 31 | 2,957 | −9.6 | 62 | 31 | 3,049 | −7.6 | 66 | 31 | 2,985 | −9.1 | 63 |
| 650 | 31 | 3,619 | −7.1 | 35 | 31 | 3,665 | −6.0 | 36 | 30 | 3,629 | −9.6 | 62 | 31 | 3,674 | −4.0 | 36 | 31 | 3,533 | −12.7 | 58 | 31 | 3,626 | −10.6 | 65 | 31 | 3,561 | −12.1 | 59 |
| 600 | 31 | 4,235 | −10.8 | ---- | 31 | 4,282 | −9.5 | 36 | 30 | 4,240 | −13.3 | 58 | 31 | 4,296 | −7.6 | 36 | 31 | 4,133 | −16.3 | 58 | 31 | 4,234 | −14.3 | 62 | 30 | 4,158 | −16.1 | 56 |
| 550 | 31 | 4,899 | −15.1 | ---- | 30 | 4,948 | −14.1 | ---- | 30 | 4,899 | −17.5 | 53 | 31 | 4,973 | −11.5 | ---- | 31 | 4,787 | −20.0 | 63 | 30 | 4,891 | −18.7 | 62 | 29 | 4,809 | −20.4 | 60 |
| 500 | 31 | 5,612 | −20.3 | ---- | 30 | 5,662 | −18.5 | ---- | 30 | 5,604 | −22.4 | ---- | 30 | 5,697 | −16.1 | ---- | 31 | 5,483 | −24.6 | ---- | 30 | 5,593 | −23.6 | ---- | 29 | 5,507 | −25.2 | ---- |
| 450 | 31 | 6,389 | −26.0 | ---- | 30 | 6,446 | −24.2 | ---- | 29 | 6,373 | −27.9 | ---- | 30 | 6,491 | −21.7 | ---- | 30 | 6,254 | −30.0 | ---- | 30 | 6,362 | −29.3 | ---- | 29 | 6,267 | −30.4 | ---- |
| 400 | 31 | 7,226 | −32.3 | ---- | 30 | 7,287 | −30.5 | ---- | 29 | 7,204 | −34.2 | ---- | 30 | 7,340 | −28.0 | ---- | 30 | 7,076 | −36.4 | ---- | 30 | 7,186 | −35.6 | ---- | 29 | 7,090 | −36.6 | ---- |
| 350 | 31 | 8,154 | −38.8 | ---- | 29 | 8,229 | −37.3 | ---- | 29 | 8,125 | −40.6 | ---- | 29 | 8,291 | −35.1 | ---- | 30 | 7,988 | −43.1 | ---- | 27 | 8,101 | −42.7 | ---- | 28 | 7,991 | −43.5 | ---- |
| 300 | 29 | 9,204 | −45.7 | ---- | 28 | 9,279 | −44.9 | ---- | 29 | 9,158 | −47.7 | ---- | 29 | 9,348 | −43.0 | ---- | 30 | 9,010 | −50.2 | ---- | 22 | 9,151 | −48.6 | ---- | 26 | 9,011 | −49.9 | ---- |
| 250 | 25 | 10,406 | −53.0 | ---- | 21 | 10,463 | −51.9 | ---- | 27 | 10,348 | −53.4 | ---- | 28 | 10,559 | −50.6 | ---- | 28 | 10,191 | −56.6 | ---- | 19 | 10,343 | −54.4 | ---- | 22 | 10,197 | −55.7 | ---- |
| 200 | 16 | 11,836 | −56.8 | ---- | 17 | 11,896 | −55.7 | ---- | 21 | 11,733 | −55.0 | ---- | 24 | 11,992 | −57.1 | ---- | 21 | 11,600 | −55.9 | ---- | 10 | 11,793 | −57.4 | ---- | 19 | 11,628 | −56.0 | ---- |
| 175 | 8 | 12,712 | −60.0 | ---- | 14 | 12,747 | −57.3 | ---- | 15 | 12,566 | −54.0 | ---- | 14 | 12,852 | −58.2 | ---- | 16 | 12,422 | −53.5 | ---- | 8 | 12,642 | −60.0 | ---- | 12 | 12,424 | −53.8 | ---- |
| 150 | ---- | ---- | ---- | ---- | 11 | 13,715 | −59.2 | ---- | 10 | 13,524 | −56.3 | ---- | 6 | 13,852 | −61.5 | ---- | 10 | 13,450 | −53.2 | ---- | 6 | 13,604 | −60.5 | ---- | 7 | 13,438 | −53.6 | ---- |

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 December 1947*—Continued

| Standard pressure surface (mb.) | Greensboro, N. C. (988.1 mb.) | | | | Hatteras, N. C. (1,019.0 mb.) | | | | Havana, Cuba [1] (.... mb.) | | | | Honolulu, T. H. (1,014.0 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 | 273 | 1.7 | 73 | 31 | 3 | 8.9 | 80 | | | | | 30 | 3 | 24.5 | 64 |
| 1,000 | 31 | 176 | (*) | | 31 | 159 | 9.6 | 70 | | | | | 30 | 125 | 22.8 | 66 |
| 950 | 31 | 595 | 4.2 | 55 | 31 | 588 | 8.1 | 63 | | | | | 30 | 576 | 18.9 | 72 |
| 900 | 31 | 1,032 | 3.3 | 49 | 31 | 1,029 | 6.6 | 51 | | | | | 30 | 1,032 | 15.6 | 76 |
| 850 | 31 | 1,494 | 2.5 | 41 | 31 | 1,497 | 5.1 | 46 | | | | | 30 | 1,515 | 13.0 | 68 |
| 800 | 31 | 1,983 | 1.3 | 35 | 31 | 1,990 | 3.1 | 43 | | | | | 30 | 2,024 | 11.3 | 52 |
| 750 | 31 | 2,505 | −.9 | | 31 | 2,515 | .9 | 42 | | | | | 30 | 2,568 | 9.2 | 44 |
| 700 | 31 | 3,048 | −3.4 | | 31 | 3,062 | −1.7 | 42 | | | | | 30 | 3,130 | 6.4 | 36 |
| 650 | 31 | 3,634 | −6.0 | | 31 | 3,655 | −4.7 | 43 | | | | | 30 | 3,738 | 3.1 | 34 |
| 600 | 31 | 4,254 | −9.1 | | 31 | 4,276 | −7.8 | 39 | | | | | 30 | 4,378 | −.4 | |
| 550 | 31 | 4,924 | −13.1 | | 31 | 4,954 | −11.6 | 38 | | | | | 30 | 5,069 | −4.2 | |
| 500 | 31 | 5,642 | −17.8 | | 31 | 5,672 | −16.0 | 43 | | | | | 30 | 5,814 | −8.8 | |
| 450 | 31 | 6,432 | −22.8 | | 30 | 6,467 | −21.0 | | | | | | 30 | 6,629 | −14.5 | |
| 400 | 31 | 7,277 | −28.7 | | 30 | 7,319 | −26.8 | | | | | | 29 | 7,502 | −21.7 | |
| 350 | 31 | 8,219 | −35.7 | | 30 | 8,270 | −33.2 | | | | | | 29 | 8,470 | −28.8 | |
| 300 | 26 | 9,296 | −42.6 | | 29 | 9,333 | −40.7 | | | | | | 29 | 9,556 | −36.6 | |
| 250 | 25 | 10,503 | −51.5 | | 27 | 10,556 | −49.6 | | | | | | 28 | 10,800 | −45.0 | |
| 200 | 18 | 11,950 | −58.9 | | 22 | 11,980 | −57.0 | | | | | | 28 | 12,261 | −53.6 | |
| 175 | 18 | 12,781 | −61.1 | | 15 | 12,813 | −58.8 | | | | | | 28 | 13,111 | −58.0 | |
| 150 | 14 | 13,740 | −62.0 | | 9 | 13,761 | −58.9 | | | | | | 26 | 14,071 | −62.3 | |
| 125 | 9 | 14,855 | −64.5 | | | | | | | | | | 22 | 15,176 | −68.0 | |
| 100 | | | | | | | | | | | | | 14 | 16,492 | −73.1 | |
| 80 | | | | | | | | | | | | | 12 | 17,794 | −73.2 | |
| 60 | | | | | | | | | | | | | 6 | 19,479 | −66.7 | |
| 50 | | | | | | | | | | | | | 5 | 20,609 | −60.9 | |

| Standard pressure surface (mb.) | Huntington, W. Va. (1,000.1 mb.) | | | | International Falls, Minn. (975.2 mb.) | | | | Joliet, Ill. (997.0 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 |
| Surface | 31 | 172 | 0.1 | 80 | 31 | 360 | −12.6 | 90 | 31 | 178 | −1.6 | 79 |
| 1,000 | 31 | 172 | (*) | | 31 | 166 | (*) | | 31 | 153 | (*) | |
| 950 | 31 | 590 | 1.7 | 70 | 31 | 561 | −11.3 | 87 | 31 | 566 | −2.3 | 77 |
| 900 | 31 | 1,020 | .0 | 63 | 31 | 975 | −10.9 | 85 | 31 | 991 | −2.1 | 66 |
| 850 | 31 | 1,477 | −1.2 | 52 | 31 | 1,415 | −9.8 | 75 | 31 | 1,445 | −2.2 | 52 |
| 800 | 31 | 1,959 | −2.6 | 48 | 31 | 1,883 | −10.4 | 65 | 31 | 1,926 | −3.4 | 51 |
| 750 | 31 | 2,475 | −3.9 | 41 | 31 | 2,383 | −11.7 | 61 | 31 | 2,441 | −5.1 | 52 |
| 700 | 31 | 3,011 | −6.1 | 43 | 31 | 2,904 | −13.7 | 59 | 31 | 2,975 | −7.5 | 50 |
| 650 | 31 | 3,593 | −8.9 | 45 | 31 | 3,470 | −16.4 | 55 | 30 | 3,550 | −10.7 | 50 |
| 600 | 31 | 4,205 | −11.9 | 45 | 31 | 4,063 | −19.6 | 53 | 30 | 4,156 | −14.0 | 47 |
| 550 | 31 | 4,868 | −15.5 | 44 | 31 | 4,708 | −23.2 | | 29 | 4,812 | −17.8 | |
| 500 | 30 | 5,582 | −19.8 | 45 | 31 | 5,397 | −27.4 | | 29 | 5,518 | −22.5 | |
| 450 | 30 | 6,360 | −25.1 | | 31 | 6,153 | −32.3 | | 29 | 6,287 | −27.9 | |
| 400 | 29 | 7,198 | −30.8 | | 31 | 6,970 | −37.9 | | 29 | 7,120 | −33.7 | |
| 350 | 28 | 8,146 | −36.9 | | 31 | 7,877 | −44.2 | | 29 | 8,044 | −39.8 | |
| 300 | 28 | 9,197 | −44.0 | | 31 | 8,896 | −50.1 | | 28 | 9,078 | −46.3 | |
| 250 | 28 | 10,399 | −51.8 | | 28 | 10,083 | −53.6 | | 23 | 10,258 | −52.5 | |
| 200 | 23 | 11,816 | −56.8 | | 23 | 11,511 | −52.4 | | 15 | 11,677 | −54.8 | |
| 175 | 17 | 12,669 | −59.4 | | 18 | 12,385 | −51.5 | | 9 | 12,510 | −54.8 | |
| 150 | 9 | 13,662 | −60.9 | | 14 | 13,367 | −51.7 | | | | | |
| 125 | | | | | 7 | 14,578 | −52.4 | | | | | |
| 100 | | | | | | | | | | | | |
| 80 | | | | | | | | | | | | |
| 60 | | | | | | | | | | | | |
| 50 | | | | | | | | | | | | |

| Standard pressure surface (mb.) | Lake Charles, La. (1,019.5 mb.) | | | | Lander, Wyo. (828.0 mb.) | | | | Las Vegas, Nev. (951.7 mb.) | | | | Little Rock, Ark. (1,011.1 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 |
| Surface | 31 | 5 | 10.6 | 85 | 31 | 1,696 | −4.6 | 69 | 31 | 574 | 6.8 | 58 | 31 | 79 | 5.9 | 78 |
| 1,000 | 31 | 166 | 12.3 | 73 | 31 | 177 | (*) | | 31 | 162 | (*) | | 31 | 169 | 6.8 | 72 |
| 950 | 31 | 602 | 10.6 | 72 | 31 | 596 | (*) | | 31 | 593 | (*) | | 31 | 593 | 6.6 | 63 |
| 900 | 31 | 1,075 | 9.9 | 63 | 31 | 1,034 | (*) | | 31 | 1,035 | 7.5 | 45 | 31 | 1,034 | 5.4 | 52 |
| 850 | 31 | 1,520 | 8.4 | 60 | 31 | 1,487 | (*) | | 31 | 1,503 | 4.7 | 46 | 31 | 1,500 | 4.3 | 43 |
| 800 | 31 | 2,020 | 6.7 | 54 | 31 | 1,969 | −1.4 | 56 | 31 | 1,995 | 1.8 | 47 | 31 | 1,992 | 2.9 | 38 |
| 750 | 31 | 2,556 | 4.8 | 48 | 31 | 2,488 | −3.4 | 50 | 31 | 2,520 | −1.1 | 46 | 31 | 2,521 | .9 | 37 |
| 700 | 31 | 3,110 | 2.3 | 44 | 31 | 3,025 | −6.4 | 53 | 31 | 3,060 | −4.2 | 43 | 31 | 3,064 | −1.6 | 38 |
| 650 | 30 | 3,708 | −.7 | 37 | 31 | 3,605 | −10.4 | 56 | 31 | 3,644 | −7.7 | 43 | 31 | 3,654 | −4.4 | |
| 600 | 30 | 4,339 | −4.3 | | 31 | 4,212 | −14.3 | 58 | 31 | 4,259 | −11.3 | | 31 | 4,278 | −7.7 | |
| 550 | 30 | 5,023 | −8.1 | | 31 | 4,870 | −18.9 | 58 | 31 | 4,921 | −16.0 | | 30 | 4,951 | −11.8 | |
| 500 | 30 | 5,755 | −12.8 | | 31 | 5,569 | −23.7 | | 31 | 5,632 | −21.1 | | 30 | 5,673 | −16.4 | |
| 450 | 30 | 6,561 | −18.1 | | 31 | 6,338 | −29.3 | | 31 | 6,406 | −26.5 | | 30 | 6,466 | −21.9 | |
| 400 | 30 | 7,423 | −24.4 | | 31 | 7,160 | −35.9 | | 30 | 7,233 | −32.7 | | 30 | 7,315 | −27.6 | |
| 350 | 30 | 8,383 | −31.5 | | 31 | 8,074 | −42.9 | | 29 | 8,166 | −39.0 | | 29 | 8,256 | −34.3 | |
| 300 | 30 | 9,456 | −39.4 | | 31 | 9,097 | −49.8 | | 29 | 9,206 | −45.9 | | 27 | 9,322 | −41.8 | |
| 250 | 28 | 10,676 | −48.5 | | 29 | 10,271 | −54.4 | | 29 | 10,401 | −52.6 | | 21 | 10,537 | −49.6 | |
| 200 | 25 | 12,121 | −57.7 | | 25 | 11,678 | −55.2 | | 25 | 11,821 | −56.3 | | 12 | 11,970 | −57.4 | |
| 175 | 17 | 12,966 | −61.1 | | 19 | 12,503 | −54.2 | | 21 | 12,659 | −56.0 | | 5 | 12,773 | −60.6 | |
| 150 | 10 | 13,925 | −63.7 | | 11 | 13,524 | −54.9 | | 16 | 13,620 | −56.7 | | | | | |
| 125 | 5 | 15,063 | −65.3 | | 5 | 14,651 | −56.5 | | 12 | 14,786 | −59.2 | | | | | |

| Standard pressure surface (mb.) | Mazatlan, Mexico (1,010.4 mb.) | | | | Medford, Oreg. (972.9 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 |
| Surface | 30 | 14 | 21.0 | 73 | 31 | 401 | 3.6 | 90 | 31 | 27 | 23.6 | 82 |
| 1,000 | 30 | 104 | 20.9 | 67 | 31 | 177 | (*) | | 31 | 132 | 23.4 | 80 |
| 950 | 30 | 550 | 20.4 | 50 | 31 | 600 | 4.1 | 88 | 31 | 581 | 20.6 | 79 |
| 900 | 30 | 1,013 | 17.6 | 47 | 31 | 1,034 | 3.5 | 75 | 31 | 1,046 | 17.6 | 79 |
| 850 | 30 | 1,499 | 14.5 | 44 | 31 | 1,497 | 1.7 | 70 | 31 | 1,533 | 15.0 | 72 |
| 800 | 30 | 2,008 | 11.3 | 41 | 31 | 1,983 | −.8 | 65 | 31 | 2,045 | 12.5 | 65 |
| 750 | 30 | 2,547 | 8.2 | 35 | 31 | 2,501 | −3.3 | 58 | 31 | 2,589 | 10.2 | 54 |
| 700 | 30 | 3,110 | 4.7 | 34 | 31 | 3,040 | −5.9 | 53 | 31 | 3,156 | 7.6 | 48 |
| 650 | 30 | 3,709 | .9 | | 30 | 3,623 | −9.0 | 57 | 31 | 3,762 | 4.2 | 50 |
| 600 | 29 | 4,348 | −3.2 | | 30 | 4,235 | −12.8 | 57 | 29 | 4,412 | .5 | 53 |
| 550 | 29 | 5,033 | −7.5 | | 29 | 4,897 | −16.5 | 57 | 29 | 5,102 | −4.0 | 51 |
| 500 | 29 | 5,767 | −12.6 | | 29 | 5,608 | −21.3 | | 29 | 5,850 | −8.7 | 48 |
| 450 | 29 | 6,570 | −18.1 | | 29 | 6,377 | −26.8 | | 29 | 6,666 | −13.6 | 43 |
| 400 | 29 | 7,434 | −24.0 | | 29 | 7,215 | −32.5 | | 29 | 7,546 | −19.8 | 43 |
| 350 | 28 | 8,394 | −31.6 | | 29 | 8,143 | −39.1 | | 29 | 8,522 | −27.5 | |
| 300 | 28 | 9,468 | −39.3 | | 29 | 9,183 | −46.5 | | 29 | 9,611 | −36.4 | |
| 250 | 26 | 10,691 | −48.4 | | 28 | 10,370 | −54.1 | | 28 | 10,848 | −46.6 | |
| 200 | 23 | 12,129 | −57.6 | | 23 | 11,776 | −57.8 | | 11 | 12,301 | −58.2 | |
| 175 | 18 | 12,954 | −60.6 | | 17 | 12,631 | −58.4 | | | | | |
| 150 | 7 | 13,915 | −63.1 | | | | | | | | | |
| 125 | | | | | | | | | | | | |

| Standard pressure surface (mb.) | Miami, Fla. (1,017.8 mb.) | | | | Nantucket, Mass. (1,013.5 mb.) | | | | Nashville, Tenn. (999.4 mb.) | | | | New Orleans, La. (1,019.8 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 | 4 | 19.8 | 82 | 31 | 14 | 0.2 | 68 | 31 | 180 | 4.2 | 71 | 31 | 2 | 11.3 | 82 |
| 1,000 | 31 | 157 | 20.2 | 78 | 31 | 121 | (*) | | 31 | 174 | (*) | | 31 | 166 | 12.4 | 72 |
| 950 | 31 | 602 | 17.7 | 76 | 31 | 530 | −2.2 | 66 | 31 | 597 | 4.2 | 62 | 31 | 600 | 11.4 | 70 |
| 900 | 31 | 1,060 | 15.0 | 76 | 31 | 958 | −3.6 | 60 | 31 | 1,031 | 2.9 | 55 | 31 | 1,048 | 10.2 | 64 |
| 850 | 31 | 1,543 | 12.5 | 71 | 31 | 1,408 | −5.4 | 54 | 31 | 1,493 | 3.0 | 43 | 31 | 1,522 | 8.9 | 59 |
| 800 | 31 | 2,050 | 10.6 | 62 | 31 | 1,882 | −6.7 | 49 | 31 | 1,982 | 1.2 | 37 | 31 | 2,023 | 7.4 | 49 |
| 750 | 31 | 2,592 | 9.5 | 43 | 31 | 2,387 | −8.7 | 46 | 31 | 2,505 | −.3 | 35 | 31 | 2,556 | 5.7 | 47 |
| 700 | 31 | 3,157 | 7.0 | | 31 | 2,916 | −10.8 | 48 | 31 | 3,049 | −3.0 | 36 | 31 | 3,115 | 3.0 | 45 |
| 650 | 31 | 3,765 | 3.9 | | 31 | 3,486 | −13.2 | 50 | 31 | 3,636 | −5.9 | 40 | 31 | 3,714 | .0 | 41 |
| 600 | 31 | 4,408 | .1 | | 31 | 4,089 | −16.1 | 46 | 31 | 4,256 | −9.4 | 40 | 31 | 4,349 | −3.7 | |
| 550 | 31 | 5,099 | −4.3 | | 31 | 4,738 | −19.7 | 46 | 31 | 4,925 | −13.1 | | 29 | 5,036 | −7.8 | |
| 500 | 31 | 5,844 | −9.2 | | 31 | 5,442 | −23.8 | | 29 | 5,649 | −17.8 | | 27 | 5,767 | −12.5 | |
| 450 | 31 | 6,657 | −14.6 | | 31 | 6,205 | −28.7 | | 29 | 6,436 | −22.6 | | 25 | 6,570 | −17.7 | |
| 400 | 31 | 7,532 | −21.2 | | 31 | 7,039 | −34.2 | | 28 | 7,285 | −28.5 | | 25 | 7,435 | −23.6 | |
| 350 | 30 | 8,502 | −28.1 | | 27 | 7,971 | −39.5 | | 26 | 8,222 | −35.7 | | 25 | 8,397 | −30.6 | |
| 300 | 30 | 9,590 | −36.1 | | 27 | 9,011 | −45.5 | | 23 | 9,283 | −42.9 | | 25 | 9,474 | −38.5 | |
| 250 | 30 | 10,830 | −45.7 | | 19 | 10,185 | −50.1 | | 21 | 10,484 | −51.4 | | 23 | 10,698 | −47.7 | |
| 200 | 24 | 12,292 | −55.9 | | 7 | 11,654 | −52.2 | | 18 | 11,916 | −57.9 | | 14 | 12,177 | −57.4 | |
| 175 | 11 | 13,130 | −61.3 | | | | | | 13 | 12,764 | −59.9 | | 14 | 13,013 | −60.8 | |
| 150 | 5 | 14,076 | −64.5 | | | | | | 8 | 13,725 | −61.0 | | 7 | 13,957 | −62.5 | |
| 125 | | | | | | | | | | | | | | | | |

| Standard pressure surface (mb.) | North Platte, Nebr. (918.3 mb.) | | | | Oakland, Calif. (1,019.6 mb.) | | | | Ogden, Utah (867.2 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 |
| Surface | 31 | 849 | −3.7 | 87 | 31 | 6 | 9.2 | 80 | 31 | 1,355 | −1.7 | 83 |
| 1,000 | 31 | 165 | (*) | | 31 | 167 | 9.7 | 73 | 31 | 203 | (*) | |
| 950 | 31 | 580 | (*) | | 31 | 600 | 9.0 | 60 | 31 | 624 | (*) | |
| 900 | 31 | 1,009 | −.1 | 76 | 31 | 1,039 | 7.4 | 55 | 31 | 1,062 | (*) | |
| 850 | 31 | 1,468 | .4 | 57 | 31 | 1,508 | 5.0 | 50 | 31 | 1,514 | −.8 | 77 |
| 800 | 31 | 1,953 | −1.2 | 55 | 31 | 2,000 | 2.6 | 43 | 31 | 1,998 | −2.1 | 65 |
| 750 | 31 | 2,471 | −3.9 | 56 | 31 | 2,525 | .1 | 34 | 31 | 2,512 | −4.9 | 67 |
| 700 | 31 | 3,007 | −6.7 | 54 | 31 | 3,069 | −2.8 | 31 | 31 | 3,048 | −7.8 | 66 |
| 650 | 31 | 3,588 | −9.8 | 53 | 31 | 3,657 | −6.1 | 34 | 31 | 3,626 | −10.9 | 62 |
| 600 | 31 | 4,196 | −13.5 | 48 | 31 | 4,274 | −9.9 | 40 | 31 | 4,232 | −14.7 | 59 |
| 550 | 31 | 4,857 | −17.5 | 46 | 31 | 4,944 | −14.3 | 43 | 31 | 4,888 | −19.0 | 58 |
| 500 | 31 | 5,562 | −22.5 | | 31 | 5,656 | −18.9 | | 31 | 5,587 | −24.2 | |
| 450 | 31 | 6,331 | −28.2 | | 31 | 6,443 | −24.3 | | 31 | 6,355 | −29.6 | |
| 400 | 31 | 7,158 | −34.4 | | 31 | 7,281 | −30.7 | | 31 | 7,178 | −35.6 | |
| 350 | 31 | 8,078 | −41.2 | | 31 | 8,215 | −37.6 | | 31 | 8,093 | −42.3 | |
| 300 | 31 | 9,108 | −48.4 | | 30 | 9,274 | −45.0 | | 31 | 9,121 | −48.7 | |
| 250 | 30 | 10,295 | −54.6 | | 28 | 10,481 | −52.8 | | 29 | 10,310 | −54.3 | |
| 200 | 27 | 11,712 | −57.6 | | 22 | 11,895 | −58.2 | | 25 | 11,734 | −56.6 | |
| 175 | 17 | 12,525 | −56.2 | | 18 | 12,745 | −59.1 | | 23 | 12,572 | −56.7 | |
| 150 | 12 | 13,460 | −56.0 | | 15 | 13,699 | −58.5 | | 15 | 13,563 | −57.2 | |
| 125 | | | | | 6 | 14,835 | −58.0 | | | | | |

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 December 1947*—Continued

| Standard pressure surface (mb) | Oklahoma City, Okla. (972.8 mb.) | | | | Omaha, Nebr. (982.0 mb.) | | | | Phoenix, Ariz. (977.3 mb.) | | | | Pittsburgh, Pa. (972.9 mb.) | | | | Portland, Maine (1,012.2 mb.) | | | | Rapid City, S. Dak. (902.5 mb.) | | | | St. Cloud, Minn. (979.0 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 | 391 | 4.5 | 77 | 31 | 308 | −1.0 | 79 | 31 | 339 | 9.5 | 57 | 31 | 382 | −0.7 | 71 | 31 | 20 | −6.2 | 72 | 31 | 980 | −2.1 | 71 | 31 | 317 | −8.6 | 87 |
| 1,000 | 31 | 163 | (*) | ---- | 31 | 162 | (*) | ---- | 31 | 146 | (*) | ---- | 31 | 161 | (*) | ---- | 31 | 115 | (*) | ---- | 31 | 151 | (*) | ---- | 31 | 151 | (*) | ---- |
| 950 | 31 | 585 | 5.8 | 70 | 31 | 577 | −1.7 | 81 | 31 | 581 | 12.9 | 43 | 31 | 576 | −1.5 | 71 | 31 | 521 | −6.0 | 67 | 31 | 567 | (*) | ---- | 31 | 553 | −8.0 | 87 |
| 900 | 31 | 1,026 | 5.1 | 61 | 31 | 1,003 | −.5 | 68 | 31 | 1,029 | 10.2 | 42 | 31 | 1,001 | −3.1 | 72 | 31 | 939 | −7.5 | 70 | 31 | 1,002 | (*) | ---- | 31 | 970 | −6.4 | 74 |
| 850 | 31 | 1,492 | 4.1 | 53 | 31 | 1,461 | −.3 | 56 | 31 | 1,502 | 6.7 | 44 | 31 | 1,452 | −4.3 | 67 | 31 | 1,383 | −9.1 | 70 | 31 | 1,460 | .3 | 54 | 31 | 1,418 | −5.7 | 56 |
| 800 | 31 | 1,984 | 2.5 | 46 | 31 | 1,945 | −1.3 | 48 | 31 | 1,997 | 3.3 | 48 | 31 | 1,929 | −5.2 | 61 | 31 | 1,851 | −10.1 | 65 | 31 | 1,945 | −1.8 | 54 | 31 | 1,893 | −6.3 | 51 |
| 750 | 21 | 2,508 | .5 | 42 | 31 | 2,463 | −3.6 | 48 | 31 | 2,519 | .0 | 46 | 31 | 2,442 | −6.6 | 53 | 31 | 2,354 | −11.8 | 59 | 31 | 2,459 | −4.6 | 55 | 31 | 2,402 | −8.0 | 51 |
| 700 | 31 | 3,055 | −2.0 | 38 | 31 | 3,000 | −6.5 | 47 | 31 | 3,067 | −2.7 | 38 | 31 | 2,972 | −8.6 | 49 | 31 | 2,874 | −13.3 | 54 | 31 | 2,997 | −7.4 | 53 | 31 | 2,929 | −10.2 | 48 |
| 650 | 31 | 3,643 | −5.0 | 35 | 31 | 3,582 | −9.7 | 47 | 31 | 3,652 | −6.2 | ---- | 31 | 3,553 | −10.8 | 46 | 31 | 3,443 | −15.8 | 51 | 31 | 3,575 | −10.6 | 52 | 31 | 3,502 | −13.1 | 47 |
| 600 | 29 | 4,266 | −8.4 | ---- | 31 | 4,190 | −13.0 | 46 | 31 | 4,273 | −10.0 | ---- | 31 | 4,156 | −14.0 | 52 | 31 | 4,035 | −19.0 | 52 | 31 | 4,182 | −14.3 | 54 | 31 | 4,104 | −16.3 | 44 |
| 550 | 29 | 4,937 | −12.6 | ---- | 31 | 4,851 | −17.3 | 47 | 31 | 4,940 | −14.4 | ---- | 31 | 4,820 | −17.6 | 52 | 31 | 4,680 | −22.7 | ---- | 31 | 4,837 | −18.3 | 53 | 30 | 4,755 | −19.8 | ---- |
| 500 | 29 | 5,656 | −17.8 | ---- | 31 | 5,556 | −22.0 | ---- | 31 | 5,654 | −19.3 | ---- | 31 | 5,519 | −21.9 | ---- | 30 | 5,373 | −26.9 | ---- | 31 | 5,542 | −23.2 | ---- | 30 | 5,457 | −24.1 | ---- |
| 450 | 27 | 6,439 | −23.5 | ---- | 31 | 6,329 | −27.8 | ---- | 31 | 6,434 | −25.2 | ---- | 31 | 6,295 | −27.2 | ---- | 30 | 6,133 | −32.3 | ---- | 31 | 6,310 | −28.6 | ---- | 29 | 6,225 | −29.3 | ---- |
| 400 | 26 | 7,284 | −29.9 | ---- | 31 | 7,161 | −33.7 | ---- | 30 | 7,286 | −31.3 | ---- | 31 | 7,126 | −32.7 | ---- | 30 | 6,947 | −37.8 | ---- | 31 | 7,140 | −34.5 | ---- | 28 | 7,061 | −35.1 | ---- |
| 350 | 25 | 8,227 | −36.3 | ---- | 31 | 8,084 | −40.1 | ---- | 30 | 8,218 | −38.5 | ---- | 30 | 8,046 | −39.1 | ---- | 29 | 7,857 | −43.1 | ---- | 31 | 8,060 | −41.3 | ---- | 28 | 7,979 | −41.7 | ---- |
| 300 | 17 | 9,291 | −43.6 | ---- | 31 | 9,119 | −47.7 | ---- | 29 | 9,253 | −46.0 | ---- | 30 | 9,088 | −45.7 | ---- | 27 | 8,885 | −48.6 | ---- | 30 | 9,085 | −48.5 | ---- | 28 | 9,008 | −48.4 | ---- |
| 250 | 10 | 10,481 | −51.1 | ---- | 31 | 10,304 | −54.5 | ---- | 27 | 10,458 | −53.1 | ---- | 29 | 10,288 | −51.6 | ---- | 25 | 10,068 | −51.7 | ---- | 30 | 10,269 | −53.7 | ---- | 27 | 10,185 | −54.7 | ---- |
| 200 | ---- | ---- | ---- | ---- | 24 | 11,734 | −57.6 | ---- | 21 | 11,874 | −57.2 | ---- | 28 | 11,725 | −55.1 | ---- | 18 | 11,503 | −53.4 | ---- | 28 | 11,691 | −55.3 | ---- | 22 | 11,600 | −55.0 | ---- |
| 175 | ---- | ---- | ---- | ---- | 14 | 12,597 | −56.6 | ---- | 15 | 12,709 | −57.5 | ---- | 26 | 12,574 | −56.4 | ---- | 12 | 12,357 | −52.2 | ---- | 24 | 12,527 | −53.8 | ---- | 12 | 12,432 | −52.6 | ---- |
| 150 | ---- | ---- | ---- | ---- | 8 | 13,560 | −56.2 | ---- | 7 | 13,654 | −56.9 | ---- | 13 | 13,521 | −56.0 | ---- | 5 | 13,315 | −53.1 | ---- | 11 | 13,522 | −53.0 | ---- | ---- | ---- | ---- | ---- |
| 125 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 5 | 14,693 | −57.9 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |

| Standard pressure surface (mb) | San Antonio, Tex. (990.4 mb.) | | | | San Juan, P. R. (1,014.1 mb.) | | | | Santa Maria, Calif. (1,010.5 mb.) | | | | Sault Ste. Marie, Mich. (989.1 mb.) | | | | Spokane, Wash.[2] (934.6 mb.) | | | | Swan Island, W. I. (1,011.8 mb.) | | | | Tacubaya, Mexico (773.6 mb.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Surface | 31 | 240 | 11.0 | 76 | 31 | 15 | 24.2 | 81 | 31 | 71 | 9.7 | 74 | 31 | 221 | −5.4 | 79 | 23 | 721 | −0.1 | 87 | 19 | 10 | 26.3 | 81 | 31 | 2,306 | 13.0 | 62 |
| 1,000 | 31 | 158 | (*) | ---- | 31 | 137 | 23.6 | 80 | 31 | 158 | 11.0 | 67 | 31 | 134 | (*) | ---- | 31 | 168 | (*) | ---- | 19 | 114 | 25.6 | 80 | 31 | 84 | (*) | ---- |
| 950 | 31 | 592 | 11.6 | 70 | 31 | 589 | 20.7 | 82 | 31 | 589 | 10.7 | 52 | 31 | 539 | −7.3 | 81 | 31 | 584 | (*) | ---- | 19 | 573 | 22.1 | 83 | 31 | 541 | (*) | ---- |
| 900 | 31 | 1,039 | 9.4 | 67 | 31 | 1,052 | 17.6 | 84 | 31 | 1,036 | 8.7 | 48 | 31 | 955 | −9.3 | 84 | 31 | 1,015 | −.7 | 86 | 19 | 1,033 | 19.0 | 79 | 31 | 1,012 | (*) | ---- |
| 850 | 31 | 1,512 | 8.0 | 57 | 31 | 1,539 | 14.7 | 78 | 31 | 1,506 | 6.2 | 46 | 31 | 1,396 | −10.4 | 79 | 31 | 1,470 | −2.3 | 80 | 19 | 1,523 | 16.0 | 75 | 31 | 1,502 | (*) | ---- |
| 800 | 31 | 2,011 | 6.4 | 49 | 31 | 2,050 | 13.1 | 62 | 31 | 2,000 | 3.9 | 38 | 31 | 1,861 | −11.9 | 75 | 31 | 1,950 | −4.6 | 78 | 19 | 2,037 | 13.1 | 72 | 31 | 2,024 | (*) | ---- |
| 750 | 31 | 2,542 | 4.3 | 50 | 31 | 2,598 | 11.2 | 38 | 31 | 2,529 | 1.2 | 34 | 31 | 2,360 | −13.2 | 69 | 31 | 2,462 | −7.0 | 74 | 19 | 2,588 | 10.3 | 63 | 31 | 2,569 | 11.5 | 62 |
| 700 | 31 | 3,097 | 1.8 | 42 | 31 | 3,165 | 8.7 | 28 | 30 | 3,070 | −1.9 | 31 | 31 | 2,877 | −14.8 | 66 | 31 | 2,992 | −9.6 | 71 | 19 | 3,149 | 7.6 | ---- | 31 | 3,139 | 7.4 | 66 |
| 650 | 31 | 3,688 | −2.1 | 39 | 31 | 3,780 | 5.9 | ---- | 29 | 3,654 | −5.3 | ---- | 30 | 3,444 | −17.2 | 61 | 31 | 3,566 | −12.7 | 68 | 19 | 3,761 | 4.5 | ---- | 31 | 3,746 | 2.8 | 74 |
| 600 | 31 | 4,322 | −5.7 | 38 | 31 | 4,425 | 2.3 | ---- | 29 | 4,276 | −9.2 | ---- | 30 | 4,034 | −20.5 | 63 | 31 | 4,168 | −16.2 | 69 | 19 | 4,404 | .6 | ---- | 31 | 4,389 | −1.9 | 75 |
| 550 | 31 | 4,995 | −9.5 | 33 | 31 | 5,125 | −1.8 | ---- | 29 | 4,946 | −13.6 | ---- | 30 | 4,677 | −23.7 | ---- | 31 | 4,822 | −19.9 | 67 | 19 | 5,102 | −3.5 | ---- | 31 | 5,076 | −5.4 | 57 |
| 500 | 30 | 5,730 | −14.4 | 40 | 31 | 5,873 | −6.5 | ---- | 28 | 5,663 | −18.2 | ---- | 30 | 5,364 | −28.0 | ---- | 30 | 5,519 | −24.5 | ---- | 19 | 5,844 | −8.3 | ---- | 31 | 5,819 | −10.1 | 53 |
| 450 | 30 | 6,522 | −19.9 | 47 | 31 | 6,700 | −12.1 | ---- | 27 | 6,451 | −23.8 | ---- | 30 | 6,120 | −32.6 | ---- | 30 | 6,283 | −29.8 | ---- | 19 | 6,670 | −13.1 | ---- | 31 | 6,629 | −15.2 | 47 |
| 400 | 29 | 7,382 | −25.9 | ---- | 31 | 7,580 | −18.3 | ---- | 26 | 7,294 | −29.9 | ---- | 30 | 6,935 | −37.7 | ---- | 30 | 7,107 | −36.0 | ---- | 18 | 7,542 | −18.9 | ---- | 31 | 7,505 | −21.5 | ---- |
| 350 | 29 | 8,336 | −32.6 | ---- | 31 | 8,562 | −25.8 | ---- | 25 | 8,233 | −36.8 | ---- | 27 | 7,849 | −43.5 | ---- | 28 | 8,033 | −42.4 | ---- | 18 | 8,522 | −26.3 | ---- | 31 | 8,475 | −28.7 | ---- |
| 300 | 28 | 9,406 | −39.7 | ---- | 31 | 9,660 | −34.5 | ---- | 17 | 9,259 | −43.8 | ---- | 19 | 8,899 | −49.3 | ---- | 24 | 9,056 | −49.1 | ---- | 16 | 9,620 | −34.8 | ---- | 30 | 9,559 | −37.3 | ---- |
| 250 | 26 | 10,634 | −47.8 | ---- | 31 | 10,909 | −44.0 | ---- | 9 | 10,454 | −50.9 | ---- | ---- | ---- | ---- | ---- | 22 | 10,236 | −54.4 | ---- | 14 | 10,866 | −44.9 | ---- | 18 | 10,796 | −47.8 | ---- |
| 200 | 16 | 12,096 | −55.3 | ---- | 29 | 12,371 | −54.5 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 16 | 11,649 | −55.1 | ---- | 14 | 12,319 | −56.4 | ---- | ---- | ---- | ---- | ---- |
| 175 | 9 | 12,980 | −60.3 | ---- | 28 | 13,213 | −60.1 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 11 | 12,495 | −55.8 | ---- | 13 | 13,155 | −62.0 | ---- | ---- | ---- | ---- | ---- |
| 150 | 6 | 13,951 | −62.2 | ---- | 21 | 14,155 | −66.1 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 9 | 14,093 | −67.4 | ---- | ---- | ---- | ---- | ---- |
| 125 | ---- | ---- | ---- | ---- | 6 | 15,244 | −70.9 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |

| Standard pressure surface (mb.) | Tampa, Fla. (1,018.1 mb.) | | | | Tatoosh Island, Wash. (1,012.5 mb.) | | | | Toledo, Ohio (995.3 mb.) | | | | Washington, D. C. (1,017.6 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 | 16.0 | 84 | 31 | 31 | 7.4 | 87 | 31 | 191 | −2.5 | 83 | 30 | 25 | 1.6 | 64 |
| 1,000 | 31 | 161 | 16.9 | 78 | 31 | 132 | 6.9 | 84 | 31 | 152 | (*) | ---- | 30 | 165 | 1.8 | 58 |
| 950 | 31 | 603 | 15.3 | 76 | 31 | 555 | 4.5 | 84 | 31 | 562 | −3.3 | 84 | 30 | 579 | .5 | 59 |
| 900 | 31 | 1,056 | 13.1 | 72 | 31 | 992 | 1.8 | 84 | 31 | 987 | −3.9 | 79 | 30 | 1,011 | −.3 | 56 |
| 850 | 31 | 1,535 | 11.1 | 64 | 31 | 1,451 | −.6 | 79 | 31 | 1,438 | −4.3 | 65 | 30 | 1,467 | −1.6 | 51 |
| 800 | 31 | 2,040 | 9.5 | 52 | 31 | 1,934 | −2.8 | 73 | 31 | 1,915 | −5.2 | 57 | 30 | 1,949 | −2.7 | 48 |
| 750 | 31 | 2,581 | 7.2 | 50 | 31 | 2,448 | −5.3 | 71 | 31 | 2,425 | −6.7 | 50 | 30 | 2,464 | −4.3 | 43 |
| 700 | 31 | 3,139 | 4.9 | 42 | 30 | 2,981 | −8.6 | 68 | 31 | 2,957 | −8.8 | 51 | 30 | 3,000 | −6.3 | ---- |
| 650 | 31 | 3,742 | 1.8 | 38 | 30 | 3,555 | −11.9 | 64 | 31 | 3,534 | −11.7 | 50 | 30 | 3,578 | −8.9 | ---- |
| 600 | 31 | 4,381 | −1.7 | 38 | 30 | 4,161 | −15.5 | 59 | 31 | 4,138 | −14.9 | 50 | 30 | 4,193 | −12.0 | ---- |
| 550 | 31 | 5,067 | −5.9 | 42 | 30 | 4,814 | −19.5 | 56 | 31 | 4,795 | −18.6 | 46 | 29 | 4,856 | −15.4 | ---- |
| 500 | 31 | 5,808 | −10.6 | 50 | 30 | 5,515 | −24.0 | ---- | 31 | 5,495 | −23.3 | ---- | 29 | 5,570 | −19.9 | ---- |
| 450 | 31 | 6,618 | −15.8 | 50 | 30 | 6,281 | −29.1 | ---- | 31 | 6,261 | −28.7 | ---- | 29 | 6,347 | −25.3 | ---- |
| 400 | 29 | 7,492 | −22.1 | ---- | 29 | 7,114 | −34.7 | ---- | 31 | 7,091 | −34.6 | ---- | 29 | 7,187 | −31.3 | ---- |
| 350 | 29 | 8,459 | −29.2 | ---- | 28 | 8,030 | −41.3 | ---- | 31 | 8,012 | −40.5 | ---- | 29 | 8,120 | −37.5 | ---- |
| 300 | 29 | 9,540 | −37.7 | ---- | 27 | 9,063 | −47.5 | ---- | 31 | 9,047 | −47.1 | ---- | 29 | 9,168 | −44.7 | ---- |
| 250 | 29 | 10,770 | −47.6 | ---- | 23 | 10,266 | −52.9 | ---- | 28 | 10,236 | −53.2 | ---- | 28 | 10,367 | −52.1 | ---- |
| 200 | 29 | 12,207 | −58.0 | ---- | 17 | 11,676 | −55.3 | ---- | 17 | 11,669 | −55.9 | ---- | 27 | 11,794 | −57.0 | ---- |
| 175 | 24 | 13,040 | −62.8 | ---- | 11 | 12,550 | −54.4 | ---- | 15 | 12,517 | −56.6 | ---- | 26 | 12,641 | −57.8 | ---- |
| 150 | 15 | 14,026 | −65.3 | ---- | 6 | 13,542 | −53.4 | ---- | 6 | 13,420 | −55.9 | ---- | 25 | 13,607 | −58.5 | ---- |
| 125 | 8 | 15,129 | −70.0 | ---- | 5 | 14,724 | −53.6 | ---- | ---- | ---- | ---- | ---- | 14 | 14,758 | −60.6 | ---- |
| 100 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 6 | 16,180 | −64.9 | ---- |

[1] Data not yet received.
[2] Station elevation changed from 598 m. to 721 m., Dec. 8, 1947.
* 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 observations.) 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 compenate 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 December 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. (1,627 m.) | | | Atlanta, Ga. (299 m.) | | | Billings, Mont. (1,095 m.) | | | Bismarck, N. Dak. (512 m.) | | | Boise, Idaho (868 m.) | | | Brownsville, Tex. (7 m.) | | | Buffalo, N. Y. (220 m.) | | | Burlington, Vt. (100 m.) | | | Charleston, S. C. (16 m.) | | | Cincinnati, Ohio (150 m.) | | | Denver, Colo. (1,618 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 | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity |
| Surface | 29 | 247 | 1.4 | 31 | 261 | 1.3 | 25 | 173 | 0.3 | 30 | 242 | 4.4 | 28 | 302 | 0.6 | 31 | 8 | 0.7 | 27 | 130 | 2.1 | 29 | 258 | 3.7 | 29 | 243 | 1.1 | 27 | 346 | 0.9 | 26 | 239 | 1.8 | 30 | 60 | 0.9 | 31 | 257 | 1.2 |
| 500 | | | | | | | 25 | 168 | .4 | | | | | | | | | | 27 | 140 | 3.3 | 29 | 251 | 5.4 | 29 | 265 | 4.2 | 27 | 284 | 1.6 | 26 | 237 | 3.0 | | | | | | |
| 1,000 | 29 | 225 | 2.5 | | | | 24 | 254 | 1.5 | | | | 27 | 296 | 5.4 | 31 | 25 | .9 | 22 | 181 | 2.8 | 19 | 258 | 8.6 | 26 | 284 | 6.8 | 27 | 261 | 3.2 | 25 | 253 | 6.5 | | | | | | |
| 1,500 | 27 | 234 | 4.4 | | | | 22 | 282 | 4.1 | 30 | 257 | 10.1 | 23 | 295 | 7.1 | 31 | 23 | .3 | 19 | 219 | 2.9 | 15 | 269 | 10.5 | 20 | 293 | 9.4 | 23 | 268 | 6.0 | 22 | 276 | 9.5 | | | | 31 | 252 | 2.0 |
| 2,000 | 27 | 245 | 5.2 | 31 | 242 | 1.7 | 19 | 281 | 7.0 | 29 | 280 | 10.4 | 21 | 296 | 9.0 | 30 | 258 | 2.2 | 17 | 228 | 3.6 | 13 | 274 | 9.5 | 14 | 304 | 12.4 | 22 | 275 | 7.8 | 20 | 278 | 11.7 | 30 | 2 | .8 | 31 | 250 | 2.9 |
| 2,500 | 26 | 248 | 6.4 | 30 | 266 | 2.6 | 18 | 285 | 6.8 | 28 | 292 | 11.5 | 19 | 300 | 11.1 | 27 | 275 | 5.2 | 17 | 223 | 4.5 | 10 | 273 | 12.6 | 11 | 310 | 14.7 | 21 | 273 | 9.2 | 20 | 280 | 14.2 | 28 | 284 | 2.6 | 31 | 264 | 4.6 |
| 3,000 | 23 | 262 | 7.5 | 29 | 267 | 4.0 | 16 | 282 | 7.8 | 26 | 291 | 12.2 | 16 | 290 | 12.5 | 25 | 278 | 7.2 | 17 | 232 | 4.2 | 10 | 276 | 15.1 | 10 | 305 | 17.2 | 21 | 273 | 10.7 | 19 | 276 | 15.2 | 28 | 304 | 5.3 | 30 | 264 | 6.3 |
| 4,000 | 21 | 251 | 8.5 | 25 | 290 | 7.7 | 14 | 270 | 12.3 | 23 | 295 | 12.8 | 15 | 290 | 15.7 | 20 | 292 | 10.5 | 15 | 242 | 7.0 | | | | | | | 21 | 273 | 14.9 | 16 | 285 | 17.3 | 27 | 300 | 7.2 | 29 | 269 | 8.8 |
| 5,000 | 19 | 257 | 9.7 | 23 | 282 | 11.2 | 13 | 276 | 18.3 | 21 | 302 | 13.9 | 13 | 291 | 14.9 | 16 | 301 | 13.1 | 14 | 245 | 10.5 | | | | | | | 19 | 273 | 16.2 | 14 | 282 | 19.8 | 26 | 288 | 9.9 | 27 | 264 | 11.0 |
| 6,000 | 18 | 243 | 13.0 | 20 | 295 | 12.0 | 13 | 273 | 21.5 | 19 | 304 | 14.1 | | | | 15 | 316 | 14.4 | 13 | 251 | 15.9 | | | | | | | 16 | 278 | 18.4 | 14 | 283 | 23.6 | 24 | 281 | 11.2 | 26 | 262 | 13.4 |
| 8,000 | | | | 12 | 292 | 15.5 | | | | 12 | 323 | 18.8 | | | | | | | | | | | | | | | | 12 | 278 | 25.0 | | | | 17 | 283 | 15.6 | 19 | 262 | 9.7 |
| 10,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | 285 | 9.2 |
| 12,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 10 | 247 | 22.0 |

| 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.) | | | 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 | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity |
| Surface | 30 | 252 | 0.2 | 31 | 303 | 1.0 | 27 | 247 | 1.1 | 26 | 248 | 4.0 | 26 | 11 | 1.5 | 25 | 245 | 1.6 | 31 | 33 | 1.6 | 30 | 53 | 0.3 | 28 | 311 | 0.6 | 31 | 93 | 1.7 | 29 | 19 | 0.7 | 30 | 221 | 1.2 | 28 | 299 | 4.2 |
| 500 | | | | | | | 27 | 249 | 2.0 | | | | 26 | 306 | 1.4 | 25 | 253 | 3.2 | | | | 30 | 215 | .7 | 28 | 301 | .4 | 31 | 104 | 2.5 | 28 | 360 | 1.1 | 30 | 234 | 2.9 | 28 | 291 | 7.2 |
| 1,000 | | | | | | | 26 | 272 | 4.4 | 26 | 255 | 8.9 | 23 | 260 | 3.0 | 18 | 265 | 7.2 | 31 | 37 | 2.7 | 25 | 261 | 2.4 | 27 | 171 | 2.0 | 31 | 104 | 1.7 | 25 | 318 | 1.3 | 27 | 235 | 4.6 | 27 | 302 | 9.5 |
| 1,500 | | | | 31 | 302 | 1.0 | 26 | 285 | 7.1 | 25 | 275 | 12.3 | 23 | 262 | 4.9 | 15 | 271 | 11.8 | 31 | 17 | 2.2 | 25 | 261 | 4.2 | 24 | 213 | 3.9 | 30 | 75 | .5 | 24 | 292 | 3.3 | 25 | 265 | 6.0 | 27 | 303 | 12.3 |
| 2,000 | 30 | 11 | .2 | 31 | 224 | .5 | 26 | 282 | 10.0 | 23 | 290 | 12.6 | 22 | 270 | 5.8 | 13 | 282 | 13.7 | 30 | 349 | 2.6 | 24 | 261 | 6.5 | 20 | 234 | 5.3 | 30 | 261 | .8 | 23 | 274 | 4.8 | 24 | 272 | 8.6 | 22 | 300 | 14.5 |
| 2,500 | 30 | 348 | 1.4 | 31 | 226 | .6 | 25 | 284 | 12.2 | 21 | 289 | 14.0 | 21 | 278 | 6.9 | 11 | 295 | 14.7 | 29 | 334 | 3.1 | 24 | 261 | 7.6 | 17 | 248 | 7.4 | 27 | 267 | 1.9 | 21 | 269 | 6.0 | 23 | 275 | 10.3 | 18 | 291 | 16.5 |
| 3,000 | 28 | 319 | 3.1 | 29 | 270 | 2.8 | 24 | 279 | 14.6 | 19 | 286 | 15.4 | 20 | 278 | 8.4 | | | | 28 | 330 | 4.4 | 24 | 262 | 8.3 | 12 | 267 | 9.3 | 23 | 242 | 4.0 | 19 | 265 | 8.9 | 23 | 274 | 11.4 | 13 | 283 | 17.2 |
| 4,000 | 25 | 312 | 6.9 | 25 | 288 | 5.1 | 22 | 276 | 18.5 | 10 | 281 | 13.7 | 20 | 263 | 12.0 | | | | 26 | 329 | 7.7 | 19 | 273 | 9.1 | | | | 18 | 255 | 8.7 | 17 | 271 | 11.4 | 18 | 269 | 15.4 | | | |
| 5,000 | 17 | 314 | 8.6 | 24 | 309 | 6.3 | 20 | 275 | 23.5 | | | | 17 | 263 | 13.0 | | | | 24 | 320 | 8.8 | 18 | 275 | 10.5 | | | | 15 | 254 | 10.5 | 16 | 264 | 15.3 | 18 | 276 | 19.6 | | | |
| 6,000 | 14 | 319 | 11.1 | 18 | 342 | 11.8 | 16 | 279 | 26.3 | | | | 14 | 273 | 17.4 | | | | 23 | 315 | 11.3 | 14 | 280 | 10.9 | | | | 11 | 245 | 12.5 | 13 | 255 | 16.6 | 16 | 278 | 21.0 | | | |
| 8,000 | 10 | 320 | 11.1 | | | | | | | | | | | | | | | | 16 | 320 | 17.1 | | | | | | | | | | | | | | | | | | |
| 10,000 | | | | | | | | | | | | | | | | | | | 10 | 336 | 19.4 | | | | | | | | | | | | | | | | | | |

| 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. Cloud, Minn. (318 m.) | | | San Antonio, Tex. (240 m.) | | | San Diego, Calif. (13 m.) | | | Sault Ste. Marie, Mich (225 m.) | | | Seattle, Wash. (116 m.) | | | Spokane, Wash. (725 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 | 31 | 257 | 1.7 | 25 | 224 | 1.3 | 29 | 317 | 2.2 | 31 | 171 | 0.5 | 31 | 345 | 2.8 | 29 | 228 | 1.4 | 27 | 281 | 1.0 | 30 | 346 | 0.9 | 31 | 280 | 2.5 | 21 | 292 | 0.8 | 23 | 186 | 1.6 | 24 | 197 | 0.8 | 30 | 294 | 2.4 |
| 500 | 31 | 341 | 1.7 | 25 | 322 | 1.5 | 29 | 305 | 2.6 | 31 | 189 | .7 | | | | 29 | 239 | 3.3 | 27 | 297 | 1.8 | 30 | 320 | .7 | 31 | 302 | 2.1 | 21 | 270 | 1.4 | 23 | 198 | 3.8 | | | | 30 | 287 | 4.9 |
| 1,000 | 30 | 346 | 3.1 | 23 | 237 | 3.6 | 26 | 297 | 4.0 | 31 | 187 | .6 | 31 | 344 | 2.9 | 25 | 249 | 7.0 | 26 | 297 | 4.1 | 30 | 242 | 1.1 | 28 | 3 | 1.5 | 16 | 259 | 2.2 | 19 | 208 | 5.7 | 24 | 188 | 3.1 | 29 | 286 | 7.0 |
| 1,500 | 28 | 335 | 3.3 | 23 | 246 | 6.4 | 26 | 289 | 6.2 | 31 | 179 | .6 | 31 | 304 | 5.2 | 21 | 263 | 9.5 | 19 | 301 | 9.3 | 26 | 264 | 2.6 | 26 | 18 | 3.5 | | | | 15 | 209 | 6.0 | 21 | 223 | 6.4 | 28 | 290 | 9.4 |
| 2,000 | 26 | 340 | 4.6 | 23 | 250 | 8.6 | 25 | 288 | 8.0 | 30 | 350 | .5 | 30 | 295 | 7.2 | 21 | 274 | 10.9 | 19 | 297 | 11.0 | 25 | 267 | 4.6 | 26 | 2 | 4.3 | | | | 11 | 225 | 5.1 | 16 | 233 | 7.6 | 27 | 293 | 12.3 |
| 2,500 | 25 | 326 | 5.4 | 23 | 252 | 9.5 | 24 | 286 | 9.6 | 29 | 329 | 1.6 | 28 | 306 | 9.4 | 20 | 276 | 13.7 | 17 | 299 | 13.2 | 24 | 247 | 6.2 | 25 | 358 | 5.1 | | | | | | | 14 | 236 | 8.5 | 26 | 288 | 16.0 |
| 3,000 | 25 | 323 | 6.0 | 22 | 260 | 8.5 | 24 | 282 | 10.1 | 27 | 337 | 3.6 | 26 | 305 | 11.1 | 19 | 278 | 14.3 | 16 | 296 | 13.9 | 22 | 249 | 8.5 | 24 | 342 | 4.7 | | | | | | | 11 | 254 | 8.2 | 23 | 285 | 19.5 |
| 4,000 | 25 | 320 | 7.8 | 18 | 267 | 8.2 | 22 | 276 | 14.0 | 23 | 314 | 6.7 | 23 | 297 | 13.9 | 19 | 281 | 16.7 | 13 | 290 | 18.2 | 21 | 252 | 12.2 | 23 | 331 | 7.6 | | | | | | | 10 | 262 | 13.5 | 20 | 281 | 23.4 |
| 5,000 | 23 | 311 | 8.5 | 17 | 267 | 10.2 | 21 | 280 | 17.2 | 17 | 291 | 8.1 | 21 | 299 | 16.3 | 18 | 286 | 18.7 | 12 | 292 | 24.0 | 18 | 256 | 13.7 | 19 | 326 | 8.4 | | | | | | | | | | 14 | 277 | 26.7 |
| 6,000 | 19 | 309 | 10.2 | 15 | 264 | 10.0 | 20 | 276 | 20.4 | 15 | 293 | 11.0 | 17 | 304 | 18.5 | 14 | 294 | 21.0 | | | | 16 | 254 | 17.5 | 17 | 317 | 9.2 | | | | | | | | | | | | |
| 8,000 | 10 | 359 | 8.0 | | | | 16 | 283 | 24.9 | 10 | 288 | 12.1 | 11 | 298 | 18.4 | | | | | | | | | | 13 | 316 | 9.7 | | | | | | | | | | | | |

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

| Section | Surface to 2,500 meters (m. s. l.) | | | | | 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] | 50.0 | wnw. | 1,084 | 9 | Albany, N. Y. | 58.1 | nw. | 5,000 | 29 | Albany, N. Y. | 99.5 | w. | 14,561 | 24 | Philipsburg, Pa. |
| East-Central [2] | 42.6 | wnw. | 2,312 | 18 | Elkins, W. Va. | 58.3 | w. | 4,951 | 26 | Hatteras, N. C. | 96.0 | wsw. | 9,772 | 17 | Huntington, W. Va. |
| Southeast [3] | 36.9 | nnw. | 2,142 | 27 | Spartanburg, S. C. | 43.7 | w. | 4,380 | 26 | Charleston, S. C. | 100.0 | w. | 9,360 | 26 | Charleston, S. C. |
| North-Central [4] | 43.2 | wsw. | 1,353 | 14 | Green Bay, Wis. | 66.4 | w. | 3,801 | 18 | Sault Ste. Marie, Mich. | 71.0 | wsw. | 9,010 | 29 | International Falls, Minn. |
| Central [5] | 37.2 | nw. | 2,494 | 28 | Fort Wayne, Ind. | 49.2 | w. | 4,246 | 4 | Springfield, Mo. | 80.0 | nw. | 9,858 | 27 | Joliet, Ill. |
| South-Central [6] | 36.6 | ssw. | 2,465 | 15 | Lake Charles, La. | 46.0 | wsw. | 5,000 | 10 | Little Rock, Ark. | 78.0 | w. | 11,740 | 21 | San Antonio, Tex. |
| Northwest [7] | 40.5 | w. | 2,474 | 14 | Great Falls, Mont. | 53.0 | wsw. | 4,946 | 23 | Spokane, Wash. | 78.0 | w. | 15,547 | 25 | Burns, Oreg. |
| West-Central [8] | 37.3 | s. | 2,438 | 20 | Oakland, Calif. | 49.5 | nnw. | 4,750 | 10 | Oakland, Calif. | 97.0 | n. | 10,819 | 29 | Red Bluff, Calif. |
| Southwest [9] | 34.8 | ene. | 2,500 | 25 | Sandberg, Calif. | 66.0 | ssw. | 4,707 | 20 | Sandberg, Calif. | 78.0 | wsw. | 11,048 | 8 | 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.

## AEROLOGICAL OBSERVATIONS FOR THE YEAR 1947

TABLE 1A.—*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 the year 1947*

STATIONS AND MEAN SURFACE PRESSURES

| Standard pressure surface (mb.) | Albany, N. Y. (1,005.4 mb.) | | | | Albuquerque, N. Mex. (836.8 mb.) | | | | Apalachicola, Fla. (1,016.9 mb.) | | | | Atlanta, Ga. (983.0 mb.) | | | | Auburn, Calif. (957.2 mb.) | | | | Big Spring, Tex. (926.5 mb.) | | | | Bismarck, N. Dak. (954.9 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 | 356 | 86 | 7.0 | 79 | 365 | 1,620 | 15.9 | 34 | 362 | 5 | 19.4 | 83 | 365 | 300 | 14.8 | 74 | 364 | 501 | 15.5 | 56 | 363 | 774 | 17.2 | 51 | 365 | 505 | 5.9 | 72 |
| 1,000 | 356 | 130 | (*) | ---- | 365 | 81 | (*) | ---- | 362 | 150 | 19.5 | 79 | 365 | 154 | (*) | ---- | 364 | 126 | (*) | ---- | 363 | 113 | (*) | ---- | 365 | 122 | (*) | ---- |
| 950 | 356 | 556 | 6.2 | 73 | 365 | 533 | (*) | ---- | 362 | 594 | 17.7 | 71 | 365 | 593 | 15.1 | 67 | 364 | 568 | 16.4 | 52 | 363 | 559 | (*) | ---- | 365 | 548 | (*) | ---- |
| 900 | 356 | 995 | 3.9 | 75 | 365 | 1,001 | (*) | ---- | 362 | 1,052 | 15.5 | 66 | 365 | 1,047 | 13.0 | 66 | 364 | 1,024 | 14.5 | 45 | 363 | 1,021 | 17.4 | 48 | 365 | 989 | 5.1 | 64 |
| 850 | 356 | 1,458 | 1.8 | 74 | 365 | 1,486 | (*) | ---- | 361 | 1,535 | 13.1 | 61 | 365 | 1,526 | 10.5 | 64 | 364 | 1,504 | 11.5 | 44 | 363 | 1,508 | 14.7 | 47 | 365 | 1,454 | 3.2 | 64 |
| 800 | 356 | 1,945 | −.2 | 70 | 365 | 1,999 | 13.3 | 34 | 361 | 2,043 | 10.6 | 56 | 365 | 2,029 | 8.1 | 59 | 364 | 2,007 | 8.2 | 41 | 363 | 2,018 | 12.1 | 45 | 365 | 1,944 | 1.0 | 61 |
| 750 | 355 | 2,466 | −.8 | 64 | 365 | 2,544 | 9.4 | 37 | 361 | 2,584 | 7.9 | 52 | 365 | 2,565 | 5.5 | 53 | 364 | 2,541 | 4.8 | 42 | 363 | 2,558 | 8.8 | 44 | 365 | 2,465 | −1.4 | 58 |
| 700 | 354 | 3,006 | −4.9 | 61 | 365 | 3,106 | 5.1 | 42 | 361 | 3,145 | 4.9 | 48 | 365 | 3,121 | 2.7 | 50 | 363 | 3,095 | 1.3 | ---- | 363 | 3,124 | 5.2 | 42 | 365 | 3,008 | −4.3 | 55 |
| 650 | 351 | 3,590 | −7.7 | 57 | 365 | 3,709 | .5 | 47 | 360 | 3,750 | 1.8 | 46 | 364 | 3,722 | −.4 | 46 | 362 | 3,689 | −2.4 | ---- | 362 | 3,726 | 1.4 | 39 | 365 | 3,593 | −7.7 | 53 |
| 600 | 349 | 4,205 | −10.8 | 55 | 365 | 4,343 | −4.3 | 50 | 356 | 4,387 | −1.9 | ---- | 361 | 4,354 | −4.1 | ---- | 360 | 4,318 | −6.2 | ---- | 361 | 4,364 | −2.8 | ---- | 365 | 4,207 | −11.2 | 51 |
| 550 | 346 | 4,872 | −14.6 | ---- | 360 | 5,023 | −9.1 | 52 | 355 | 5,075 | −6.0 | ---- | 359 | 5,036 | −8.0 | ---- | 360 | 4,993 | −10.6 | ---- | 356 | 5,048 | −7.2 | ---- | 360 | 4,872 | −15.2 | 50 |
| 500 | 342 | 5,585 | −19.1 | ---- | 360 | 5,753 | −14.1 | 52 | 354 | 5,814 | −10.5 | ---- | 358 | 5,769 | −12.6 | ---- | 360 | 5,720 | −15.5 | ---- | 352 | 5,784 | −12.1 | ---- | 356 | 5,585 | −19.8 | 50 |
| 450 | 340 | 6,368 | −24.1 | ---- | 359 | 6,550 | −19.5 | ---- | 352 | 6,624 | −15.7 | ---- | 357 | 6,572 | −17.9 | ---- | 357 | 6,511 | −21.2 | ---- | 342 | 6,590 | −17.5 | ---- | 351 | 6,366 | −25.0 | ---- |
| 400 | 337 | 7,211 | −29.9 | ---- | 356 | 7,409 | −25.4 | ---- | 348 | 7,495 | −21.6 | ---- | 355 | 7,437 | −23.9 | ---- | 356 | 7,364 | −27.7 | ---- | 339 | 7,455 | −23.6 | ---- | 341 | 7,206 | −30.9 | ---- |
| 350 | 329 | 8,149 | −36.4 | ---- | 353 | 8,364 | −32.4 | ---- | 345 | 8,464 | −28.7 | ---- | 351 | 8,397 | −31.0 | ---- | 352 | 8,310 | −34.9 | ---- | 333 | 8,417 | −30.5 | ---- | 334 | 8,141 | −37.6 | ---- |
| 300 | 314 | 9,204 | −43.5 | ---- | 345 | 9,434 | −40.1 | ---- | 341 | 9,550 | −36.8 | ---- | 345 | 9,471 | −39.0 | ---- | 347 | 9,368 | −43.0 | ---- | 313 | 9,491 | −38.1 | ---- | 314 | 9,190 | −44.8 | ---- |
| 250 | 307 | 10,411 | −50.5 | ---- | 325 | 10,658 | −48.2 | ---- | 335 | 10,785 | −46.4 | ---- | 342 | 10,697 | −48.0 | ---- | 341 | 10,573 | −51.6 | ---- | 290 | 10,725 | −46.4 | ---- | 256 | 10,403 | −51.4 | ---- |
| 200 | 273 | 11,848 | −55.6 | ---- | 245 | 12,107 | −55.1 | ---- | 324 | 12,233 | −56.5 | ---- | 327 | 12,138 | −56.6 | ---- | 313 | 11,996 | −58.2 | ---- | 240 | 12,180 | −54.3 | ---- | ---- | ---- | ---- | ---- |
| 175 | 229 | 12,682 | −56.5 | ---- | 151 | 12,973 | −57.3 | ---- | 297 | 13,072 | −61.1 | ---- | 282 | 12,974 | −59.7 | ---- | 262 | 12,837 | −59.4 | ---- | 185 | 13,056 | −57.5 | ---- | ---- | ---- | ---- | ---- |
| 150 | 185 | 13,658 | −57.2 | ---- | ---- | ---- | ---- | ---- | 245 | 14,021 | −65.0 | ---- | 189 | 13,925 | −62.1 | ---- | 200 | 13,789 | −59.7 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| 125 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 141 | 15,127 | −68.1 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |

| Standard pressure surface (mb.) | Boise, Idaho (915.6 mb.) | | | | Brownsville, Tex. (1,013.7 mb.) | | | | Buffalo, N. Y. (989,5 mb.) | | | | Caribou, Maine (990.4 mb.) | | | | Charleston. S. C. (1,016.0 mb.) | | | | Ciudad Victoria, Mexico (974,3 mb.) | | | | Columbia, Mo. (988.0 mb.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Surface | 364 | 868 | 11.9 | 57 | 364 | 6 | 21.6 | 82 | 357 | 221 | 7.6 | 78 | 365 | 191 | 2.7 | 82 | 363 | 13 | 16.0 | 85 | 350 | 335 | 24.0 | 61 | 361 | 239 | 12.2 | 69 |
| 1,000 | 364 | 119 | (*) | ---- | 364 | 124 | 21.4 | 81 | 357 | 133 | (*) | ---- | 365 | 112 | (*) | ---- | 363 | 148 | 17.0 | 79 | 350 | 104 | (*) | ---- | 361 | 136 | (*) | ---- |
| 950 | 364 | 559 | (*) | ---- | 364 | 573 | 19.3 | 76 | 357 | 560 | 7.1 | 71 | 365 | 531 | 3.0 | 74 | 363 | 590 | 15.9 | 71 | 350 | 556 | 22.6 | 60 | 361 | 571 | 11.8 | 64 |
| 900 | 364 | 1,011 | 13.0 | 50 | 364 | 1,032 | 17.7 | 63 | 357 | 1,000 | 4.8 | 71 | 365 | 966 | 1.1 | 74 | 363 | 1,045 | 13.6 | 68 | 350 | 1,023 | 19.1 | 64 | 361 | 1,019 | 9.7 | 64 |
| 850 | 364 | 1,489 | 10.1 | 48 | 364 | 1,520 | 15.8 | 55 | 357 | 1,464 | 2.3 | 70 | 365 | 1,424 | −.8 | 72 | 363 | 1,525 | 11.1 | 65 | 350 | 1,512 | 15.8 | 68 | 361 | 1,492 | 7.5 | 62 |
| 800 | 364 | 1,990 | 6.6 | 51 | 364 | 2,034 | 13.6 | 48 | 357 | 1,952 | .2 | 67 | 365 | 1,907 | −2.8 | 69 | 363 | 2,029 | 8.6 | 59 | 350 | 2,025 | 13.0 | 69 | 361 | 1,990 | 5.5 | 56 |
| 750 | 364 | 2,518 | 3.0 | 53 | 364 | 2,580 | 11.2 | 42 | 357 | 2,475 | −2.1 | 61 | 365 | 2,421 | −5.0 | 65 | 363 | 2,566 | 6.0 | 52 | 350 | 2,571 | 10.4 | 64 | 360 | 2,521 | 3.1 | 52 |
| 700 | 364 | 3,071 | −.9 | 56 | 364 | 3,148 | 8.0 | 39 | 357 | 3,014 | −4.5 | 56 | 365 | 2,957 | −7.1 | 60 | 362 | 3,124 | 3.2 | 51 | 349 | 3,139 | 7.6 | 56 | 360 | 3,072 | .3 | 49 |
| 650 | 364 | 3,660 | −4.8 | 56 | 360 | 3,759 | 4.4 | 38 | 356 | 3,600 | −7.5 | 53 | 365 | 3,536 | −10.0 | 57 | 359 | 3,725 | .0 | ---- | 345 | 3,745 | 3.9 | 52 | 356 | 3,667 | −3.0 | 47 |
| 600 | 364 | 4,283 | −8.9 | 54 | 360 | 4,402 | .3 | ---- | 353 | 4,215 | −10.8 | 51 | 359 | 4,144 | −13.5 | 56 | 354 | 4,358 | −3.5 | ---- | 339 | 4,392 | −.1 | 49 | 354 | 4,293 | −6.7 | 45 |
| 550 | 364 | 4,951 | −13.3 | 53 | 356 | 5,096 | −4.0 | ---- | 348 | 4,883 | −14.6 | ---- | 355 | 4,803 | −17.2 | 54 | 346 | 5,043 | −7.6 | ---- | 336 | 5,083 | −4.3 | 46 | 350 | 4,968 | −11.0 | ---- |
| 500 | 361 | 5,671 | −18.2 | 51 | 354 | 5,840 | −8.7 | ---- | 343 | 5,597 | −19.1 | ---- | 352 | 5,511 | −21.4 | ---- | 343 | 5,778 | −12.1 | ---- | 331 | 5,829 | −8.8 | 45 | 348 | 5,693 | −15.6 | ---- |
| 450 | 361 | 6,455 | −23.7 | ---- | 352 | 6,657 | −14.0 | ---- | 338 | 6,382 | −24.2 | ---- | 350 | 6,286 | −26.3 | ---- | 335 | 6,585 | −17.4 | ---- | 324 | 6,645 | −14.0 | ---- | 341 | 6,488 | −20.9 | ---- |
| 400 | 360 | 7,300 | −30.0 | ---- | 346 | 7,533 | −20.0 | ---- | 332 | 7,222 | −30.1 | ---- | 342 | 7,124 | −31.9 | ---- | 330 | 7,451 | −23.3 | ---- | 316 | 7,525 | −19.8 | ---- | 338 | 7,341 | −26.9 | ---- |
| 350 | 359 | 8,237 | −37.1 | ---- | 344 | 8,510 | −26.9 | ---- | 324 | 8,160 | −36.7 | ---- | 333 | 8,056 | −38.2 | ---- | 327 | 8,414 | −30.2 | ---- | 311 | 8,502 | −27.0 | ---- | 335 | 8,291 | −33.8 | ---- |
| 300 | 351 | 9,287 | −44.8 | ---- | 337 | 9,602 | −35.0 | ---- | 312 | 9,212 | −43.6 | ---- | 320 | 9,101 | −44.7 | ---- | 321 | 9,493 | −38.2 | ---- | 307 | 9,594 | −35.3 | ---- | 324 | 9,358 | −41.3 | ---- |
| 250 | 333 | 10,486 | −52.7 | ---- | 329 | 10,849 | −44.3 | ---- | 288 | 10,420 | −50.1 | ---- | 298 | 10,307 | −50.5 | ---- | 311 | 10,726 | −47.4 | ---- | 286 | 10,842 | −45.0 | ---- | 288 | 10,580 | −49.1 | ---- |
| 200 | 287 | 11,911 | −57.8 | ---- | 298 | 12,311 | −54.3 | ---- | 245 | 11,860 | −54.9 | ---- | 229 | 11,742 | −53.6 | ---- | 289 | 12,169 | −56.6 | ---- | 225 | 12,298 | −55.7 | ---- | 225 | 12,019 | −55.6 | ---- |
| 175 | 211 | 12,743 | −57.5 | ---- | 234 | 13,157 | −58.9 | ---- | 196 | 12,702 | −55.7 | ---- | 168 | 12,648 | −54.0 | ---- | 229 | 13,012 | −60.6 | ---- | 129 | 13,149 | −61.3 | ---- | 158 | 12,872 | −57.2 | ---- |
| 150 | 121 | 13,741 | −57.5 | ---- | 145 | 14,118 | −63.3 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 146 | 13,956 | −63.1 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |

| Standard pressure surface (mb.) | Dodge City, Kans. (924.3 mb.) | | | | El Paso, Tex. (880.8 mb.) | | | | Ely, Nev. (808.7 mb.) | | | | Fort Worth, Tex. (991.1 mb.) | | | | Glasgow, Mont. (938.8 mb.) | | | | Grand Junction, Colo. (849.7 mb.) | | | | Great Falls, Mont. (886.1 mb.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Surface | 363 | 787 | 11.4 | 64 | 364 | 1,195 | 18.3 | 33 | 363 | 1,908 | 8.2 | 53 | 365 | 211 | 18.2 | 61 | 364 | 648 | 6.4 | 65 | 363 | 1,474 | 11.5 | 50 | 364 | 1,128 | 7.7 | 55 |
| 1,000 | 363 | 119 | (*) | ---- | 364 | 88 | (*) | ---- | 363 | 108 | (*) | ---- | 365 | 132 | (*) | ---- | 364 | 122 | (*) | ---- | 363 | 106 | (*) | ---- | 364 | 115 | (*) | ---- |
| 950 | 363 | 558 | (*) | ---- | 364 | 544 | (*) | ---- | 363 | 553 | (*) | ---- | 365 | 577 | 17.4 | 57 | 364 | 551 | (*) | ---- | 363 | 554 | (*) | ---- | 364 | 553 | (*) | ---- |
| 900 | 363 | 1,010 | 12.8 | 57 | 364 | 1,014 | (*) | ---- | 363 | 1,011 | (*) | ---- | 365 | 1,033 | 14.8 | 57 | 364 | 994 | 6.6 | 60 | 363 | 1,013 | (*) | ---- | 364 | 1,003 | (*) | ---- |
| 850 | 363 | 1,489 | 10.8 | 53 | 364 | 1,500 | 17.8 | 31 | 363 | 1,491 | (*) | ---- | 365 | 1,515 | 12.3 | 56 | 364 | 1,461 | 4.4 | 60 | 363 | 1,492 | (*) | ---- | 364 | 1,471 | 6.9 | 52 |
| 800 | 363 | 1,993 | 8.6 | 50 | 364 | 2,014 | 14.1 | 33 | 363 | 1,998 | 9.9 | 50 | 365 | 2,021 | 10.0 | 52 | 364 | 1,952 | 1.8 | 61 | 363 | 1,999 | 10.1 | 45 | 364 | 1,966 | 3.7 | 54 |
| 750 | 363 | 2,528 | 5.5 | 49 | 364 | 2,559 | 10.0 | 35 | 363 | 2,534 | 6.8 | 47 | 365 | 2,561 | 7.3 | 46 | 364 | 2,474 | −1.2 | 60 | 362 | 2,534 | 6.3 | 48 | 364 | 2,490 | .2 | 59 |
| 700 | 363 | 3,085 | 2.2 | 46 | 364 | 3,123 | 5.6 | 39 | 363 | 3,093 | 2.5 | 51 | 365 | 3,121 | 4.2 | 42 | 363 | 3,018 | −4.4 | 60 | 362 | 3,094 | 2.1 | 53 | 364 | 3,036 | −3.4 | 61 |
| 650 | 363 | 3,683 | −1.6 | 46 | 364 | 3,727 | −1.1 | 41 | 363 | 3,689 | −1.9 | 53 | 363 | 3,723 | .5 | 39 | 362 | 3,601 | −7.8 | 59 | 361 | 3,688 | −2.5 | 58 | 363 | 3,622 | −7.3 | 62 |
| 600 | 361 | 4,313 | −5.8 | 46 | 363 | 4,363 | −3.4 | 42 | 363 | 4,319 | −6.5 | 54 | 362 | 4,358 | −3.5 | ---- | 360 | 4,216 | −11.7 | 58 | 361 | 4,317 | −7.2 | 61 | 361 | 4,237 | −11.3 | 59 |
| 550 | 361 | 4,991 | −10.2 | 45 | 360 | 5,047 | −8.1 | ---- | 363 | 4,993 | −11.1 | 54 | 362 | 5,043 | −7.9 | ---- | 360 | 4,878 | −15.7 | 56 | 359 | 4,990 | −12.0 | 61 | 360 | 4,901 | −15.6 | 58 |
| 500 | 361 | 5,717 | −15.1 | ---- | 358 | 5,778 | −13.1 | ---- | 361 | 5,721 | −16.0 | 51 | 355 | 5,776 | −12.7 | ---- | 360 | 5,594 | −20.4 | 55 | 350 | 5,712 | −17.0 | ---- | 359 | 5,612 | −20.6 | 57 |
| 450 | 361 | 6,510 | −20.6 | ---- | 358 | 6,579 | −18.7 | ---- | 358 | 6,510 | −21.6 | ---- | 354 | 6,580 | −18.3 | ---- | 356 | 6,369 | −25.7 | 57 | 347 | 6,504 | −22.3 | ---- | 357 | 6,390 | −26.1 | ---- |
| 400 | 358 | 7,366 | −26.8 | ---- | 357 | 7,440 | −24.9 | ---- | 356 | 7,362 | −27.8 | ---- | 351 | 7,441 | −24.5 | ---- | 353 | 7,209 | −31.8 | ---- | 342 | 7,352 | −28.6 | ---- | 354 | 7,225 | −32.2 | ---- |
| 350 | 351 | 8,317 | −33.8 | ---- | 352 | 8,397 | −32.0 | ---- | 354 | 8,308 | −34.9 | ---- | 345 | 8,403 | −31.7 | ---- | 347 | 8,139 | −38.5 | ---- | 327 | 8,295 | −35.6 | ---- | 350 | 8,153 | −39.2 | ---- |
| 300 | 344 | 9,379 | −41.6 | ---- | 346 | 9,468 | −39.9 | ---- | 348 | 9,366 | −42.8 | ---- | 338 | 9,473 | −39.6 | ---- | 332 | 9,181 | −45.8 | ---- | 308 | 9,352 | −43.2 | ---- | 346 | 9,193 | −46.5 | ---- |
| 250 | 320 | 10,595 | −49.9 | ---- | 320 | 10,689 | −48.6 | ---- | 324 | 10,576 | −50.9 | ---- | 327 | 10,696 | −48.3 | ---- | 303 | 10,375 | −52.7 | ---- | 280 | 10,560 | −50.7 | ---- | 329 | 10,384 | −53.6 | ---- |
| 200 | 277 | 12,034 | −56.6 | ---- | 277 | 12,130 | −56.5 | ---- | 252 | 11,996 | −57.1 | ---- | 294 | 12,141 | −56.6 | ---- | 247 | 11,804 | −55.6 | ---- | 195 | 11,978 | −56.1 | ---- | 274 | 11,813 | −56.9 | ---- |
| 175 | 236 | 12,875 | −58.8 | ---- | 203 | 12,975 | −59.4 | ---- | 193 | 12,859 | −57.7 | ---- | 228 | 13,010 | −60.3 | ---- | 214 | 12,647 | −54.5 | ---- | 121 | 12,808 | −57.3 | ---- | 196 | 12,654 | −55.8 | ---- |
| 150 | 156 | 13,852 | −60.3 | ---- | 120 | 13,950 | −62.8 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 148 | 13,629 | −54.2 | ---- | ---- | ---- | ---- | ---- | 114 | 13,670 | −55.2 | ---- |

**See footnotes at end of table.**

TABLE 1A.—*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 the year 1947*—Continued

| Standard pressure surface (mb.) | Greensboro, N. C. (986.0 mb.) | | | | Hatteras, N. C. (1,017.1 mb.) | | | | Havana, Cuba [1] (....mb.) | | | | Honolulu, T. H. (1,015.0 mb.) | | | | Huntington, W. Va. (997.3 mb.) | | | | International Falls, Minn. (973.4 mb.) | | | | Joliet, Ill. (995.0 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 | 365 | 273 | 12.2 | 76 | 360 | 3 | 16.3 | 82 | | | | | 362 | 3 | 26.0 | 63 | 355 | 172 | 10.4 | 80 | 362 | 360 | 2.5 | 77 | 362 | 178 | 8.1 | 80 |
| 1,000 | 365 | 154 | (*) | | 360 | 148 | 16.1 | 77 | | | | | 362 | 134 | 24.1 | 65 | 355 | 149 | (*) | | 362 | 139 | (*) | | 362 | 135 | (*) | |
| 950 | 365 | 589 | 12.7 | 66 | 360 | 587 | 14.1 | 70 | | | | | 362 | 584 | 20.4 | 71 | 355 | 582 | 10.8 | 70 | 362 | 558 | 3.0 | 72 | 362 | 563 | 8.2 | 71 |
| 900 | 365 | 1,039 | 10.8 | 66 | 360 | 1,038 | 11.7 | 65 | | | | | 362 | 1,046 | 16.9 | 75 | 355 | 1,027 | 8.1 | 71 | 362 | 993 | .9 | 72 | 362 | 1,006 | 6.2 | 68 |
| 850 | 365 | 1,514 | 7.9 | 66 | 360 | 1,515 | 10.0 | 61 | | | | | 362 | 1,532 | 14.0 | 72 | 355 | 1,498 | 5.6 | 69 | 362 | 1,452 | −.6 | 70 | 362 | 1,474 | 4.3 | 63 |
| 800 | 365 | 2,012 | 5.5 | 63 | 360 | 2,016 | 7.0 | 56 | | | | | 362 | 2,043 | 12.6 | 52 | 355 | 1,992 | 3.3 | 66 | 362 | 1,935 | −2.2 | 65 | 362 | 1,966 | 2.3 | 60 |
| 750 | 365 | 2,542 | 2.8 | 61 | 360 | 2,549 | 4.5 | 51 | | | | | 362 | 2,588 | 10.7 | 38 | 355 | 2,518 | 1.0 | 59 | 362 | 2,450 | −4.7 | 61 | 362 | 2,490 | .0 | 56 |
| 700 | 365 | 3,094 | .1 | 55 | 359 | 3,104 | 1.8 | 49 | | | | | 361 | 3,155 | 8.0 | | 354 | 3,066 | −1.7 | 55 | 361 | 2,986 | −7.1 | 58 | 360 | 3,036 | −2.7 | 55 |
| 650 | 363 | 3,688 | −2.9 | 50 | 359 | 3,701 | −1.4 | | | | | | 360 | 3,766 | 4.9 | | 353 | 3,656 | −4.8 | 52 | 360 | 3,564 | −10.2 | 54 | 359 | 3,625 | −5.8 | 51 |
| 600 | 362 | 4,315 | −6.4 | 45 | 356 | 4,332 | −4.9 | | | | | | 356 | 4,411 | 1.8 | | 353 | 4,278 | −8.3 | 51 | 359 | 4,173 | −13.6 | 52 | 358 | 4,243 | −9.3 | 48 |
| 550 | 361 | 4,992 | −10.2 | | 349 | 5,014 | −8.8 | | | | | | 353 | 5,108 | −2.7 | | 350 | 4,951 | −12.0 | | 354 | 4,831 | −17.5 | 51 | 355 | 4,913 | −13.2 | 48 |
| 500 | 359 | 5,719 | −14.8 | | 349 | 5,744 | −13.3 | | | | | | 347 | 5,856 | −7.5 | | 347 | 5,673 | −16.5 | | 349 | 5,538 | −21.9 | 50 | 353 | 5,630 | −17.8 | |
| 450 | 357 | 6,516 | −20.0 | | 341 | 6,544 | −18.6 | | | | | | 345 | 6,676 | −13.3 | | 346 | 6,462 | −21.8 | | 343 | 6,311 | −27.0 | | 352 | 6,416 | −23.1 | |
| 400 | 356 | 7,373 | −26.0 | | 341 | 7,406 | −24.4 | | | | | | 332 | 7,553 | −19.7 | | 337 | 7,316 | −27.7 | | 336 | 7,146 | −32.8 | | 351 | 7,263 | −29.1 | |
| 350 | 356 | 8,325 | −33.0 | | 332 | 8,365 | −31.1 | | | | | | 325 | 8,531 | −26.8 | | 331 | 8,264 | −34.6 | | 326 | 8,074 | −39.4 | | 345 | 8,203 | −35.7 | |
| 300 | 349 | 9,394 | −40.7 | | 328 | 9,439 | −38.9 | | | | | | 315 | 9,625 | −34.8 | | 319 | 9,324 | −42.1 | | 306 | 9,110 | −46.2 | | 337 | 9,259 | −42.8 | |
| 250 | 338 | 10,612 | −49.3 | | 304 | 10,669 | −47.7 | | | | | | 304 | 10,876 | −43.6 | | 302 | 10,543 | −49.9 | | 277 | 10,310 | −52.0 | | 308 | 10,473 | −49.6 | |
| 200 | 299 | 12,047 | −57.4 | | 273 | 12,107 | −56.1 | | | | | | 275 | 12,350 | −53.0 | | 263 | 11,966 | −56.5 | | 189 | 11,778 | −53.5 | | 262 | 11,918 | −54.8 | |
| 175 | 259 | 12,882 | −59.9 | | 202 | 12,940 | −58.6 | | | | | | 236 | 13,201 | −57.8 | | 224 | 12,826 | −58.6 | | 129 | 12,650 | −53.4 | | 204 | 12,769 | −56.3 | |
| 150 | 194 | 13,831 | −61.9 | | 116 | 13,895 | −60.0 | | | | | | 169 | 14,162 | −62.7 | | 171 | 13,784 | −60.1 | | | | | | | | | |
| 125 | 109 | 14,755 | −63.4 | | | | | | | | | | | | | | | | | | | | | | | | | |

| Standard pressure surface (mb.) | Lake Charles, La. (1,016.1 mb.) | | | | Lander, Wyo. (828.2 mb.) | | | | Las Vegas, Nev. (945.7 mb.) | | | | Little Rock, Ark. (1,007.3 mb.) | | | | Mazatlan, Mexico (1,009.1 mb.) | | | | Medford, Oreg. (969.6 mb.) | | | | Merida, Mexico (1,010.3 mb.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Surface | 364 | 5 | 18.3 | 83 | 364 | 1,696 | 6.7 | 57 | 363 | 574 | 21.5 | 28 | 360 | 79 | 15.5 | 72 | 356 | 14 | 24.8 | 75 | 365 | 401 | 14.5 | 62 | 357 | 27 | 26.4 | 74 |
| 1,000 | 364 | 141 | 18.8 | 76 | 364 | 112 | (*) | | 363 | 83 | (*) | | 360 | 140 | 16.9 | 66 | 356 | 94 | 24.1 | 72 | 365 | 138 | (*) | | 357 | 118 | 25.6 | 74 |
| 950 | 364 | 586 | 16.8 | 70 | 364 | 552 | (*) | | 363 | 533 | (*) | | 360 | 580 | 15.3 | 62 | 356 | 546 | 22.4 | 57 | 365 | 578 | 14.5 | 58 | 357 | 570 | 22.8 | 73 |
| 900 | 364 | 1,044 | 15.0 | 65 | 364 | 1,007 | (*) | | 363 | 1,002 | 20.6 | 26 | 360 | 1,033 | 12.8 | 63 | 356 | 1,012 | 20.7 | 55 | 365 | 1,027 | 11.7 | 57 | 357 | 1,038 | 19.9 | 73 |
| 850 | 364 | 1,524 | 12.9 | 59 | 364 | 1,480 | (*) | | 363 | 1,491 | 16.6 | 28 | 360 | 1,512 | 10.5 | 60 | 356 | 1,504 | 17.9 | 51 | 365 | 1,503 | 8.3 | 61 | 357 | 1,530 | 16.8 | 72 |
| 800 | 364 | 2,032 | 10.6 | 55 | 364 | 1,981 | 7.6 | 49 | 363 | 2,003 | 12.4 | 32 | 360 | 2,015 | 8.4 | 54 | 356 | 2,020 | 14.8 | | 365 | 2,000 | 4.9 | 63 | 357 | 2,042 | 13.8 | 69 |
| 750 | 364 | 2,573 | 7.9 | 49 | 364 | 2,514 | 4.2 | 49 | 363 | 2,543 | 8.0 | 34 | 360 | 2,551 | 5.9 | 50 | 356 | 2,569 | 11.6 | | 365 | 2,528 | 1.7 | 61 | 357 | 2,591 | 10.9 | 64 |
| 700 | 364 | 3,134 | 5.1 | 44 | 364 | 3,068 | .3 | 52 | 363 | 3,104 | 3.6 | 38 | 360 | 3,108 | 3.0 | 47 | 354 | 3,137 | 7.9 | | 365 | 3,077 | −1.4 | 56 | 357 | 3,160 | 8.1 | 55 |
| 650 | 361 | 3,739 | 1.6 | 41 | 364 | 3,660 | −4.0 | 58 | 363 | 3,702 | −1.0 | 41 | 357 | 3,709 | −.2 | 46 | 349 | 3,746 | 3.9 | | 365 | 3,667 | −4.7 | 49 | 354 | 3,771 | 4.8 | 49 |
| 600 | 361 | 4,376 | −2.2 | | 364 | 4,284 | −8.4 | 58 | 363 | 4,334 | −5.2 | 42 | 355 | 4,342 | −4.0 | | 346 | 4,391 | −.3 | | 363 | 4,289 | −8.5 | 45 | 348 | 4,417 | 1.2 | |
| 550 | 361 | 5,063 | −6.5 | | 364 | 4,955 | −13.0 | 55 | 363 | 5,013 | −9.8 | | 345 | 5,025 | −8.1 | | 337 | 5,083 | −4.7 | | 362 | 4,959 | −12.7 | 46 | 342 | 5,111 | −2.8 | |
| 500 | 360 | 5,800 | −11.3 | | 362 | 5,674 | −18.1 | 56 | 363 | 5,741 | −14.8 | | 338 | 5,757 | −12.8 | | 333 | 5,826 | −9.3 | | 362 | 5,680 | −17.4 | | 340 | 5,861 | −7.4 | |
| 450 | 360 | 6,609 | −16.6 | | 357 | 6,458 | −23.8 | 55 | 362 | 6,535 | −20.4 | | 335 | 6,560 | −18.1 | | 330 | 6,643 | −14.4 | | 362 | 6,464 | −23.0 | | 335 | 6,681 | −12.6 | |
| 400 | 359 | 7,476 | −22.8 | | 355 | 7,303 | −30.1 | | 361 | 7,391 | −26.8 | | 331 | 7,422 | −24.3 | | 326 | 7,518 | −20.2 | | 361 | 7,313 | −29.2 | | 333 | 7,564 | −18.7 | |
| 350 | 357 | 8,441 | −29.8 | | 352 | 8,240 | −37.1 | | 359 | 8,340 | −34.2 | | 321 | 8,382 | −31.0 | | 306 | 8,493 | −27.6 | | 360 | 8,245 | −36.3 | | 327 | 8,544 | −26.2 | |
| 300 | 354 | 9,522 | −37.7 | | 345 | 9,284 | −44.8 | | 357 | 9,400 | −42.1 | | 303 | 9,459 | −38.8 | | 295 | 9,573 | −35.7 | | 358 | 9,304 | −44.2 | | 321 | 9,638 | −34.9 | |
| 250 | 347 | 10,755 | −46.8 | | 336 | 10,487 | −52.5 | | 347 | 10,614 | −50.4 | | 282 | 10,688 | −47.2 | | 266 | 10,829 | −45.0 | | 352 | 10,504 | −52.4 | | 303 | 10,884 | −44.9 | |
| 200 | 322 | 12,204 | −56.0 | | 284 | 11,907 | −57.2 | | 311 | 12,042 | −57.0 | | 215 | 12,130 | −55.2 | | | | | | 326 | 11,926 | −58.1 | | 201 | 12,343 | −56.0 | |
| 175 | 280 | 13,052 | −60.0 | | 221 | 12,749 | −57.2 | | 260 | 12,885 | −58.6 | | | | | | | | | | 297 | 12,763 | −58.4 | | | | | |
| 150 | 204 | 14,024 | −64.4 | | 150 | 13,720 | −57.6 | | 171 | 13,840 | −59.3 | | | | | | | | | | 210 | 13,739 | −57.9 | | | | | |
| 125 | 114 | 15,151 | −67.8 | | | | | | | | | | | | | | | | | | | | | | | | | |

| Standard pressure surface (mb.) | Miami, Fla. (1,016.6 mb.) | | | | Nantucket, Mass. (1,014.4 mb.) | | | | Nashville, Tenn. (996.2 mb.) | | | | New Orleans, La. (1,016.6 mb.) | | | | North Platte, Nebr. (917.1 mb.) | | | | Oakland, Calif. (1,015.8 mb.) | | | | Ogden, Utah (864.4 mb.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Surface | 363 | 4 | 22.7 | 82 | 350 | 14 | 8.5 | 84 | 363 | 180 | 14.1 | 72 | 359 | 2 | 19.1 | 81 | 364 | 849 | 8.5 | 73 | 364 | 6 | 14.3 | 74 | 365 | 1,355 | 10.2 | 59 |
| 1,000 | 363 | 147 | 22.5 | 80 | 350 | 133 | 8.9 | 67 | 363 | 147 | (*) | | 359 | 143 | 19.3 | 76 | 364 | 121 | (*) | | 364 | 138 | 13.8 | 72 | 365 | 118 | (*) | |
| 950 | 363 | 596 | 19.9 | 79 | 350 | 560 | 8.1 | 67 | 363 | 584 | 13.3 | 67 | 358 | 588 | 17.4 | 71 | 364 | 556 | (*) | | 364 | 576 | 13.6 | 58 | 365 | 562 | (*) | |
| 900 | 363 | 1,058 | 17.3 | 74 | 350 | 1,003 | 6.2 | 60 | 363 | 1,034 | 10.7 | 67 | 358 | 1,045 | 15.3 | 67 | 364 | 1,005 | 10.2 | 64 | 364 | 1,025 | 13.2 | 43 | 365 | 1,018 | (*) | |
| 850 | 363 | 1,545 | 14.7 | 69 | 350 | 1,470 | 4.2 | 54 | 363 | 1,509 | 8.5 | 64 | 354 | 1,529 | 13.2 | 60 | 364 | 1,479 | 8.5 | 58 | 364 | 1,504 | 11.3 | 38 | 365 | 1,494 | 11.1 | 51 |
| 800 | 363 | 2,056 | 12.2 | 62 | 349 | 1,962 | 2.1 | 53 | 363 | 2,009 | 6.2 | 58 | 353 | 2,037 | 10.9 | 54 | 364 | 1,979 | 6.1 | 57 | 364 | 2,008 | 8.8 | 34 | 365 | 1,998 | 8.2 | 49 |
| 750 | 363 | 2,599 | 9.6 | 58 | 349 | 2,485 | −.6 | 50 | 363 | 2,541 | 3.9 | 53 | 351 | 2,578 | 8.4 | 51 | 364 | 2,510 | 2.7 | 57 | 364 | 2,545 | 6.0 | | 365 | 2,531 | 4.4 | 52 |
| 700 | 362 | 3,165 | 6.7 | 55 | 349 | 3,030 | −2.7 | 47 | 363 | 3,094 | 1.1 | 49 | 350 | 3,141 | 5.4 | 48 | 364 | 3,061 | −.3 | 55 | 364 | 3,101 | 2.9 | | 365 | 3,085 | .4 | 55 |
| 650 | 361 | 3,772 | 3.4 | | 346 | 3,613 | −5.6 | 44 | 361 | 3,690 | −2.1 | 48 | 345 | 3,747 | 2.0 | 46 | 364 | 3,655 | −4.0 | 55 | 361 | 3,700 | −.6 | | 365 | 3,678 | −3.8 | 57 |
| 600 | 357 | 4,416 | −.2 | | 339 | 4,238 | −8.8 | | 354 | 4,320 | −5.7 | 46 | 340 | 4,385 | −1.7 | | 364 | 4,268 | −8.2 | 54 | 359 | 4,331 | −4.5 | | 364 | 4,302 | −8.2 | 58 |
| 550 | 352 | 5,108 | −4.1 | | 338 | 4,907 | −12.7 | | 350 | 5,000 | −9.6 | | 331 | 5,074 | −5.8 | | 360 | 4,950 | −12.2 | 52 | 357 | 5,013 | −8.8 | | 363 | 4,974 | −12.7 | 57 |
| 500 | 351 | 5,853 | −8.6 | | 335 | 5,630 | −17.1 | | 345 | 5,728 | −14.2 | | 321 | 5,813 | −10.4 | | 357 | 5,667 | −17.4 | 51 | 354 | 5,744 | −13.7 | | 363 | 5,693 | −17.7 | 56 |
| 450 | 350 | 6,670 | −13.7 | | 329 | 6,419 | −22.3 | | 342 | 6,527 | −19.4 | | 308 | 6,623 | −15.6 | | 355 | 6,457 | −22.9 | | 354 | 6,544 | −19.2 | | 363 | 6,481 | −23.2 | 56 |
| 400 | 342 | 7,459 | −19.7 | | 329 | 7,271 | −28.1 | | 335 | 7,386 | −25.3 | | 296 | 7,493 | −21.7 | | 353 | 7,301 | −29.1 | | 352 | 7,402 | −25.6 | | 362 | 7,326 | −29.4 | |
| 350 | 339 | 8,526 | −26.6 | | 312 | 8,219 | −34.5 | | 328 | 8,342 | −32.3 | | 283 | 8,463 | −28.7 | | 350 | 8,240 | −36.0 | | 346 | 8,356 | −32.8 | | 358 | 8,265 | −36.5 | |
| 300 | 328 | 9,620 | −34.8 | | 304 | 9,278 | −41.7 | | 321 | 9,412 | −39.9 | | 268 | 9,548 | −36.6 | | 348 | 9,296 | −43.7 | | 330 | 9,427 | −40.6 | | 357 | 9,315 | −44.2 | |
| 250 | 318 | 10,868 | −44.5 | | 275 | 10,495 | −49.2 | | 303 | 10,632 | −48.4 | | 249 | 10,785 | −45.8 | | 338 | 10,501 | −51.3 | | 301 | 10,650 | −49.2 | | 346 | 10,518 | −51.9 | |
| 200 | 285 | 12,327 | −55.0 | | 206 | 11,951 | −55.3 | | 267 | 12,071 | −55.9 | | 209 | 12,248 | −55.2 | | 311 | 11,927 | −56.7 | | 222 | 12,096 | −56.3 | | 299 | 11,944 | −57.0 | |
| 175 | 220 | 13,170 | −60.4 | | | | | | 230 | 12,910 | −58.4 | | 148 | 13,113 | −59.3 | | 275 | 12,765 | −57.7 | | 147 | 12,937 | −57.7 | | 245 | 12,790 | −57.4 | |
| 150 | 141 | 14,121 | −65.1 | | | | | | 179 | 13,886 | | | | | | | 207 | 13,733 | −58.7 | | 82 | 13,926 | −58.0 | | 153 | 13,787 | −58.5 | |

See footnotes at end of table.

TABLE 1A.—*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 the year 1947*—Continued

| Standard pressure surface (mb.) | Oklahoma City, Okla. (969.7 mb.) | | | | Omaha, Nebr. (979.4 mb.) | | | | Phoenix, Ariz. (971.7 mb.) | | | | Pittsburgh, Pa. (971.8 mb.) | | | | Portland, Maine (1,012.6 mb.) | | | | Rapid City, S. Dak. (902.2 mb.) | | | | St. Cloud, Minn.[3] (981.4 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 | 357 | 391 | 14.8 | 67 | 363 | 308 | 11.1 | 70 | 364 | 339 | 22.8 | 38 | 361 | 382 | 9.8 | 72 | 363 | 20 | 5.8 | 79 | 365 | 980 | 6.6 | 68 | 359 | 317 | 6.4 | 75 |
| 1,000 | 357 | 127 | (*) | ---- | 363 | 131 | (*) | ---- | 364 | 86 | (*) | ---- | 361 | 143 | (*) | ---- | 363 | 122 | (*) | ---- | 365 | 119 | (*) | ---- | 359 | 123 | (*) | ---- |
| 950 | 357 | 564 | 15.5 | 61 | 363 | 564 | 10.3 | 67 | 364 | 540 | 24.7 | 29 | 361 | 577 | 9.2 | 70 | 363 | 549 | 6.4 | 68 | 365 | 552 | (*) | ---- | 359 | 550 | 6.1 | 71 |
| 900 | 357 | 1,022 | 13.6 | 58 | 363 | 1,010 | 8.4 | 65 | 364 | 1,007 | 21.2 | 30 | 361 | 1,018 | 7.0 | 71 | 363 | 986 | 4.2 | 68 | 365 | 1,000 | (*) | ---- | 359 | 987 | 4.3 | 70 |
| 850 | 357 | 1,502 | 11.2 | 58 | 363 | 1,481 | 6.5 | 64 | 364 | 1,498 | 17.2 | 33 | 361 | 1,488 | 4.5 | 70 | 363 | 1,450 | 2.1 | 68 | 365 | 1,471 | 7.1 | 58 | 359 | 1,451 | 2.5 | 65 |
| 800 | 357 | 2,006 | 9.0 | 53 | 363 | 1,977 | 4.4 | 61 | 364 | 2,011 | 13.0 | 37 | 361 | 1,978 | 2.2 | 65 | 363 | 1,938 | .2 | 62 | 365 | 1,968 | 4.4 | 60 | 359 | 1,940 | .4 | 60 |
| 750 | 357 | 2,542 | 6.4 | 48 | 363 | 2,505 | 1.8 | 57 | 364 | 2,554 | 8.7 | 40 | 361 | 2,505 | −.2 | 59 | 363 | 2,459 | −2.0 | 58 | 365 | 2,494 | 1.5 | 60 | 358 | 2,462 | −1.6 | 55 |
| 700 | 357 | 3,102 | 3.2 | 45 | 363 | 3,054 | −1.1 | 53 | 364 | 3,116 | 4.7 | 40 | 359 | 3,048 | −2.8 | 54 | 363 | 3,000 | −4.5 | 54 | 364 | 3,043 | −1.7 | 58 | 358 | 3,003 | −4.3 | 52 |
| 650 | 354 | 3,701 | −.4 | 42 | 360 | 3,646 | −4.5 | 50 | 364 | 3,720 | .7 | ---- | 358 | 3,639 | −5.6 | 51 | 362 | 3,585 | −7.6 | 54 | 363 | 3,633 | −5.3 | 56 | 356 | 3,549 | −7.4 | 52 |
| 600 | 349 | 4,335 | −4.3 | ---- | 358 | 4,268 | −8.3 | 48 | 362 | 4,353 | −3.7 | ---- | 356 | 4,256 | −9.0 | 48 | 360 | 4,200 | −10.9 | ---- | 363 | 4,254 | −9.1 | 55 | 356 | 4,205 | −11.0 | 51 |
| 550 | 346 | 5,016 | −8.6 | ---- | 356 | 4,941 | −12.5 | 48 | 361 | 5,038 | −8.4 | ---- | 356 | 4,929 | −12.9 | ---- | 359 | 4,865 | −14.6 | ---- | 360 | 4,923 | −13.4 | 54 | 351 | 4,870 | −15.0 | ---- |
| 500 | 341 | 5,748 | −13.5 | ---- | 354 | 5,661 | −17.3 | ---- | 360 | 5,768 | −13.4 | ---- | 355 | 5,645 | −17.2 | ---- | 356 | 5,579 | −19.1 | ---- | 359 | 5,641 | −18.1 | 53 | 350 | 5,584 | −19.5 | ---- |
| 450 | 325 | 6,546 | −19.0 | ---- | 352 | 6,448 | −22.7 | ---- | 358 | 6,570 | −19.1 | ---- | 354 | 6,437 | −22.4 | ---- | 355 | 6,362 | −24.3 | ---- | 349 | 6,427 | −23.4 | 53 | 344 | 6,366 | −24.7 | ---- |
| 400 | 311 | 7,408 | −25.2 | ---- | 351 | 7,297 | −28.8 | ---- | 354 | 7,429 | −25.4 | ---- | 354 | 7,284 | −28.3 | ---- | 352 | 7,206 | −30.1 | ---- | 349 | 7,273 | −29.4 | 55 | 339 | 7,209 | −30.5 | ---- |
| 350 | 297 | 8,364 | −32.0 | ---- | 347 | 8,239 | −35.4 | ---- | 352 | 8,384 | −32.6 | ---- | 352 | 8,227 | −35.0 | ---- | 352 | 8,147 | −36.7 | ---- | 344 | 8,214 | −36.4 | ---- | 334 | 8,145 | −37.2 | ---- |
| 300 | 262 | 9,444 | −39.5 | ---- | 341 | 9,296 | −42.9 | ---- | 338 | 9,453 | −40.6 | ---- | 347 | 9,289 | −42.1 | ---- | 346 | 9,193 | −43.8 | ---- | 334 | 9,268 | −43.8 | ---- | 328 | 9,192 | −44.4 | ---- |
| 250 | 246 | 10,666 | −47.6 | ---- | 334 | 10,507 | −50.3 | ---- | 314 | 10,678 | −49.1 | ---- | 343 | 10,504 | −49.4 | ---- | 331 | 10,401 | −50.8 | ---- | 307 | 10,482 | −51.1 | ---- | 314 | 10,394 | −51.1 | ---- |
| 200 | 139 | 12,133 | −54.8 | ---- | 289 | 11,942 | −55.6 | ---- | 261 | 12,118 | −56.7 | ---- | 320 | 11,945 | −55.7 | ---- | 281 | 11,839 | −55.7 | ---- | 224 | 11,930 | −55.7 | ---- | 254 | 11,837 | −54.5 | ---- |
| 175 | 108 | 12,976 | −57.3 | ---- | 235 | 12,791 | −56.7 | ---- | 197 | 12,951 | −58.7 | ---- | 283 | 12,792 | −57.5 | ---- | 244 | 12,683 | −56.7 | ---- | 142 | 12,804 | −55.8 | ---- | 196 | 12,682 | −54.4 | ---- |
| 150 | ---- | ---- | ---- | ---- | 179 | 13,759 | −58.0 | ---- | ---- | ---- | ---- | ---- | 215 | 13,762 | −58.5 | ---- | 206 | 13,652 | −57.3 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |

| Standard pressure surface (mb.) | San Antonio, Tex. (987.2 mb.) | | | | San Juan, P. R. (1,014.7 mb.) | | | | Santa Maria, Calif. (1,007.6 mb.) | | | | Sault Ste. Marie, Mich. (988.1 mb.) | | | | Spokane, Wash.[3] (944.1 mb.) | | | | Swan Island, W. I. (1,012.7 mb.) | | | | Tacubaya, Mexico (774.0 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 | 357 | 240 | 19.0 | 68 | 359 | 15 | 25.2 | 81 | 362 | 71 | 13.6 | 76 | 364 | 221 | 4.0 | 80 | 357 | 721 | 11.2 | 61 | 340 | 10 | 26.2 | 81 | 341 | 2,306 | 15.8 | 60 |
| 1,000 | 357 | 128 | (*) | ---- | 359 | 144 | 24.2 | 81 | 362 | 135 | 13.5 | 74 | 364 | 122 | (*) | ---- | 365 | 123 | (*) | ---- | 340 | 122 | 25.5 | 82 | 341 | 64 | (*) | ---- |
| 950 | 357 | 573 | 18.8 | 65 | 359 | 595 | 20.9 | 83 | 362 | 574 | 14.0 | 59 | 364 | 547 | 4.0 | 73 | 365 | 558 | (*) | ---- | 340 | 577 | 22.1 | 83 | 341 | 526 | (*) | ---- |
| 900 | 357 | 1,034 | 16.5 | 66 | 359 | 1,059 | 17.8 | 82 | 362 | 1,023 | 14.3 | 43 | 364 | 980 | 2.2 | 71 | 365 | 1,006 | 9.5 | 58 | 340 | 1,041 | 19.2 | 78 | 341 | 1,003 | (*) | ---- |
| 850 | 357 | 1,519 | 14.2 | 64 | 359 | 1,546 | 14.9 | 78 | 362 | 1,504 | 12.6 | 39 | 364 | 1,440 | .3 | 69 | 365 | 1,477 | 6.2 | 59 | 340 | 1,532 | 16.5 | 72 | 341 | 1,497 | (*) | ---- |
| 800 | 357 | 2,029 | 11.9 | 57 | 358 | 2,058 | 12.5 | 66 | 362 | 2,010 | 10.0 | 35 | 364 | 1,925 | −1.7 | 65 | 365 | 1,972 | 2.9 | 62 | 340 | 2,046 | 13.8 | 64 | 341 | 2,025 | (*) | ---- |
| 750 | 357 | 2,570 | 9.4 | 48 | 357 | 2,602 | 10.3 | 52 | 362 | 2,550 | 7.1 | 31 | 364 | 2,443 | −3.9 | 62 | 365 | 2,497 | −.5 | 65 | 340 | 2,594 | 10.9 | 58 | 341 | 2,576 | 13.9 | 61 |
| 700 | 357 | 3,137 | 6.4 | 41 | 357 | 3,170 | 7.7 | ---- | 361 | 3,107 | 4.0 | ---- | 364 | 2,979 | −6.4 | 58 | 365 | 3,040 | −3.9 | 65 | 339 | 3,161 | 8.0 | 49 | 341 | 3,152 | 9.5 | 66 |
| 650 | 350 | 3,742 | 2.6 | 39 | 353 | 3,779 | 4.6 | ---- | 360 | 3,709 | .6 | ---- | 362 | 3,562 | −9.2 | 56 | 364 | 3,625 | −7.4 | 60 | 337 | 3,773 | 4.7 | ---- | 341 | 3,765 | 4.9 | 73 |
| 600 | 348 | 4,383 | −1.3 | ---- | 349 | 4,425 | 1.0 | ---- | 357 | 4,343 | −3.2 | ---- | 360 | 4,171 | −12.7 | 54 | 364 | 4,240 | −11.2 | 58 | 334 | 4,418 | 1.0 | ---- | 341 | 4,412 | .4 | 77 |
| 550 | 339 | 5,072 | −5.6 | ---- | 348 | 5,118 | −3.0 | ---- | 353 | 5,028 | −7.5 | ---- | 355 | 4,834 | −16.4 | 52 | 364 | 4,904 | −15.3 | 56 | 332 | 5,114 | −2.9 | ---- | 337 | 5,107 | −3.8 | 69 |
| 500 | 331 | 5,812 | −10.4 | ---- | 344 | 5,867 | −7.6 | ---- | 350 | 5,761 | −12.5 | ---- | 349 | 5,542 | −20.7 | 53 | 359 | 5,616 | −20.0 | 56 | 331 | 5,862 | −7.3 | ---- | 334 | 5,853 | −8.2 | 62 |
| 450 | 327 | 6,621 | −15.8 | ---- | 340 | 6,689 | −12.9 | ---- | 347 | 6,564 | −18.3 | ---- | 346 | 6,323 | −25.8 | ---- | 356 | 6,396 | −25.3 | ---- | 327 | 6,684 | −12.3 | ---- | 330 | 6,673 | −13.0 | ---- |
| 400 | 318 | 7,492 | −21.8 | ---- | 339 | 7,567 | −19.0 | ---- | 342 | 7,425 | −24.7 | ---- | 339 | 7,157 | −31.5 | ---- | 352 | 7,236 | −31.3 | ---- | 322 | 7,566 | −18.2 | ---- | 328 | 7,554 | −18.8 | ---- |
| 350 | 307 | 8,461 | −28.8 | ---- | 338 | 8,547 | −26.3 | ---- | 332 | 8,382 | −32.0 | ---- | 321 | 8,088 | −38.1 | ---- | 347 | 8,169 | −38.2 | ---- | 321 | 8,549 | −25.3 | ---- | 323 | 8,535 | −26.1 | ---- |
| 300 | 288 | 9,546 | −36.5 | ---- | 333 | 9,642 | −34.7 | ---- | 312 | 9,452 | −39.9 | ---- | 269 | 9,137 | −44.6 | ---- | 336 | 9,229 | −45.6 | ---- | 318 | 9,649 | −33.8 | ---- | 313 | 9,630 | −34.1 | ---- |
| 250 | 275 | 10,786 | −45.2 | ---- | 322 | 10,890 | −44.2 | ---- | 242 | 10,679 | −48.2 | ---- | ---- | ---- | ---- | ---- | 324 | 10,406 | −52.8 | ---- | 310 | 10,900 | −43.8 | ---- | 244 | 10,883 | −44.4 | ---- |
| 200 | 243 | 12,246 | −54.3 | ---- | 306 | 12,350 | −55.0 | ---- | 148 | 12,162 | −55.5 | ---- | ---- | ---- | ---- | ---- | 281 | 11,827 | −56.5 | ---- | 300 | 12,362 | −55.3 | ---- | ---- | ---- | ---- | ---- |
| 175 | 201 | 13,095 | −58.6 | ---- | 278 | 13,193 | −60.8 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 237 | 12,668 | −55.8 | ---- | 279 | 13,201 | −61.6 | ---- | ---- | ---- | ---- | ---- |

| Standard pressure surface (mb.) | Tampa, Fla. (1,016.5 mb.) | | | | Tatoosh Island, Wash. (1,013.2 mb.) | | | | Toledo, Ohio (993.3 mb.) | | | | Washington, D. C. (1,015.0 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 | 364 | 9 | 20.5 | 84 | 365 | 31 | 9.8 | 86 | 365 | 191 | 8.4 | 80 | 363 | 25 | 12.6 | 70 |
| 1,000 | 364 | 150 | 20.6 | 81 | 365 | 140 | 8.6 | 76 | 365 | 134 | (*) | ---- | 363 | 149 | 12.1 | 61 |
| 950 | 364 | 596 | 18.7 | 76 | 365 | 567 | 8.1 | 76 | 365 | 562 | 7.9 | 72 | 363 | 581 | 10.6 | 65 |
| 900 | 364 | 1,057 | 16.2 | 73 | 365 | 1,010 | 6.2 | 69 | 365 | 1,005 | 5.7 | 72 | 363 | 1,028 | 8.2 | 66 |
| 850 | 364 | 1,542 | 13.8 | 68 | 365 | 1,477 | 4.0 | 65 | 365 | 1,471 | 3.7 | 68 | 363 | 1,499 | 5.9 | 64 |
| 800 | 364 | 2,051 | 11.3 | 61 | 365 | 1,968 | 1.6 | 61 | 365 | 1,962 | 1.7 | 62 | 363 | 1,994 | 3.5 | 62 |
| 750 | 364 | 2,592 | 8.6 | 57 | 365 | 2,490 | −1.0 | 55 | 364 | 2,486 | −.5 | 57 | 363 | 2,519 | 1.0 | 56 |
| 700 | 363 | 3,156 | 5.6 | 52 | 364 | 3,033 | −3.9 | 52 | 363 | 3,030 | −3.2 | 55 | 363 | 3,068 | −1.6 | 54 |
| 650 | 362 | 3,761 | 2.3 | 49 | 363 | 3,618 | −7.1 | 49 | 363 | 3,619 | −6.2 | 52 | 361 | 3,658 | −4.6 | 50 |
| 600 | 355 | 4,402 | −1.3 | ---- | 361 | 4,235 | −10.7 | 48 | 362 | 4,236 | −9.6 | 51 | 361 | 4,282 | −8.0 | 48 |
| 550 | 354 | 5,091 | −5.2 | ---- | 358 | 4,902 | −14.7 | 49 | 359 | 4,904 | −13.7 | ---- | 358 | 4,953 | −11.8 | 44 |
| 500 | 354 | 5,833 | −9.6 | ---- | 357 | 5,616 | −19.3 | 51 | 356 | 5,620 | −18.1 | ---- | 356 | 5,677 | −16.4 | 45 |
| 450 | 350 | 6,646 | −14.7 | ---- | 352 | 6,397 | −24.5 | 51 | 353 | 6,408 | −23.4 | ---- | 356 | 6,466 | −21.7 | ---- |
| 400 | 349 | 7,523 | −20.6 | ---- | 349 | 7,240 | −30.3 | 53 | 353 | 7,252 | −29.4 | ---- | 356 | 7,320 | −27.7 | ---- |
| 350 | 343 | 8,496 | −27.5 | ---- | 339 | 8,175 | −37.0 | ---- | 350 | 8,109 | −36.1 | ---- | 355 | 8,366 | −34.5 | ---- |
| 300 | 342 | 9,586 | −35.7 | ---- | 325 | 9,228 | −44.2 | ---- | 343 | 9,245 | −43.3 | ---- | 354 | 9,326 | −42.0 | ---- |
| 250 | 339 | 10,827 | −45.3 | ---- | 292 | 10,435 | −51.1 | ---- | 329 | 10,462 | −50.3 | ---- | 348 | 10,537 | −50.0 | ---- |
| 200 | 327 | 12,281 | −55.9 | ---- | 224 | 11,861 | −54.8 | ---- | 275 | 11,894 | −55.7 | ---- | 318 | 11,971 | −56.5 | ---- |
| 175 | 300 | 13,119 | −60.9 | ---- | 167 | 12,709 | −53.1 | ---- | 224 | 12,737 | −57.0 | ---- | 273 | 12,806 | −58.1 | ---- |
| 150 | 232 | 14,076 | −65.3 | ---- | 116 | 13,710 | −52.2 | ---- | 153 | 13,698 | −57.7 | ---- | 220 | 13,767 | −59.4 | ---- |
| 125 | 118 | 15,160 | −68.8 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 141 | 14,898 | 60.9 | ---- |

[1] Insufficient observations.
[2] Station elevation changed from 598 m. to 721 m., Dec. 8, 1947.
[3] Station moved from St. Paul, Minn., to St. Cloud, Minn., May 24, 1947.

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

| Altitude (meters) m.s.l. | Abilene, Tex. (534 m.) | | | Alburquerque, N. Mex. (1,627 m.) | | | Atlanta, Ga. (299 m.) | | | Billings, Mont. (1,095 m.) | | | Bismarck, N. Dak. (512 m.) | | | Boise, Idaho (868 m.) | | | Brownsville, Tex. (7 m.) | | | Buffalo, N. Y. (220 m.) | | | Burlington, Vt. (100 m.) | | | Charleston, S. C. (16 m.) | | | Cincinnati, Ohio (276 m.) | | | Denver, Colo. (1,618 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 | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity |
| Surface | 350 | 170 | 2.1 | 364 | 249 | 2.4 | 323 | 281 | 1.7 | 356 | 279 | 1.6 | 354 | 290 | 1.8 | 361 | 321 | 2.6 | 350 | 118 | 4.0 | 332 | 245 | 3.4 | 324 | 228 | 1.2 | 337 | 200 | 0.9 | 342 | 246 | 1.7 | 353 | 18 | 0.7 | 364 | 236 | 2.0 |
| 500 | --- | --- | --- | --- | --- | --- | 323 | 285 | 1.9 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 349 | 126 | 5.1 | 332 | 247 | 4.8 | 324 | 231 | 3.3 | 337 | 202 | 1.9 | 342 | 242 | 2.5 | --- | --- | --- | --- | --- | --- |
| 1,000 | 350 | 181 | 3.1 | --- | --- | --- | 314 | 278 | 2.6 | --- | --- | --- | 348 | 295 | 3.0 | 361 | 319 | 2.7 | 318 | 144 | 4.1 | 282 | 248 | 6.0 | 310 | 252 | 4.6 | 317 | 242 | 2.5 | 307 | 244 | 3.6 | --- | --- | --- | --- | --- | --- |
| 1,500 | 335 | 199 | 3.4 | --- | --- | --- | 304 | 278 | 3.4 | 356 | 274 | 3.8 | 314 | 288 | 4.3 | 359 | 307 | 2.9 | 294 | 164 | 2.4 | 226 | 246 | 6.8 | 264 | 272 | 6.6 | 307 | 265 | 4.0 | 286 | 255 | 4.5 | --- | --- | --- | 364 | 235 | 2.5 |
| 2,000 | 322 | 220 | 3.9 | 364 | 247 | 3.1 | 289 | 283 | 5.1 | 342 | 281 | 5.0 | 258 | 281 | 6.1 | 353 | 288 | 3.3 | 266 | 195 | 1.8 | --- | --- | --- | 217 | 276 | 8.3 | 287 | 275 | 5.5 | 243 | 269 | 5.7 | 352 | 2 | .8 | 364 | 241 | 2.7 |
| 2,500 | 307 | 235 | 4.7 | 363 | 254 | 3.4 | 261 | 287 | 6.7 | 331 | 281 | 6.2 | 235 | 281 | 8.1 | 338 | 281 | 4.4 | 240 | 216 | 1.9 | --- | --- | --- | 172 | 281 | 9.8 | 265 | 275 | 7.3 | 202 | 274 | 6.9 | 342 | 293 | 1.1 | 359 | 248 | 3.2 |
| 3,000 | 285 | 249 | 5.5 | 361 | 261 | 4.2 | 236 | 288 | 7.9 | 301 | 279 | 7.6 | 212 | 280 | 9.6 | 320 | 272 | 5.2 | 239 | 236 | 1.9 | --- | --- | --- | --- | --- | --- | 259 | 277 | 8.3 | 149 | 279 | 6.7 | 332 | 282 | 2.8 | 350 | 256 | 4.3 |
| 4,000 | 266 | 264 | 7.1 | 337 | 269 | 5.8 | 196 | 284 | 10.6 | 260 | 281 | 10.4 | 179 | 285 | 12.5 | 272 | 267 | 6.5 | 226 | 256 | 2.4 | --- | --- | --- | --- | --- | --- | 222 | 274 | 9.7 | --- | --- | --- | 301 | 284 | 6.7 | 332 | 261 | 6.3 |
| 5,000 | 249 | 272 | 8.6 | 310 | 274 | 8.5 | --- | --- | --- | 227 | 283 | 12.3 | --- | --- | --- | 230 | 268 | 7.4 | 196 | 259 | 4.3 | --- | --- | --- | --- | --- | --- | 162 | 272 | 10.3 | --- | --- | --- | 271 | 285 | 9.6 | 321 | 262 | 8.0 |
| 6,000 | 224 | 270 | 9.9 | 295 | 273 | 10.4 | --- | --- | --- | 203 | 285 | 12.0 | --- | --- | --- | 204 | 269 | 10.1 | 167 | 266 | 6.4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 241 | 283 | 11.2 | 301 | 264 | 9.2 |
| 8,000 | --- | --- | --- | 235 | 271 | 11.6 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 168 | 283 | 14.3 | 251 | 262 | 10.4 |

| 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.) | | | 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 | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity |
| Surface | 360 | 238 | 1.7 | 362 | 284 | 1.9 | 330 | 247 | 1.1 | 331 | 271 | 2.1 | 339 | 88 | 1.0 | 341 | 248 | 1.8 | 365 | 174 | 0.9 | 349 | 196 | 0.6 | 353 | 308 | 1.5 | 358 | 123 | 2.4 | 325 | 232 | 0.1 | 347 | 266 | 1.4 | 341 | 255 | 1.8 |
| 500 | --- | --- | --- | --- | --- | --- | 330 | 243 | 1.7 | --- | --- | --- | 337 | 174 | .6 | 341 | 255 | 2.5 | --- | --- | --- | 348 | 226 | 1.2 | 353 | 308 | 1.5 | 358 | 119 | 2.9 | 324 | 226 | .8 | 347 | 255 | 2.2 | 340 | 258 | 3.8 |
| 1,000 | --- | --- | --- | --- | --- | --- | 325 | 249 | 2.8 | 331 | 267 | 3.6 | 316 | 243 | 2.2 | 303 | 255 | 3.8 | 365 | 181 | 1.5 | 327 | 244 | 2.1 | 351 | 289 | 1.3 | 352 | 132 | 2.0 | 289 | 298 | 1.3 | 332 | 251 | 3.1 | 322 | 274 | 5.6 |
| 1,500 | --- | --- | --- | 362 | 283 | 2.1 | 317 | 264 | 4.4 | 327 | 273 | 5.4 | 296 | 262 | 3.6 | 267 | 263 | 4.9 | 365 | 201 | 1.6 | 313 | 261 | 3.1 | 337 | 243 | 1.8 | 342 | 183 | .9 | 275 | 303 | 2.8 | 304 | 261 | 3.9 | 302 | 285 | 6.5 |
| 2,000 | 360 | 237 | 1.8 | 362 | 277 | 2.3 | 301 | 276 | 6.4 | 305 | 276 | 6.4 | 274 | 270 | 5.2 | 230 | 273 | 6.3 | 364 | 222 | 2.0 | 295 | 273 | 3.7 | 314 | 231 | 2.4 | 324 | 245 | 1.5 | 245 | 299 | 4.3 | 278 | 269 | 5.4 | 263 | 283 | 7.9 |
| 2,500 | 360 | 238 | 2.4 | 362 | 264 | 2.6 | 271 | 283 | 8.2 | 277 | 276 | 7.7 | 261 | 272 | 6.0 | 186 | 279 | 6.9 | 361 | 244 | 2.6 | 269 | 280 | 5.9 | 280 | 235 | 2.7 | 305 | 254 | 2.2 | 215 | 292 | 5.5 | 249 | 277 | 6.7 | 232 | 285 | 8.7 |
| 3,000 | 352 | 247 | 2.7 | 350 | 259 | 3.5 | 246 | 283 | 10.2 | 241 | 279 | 8.8 | 241 | 274 | 6.2 | --- | --- | --- | 352 | 259 | 3.2 | 257 | 282 | 7.2 | 248 | 244 | 2.7 | 296 | 248 | 3.0 | 201 | 287 | 6.7 | 225 | 281 | 8.3 | 185 | 286 | 7.9 |
| 4,000 | 324 | 265 | 4.1 | 313 | 265 | 5.0 | 206 | 279 | 12.5 | 171 | 277 | 10.1 | 206 | 272 | 8.3 | --- | --- | --- | 334 | 273 | 5.0 | 217 | 284 | 9.3 | 209 | 276 | 4.1 | 238 | 257 | 5.4 | 146 | 283 | 10.4 | 170 | 283 | 10.0 | --- | --- | --- |
| 5,000 | 260 | 276 | 6.0 | 279 | 275 | 6.4 | 148 | 278 | 14.2 | --- | --- | --- | 161 | 298 | 9.2 | --- | --- | --- | 300 | 278 | 6.9 | 181 | 287 | 11.1 | 164 | 260 | 5.4 | 194 | 255 | 7.3 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6,000 | 230 | 282 | 7.7 | 223 | 286 | 7.8 | --- | --- | --- | --- | --- | --- | 131 | 275 | 9.8 | --- | --- | --- | 278 | 285 | 8.7 | --- | --- | --- | --- | --- | --- | 159 | 259 | 9.7 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8,000 | 158 | 284 | 9.8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 213 | 288 | 11.4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

| 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. Cloud, Minn.[1] (318 m.) | | | San Antonio, Tex. (240 m.) | | | San Diego, Calif. (13 m.) | | | Sault Ste. Marie, Mich. (225 m.) | | | Seattle, Wash. (116 m.) | | | Spokane, Wash.[2] (725 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 | 361 | 267 | 4.0 | 342 | 188 | 2.3 | 347 | 237 | 0.8 | 365 | 244 | 0.7 | 348 | 340 | 2.4 | 347 | 248 | 1.3 | 331 | 260 | 1.6 | 352 | 130 | 1.6 | 363 | 267 | 3.3 | 306 | 284 | 2.2 | 335 | 240 | 1.8 | 348 | 224 | 1.5 | 343 | 243 | 1.7 |
| 500 | 359 | 289 | 3.1 | 342 | 189 | 2.1 | 347 | 219 | 1.4 | 365 | 245 | 1.3 | --- | --- | --- | 347 | 251 | 2.3 | 331 | 266 | 2.0 | 352 | 133 | 2.1 | 361 | 283 | 3.3 | 306 | 278 | 2.7 | 334 | 225 | 2.4 | --- | --- | --- | 342 | 250 | 3.2 |
| 1,000 | 342 | 309 | 2.4 | 336 | 201 | 3.1 | 330 | 235 | 2.8 | 365 | 238 | 1.7 | 348 | 339 | 2.4 | 327 | 250 | 3.7 | 312 | 262 | 3.1 | 349 | 147 | 2.3 | 329 | 296 | 1.9 | 281 | 267 | 3.7 | 311 | 217 | 3.2 | 348 | 223 | 3.0 | 333 | 260 | 4.4 |
| 1,500 | 329 | 300 | 2.1 | 317 | 225 | 3.9 | 300 | 249 | 5.0 | 364 | 231 | 1.9 | 348 | 316 | 3.2 | 299 | 260 | 5.2 | 278 | 264 | 4.4 | 322 | 165 | 2.1 | 312 | 319 | 1.5 | 237 | 266 | 4.8 | 278 | 222 | 3.3 | 330 | 232 | 4.4 | 323 | 268 | 5.6 |
| 2,000 | 315 | 301 | 2.0 | 299 | 246 | 5.3 | 275 | 261 | 6.9 | 361 | 238 | 2.1 | 326 | 296 | 4.7 | 277 | 273 | 6.9 | 251 | 270 | 6.7 | 313 | 212 | 2.5 | 304 | 321 | 1.9 | --- | --- | --- | 240 | 231 | 3.5 | 299 | 246 | 4.9 | 301 | 275 | 7.6 |
| 2,500 | 306 | 291 | 2.5 | 286 | 256 | 6.2 | 256 | 269 | 8.7 | 354 | 247 | 2.2 | 304 | 289 | 6.4 | 262 | 281 | 8.2 | 218 | 276 | 8.2 | 295 | 233 | 3.2 | 296 | 310 | 2.3 | --- | --- | --- | 201 | 237 | 3.6 | 266 | 254 | 5.3 | 276 | 278 | 9.6 |
| 3,000 | 301 | 291 | 3.0 | 270 | 265 | 7.3 | 234 | 273 | 10.0 | 349 | 258 | 2.8 | 286 | 288 | 8.2 | 243 | 283 | 9.6 | --- | --- | --- | 282 | 250 | 4.1 | 288 | 296 | 2.8 | --- | --- | --- | 178 | 249 | 3.7 | 230 | 259 | 6.0 | 261 | 279 | 11.0 |
| 4,000 | 289 | 298 | 4.2 | 237 | 276 | 9.3 | 213 | 278 | 12.3 | 339 | 269 | 3.9 | 230 | 286 | 10.9 | 208 | 288 | 11.3 | --- | --- | --- | 253 | 260 | 6.0 | 275 | 281 | 3.9 | --- | --- | --- | --- | --- | --- | 182 | 267 | 8.3 | 215 | 277 | 13.5 |
| 5,000 | 248 | 290 | 5.4 | 207 | 282 | 11.2 | --- | --- | --- | 296 | 268 | 5.3 | 205 | 284 | 12.1 | --- | --- | --- | --- | --- | --- | 222 | 268 | 8.1 | 255 | 276 | 5.1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 185 | 274 | 15.3 |
| 6,000 | 239 | 288 | 6.9 | 165 | 284 | 12.0 | --- | --- | --- | 266 | 264 | 6.4 | 158 | 282 | 11.3 | --- | --- | --- | --- | --- | --- | 192 | 267 | 10.0 | 237 | 279 | 6.7 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8,000 | 170 | 271 | 7.7 | --- | --- | --- | --- | --- | --- | 197 | 273 | 8.4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 166 | 287 | 7.4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

[1] Station moved from St. Paul, Minn., to St. Cloud, Minn., May 24, 1947.

[2] Station elevation changed from 603 m. to 725 m., Dec. 8, 1947.

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

| Section | Surface to 2,500 meters (m. s. l.) | | | | | 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 | Jan. 5 | Binghamton, N. Y. | 71.0 | w. | 4,958 | Feb. 2 | Nantucket, Mass. | 104.0 | nw. | 18,345 | Sept. 28 | Harrisburg, Pa. |
| East-Central [2] | 50.7 | ssw. | 2,500 | Apr. 5 | Louisville, Ky. | 61.8 | wsw. | 3,206 | Mar. 15 | Richmond, Va. | 96.0 | wsw. | 9,772 | Dec. 17 | Huntington, W. Va. |
| Southeast [3] | 53.2 | w. | 1,053 | Mar. 25 | Spartanburg, S. C. | 62.0 | w. | 4,691 | Mar. 25 | Jacksonville, Fla. | 100.0 | w. | 9,360 | Dec. 26 | Charleston, S. C. |
| North-Central [4] | 54.6 | ssw. | 1,572 | June 4 | Marquette, Mich. | 66.4 | w. | 3,801 | Dec. 18 | Sault Ste. Marie, Mich. | 83.4 | sw. | 7,828 | Jan. 14 | Green Bay, Wis. |
| Central [5] | 51.4 | wsw. | 1,534 | Apr. 6 | Springfield, Ill. | 77.0 | sw. | 4,998 | Oct. 8 | Lander, Wyo. | 90.0 | wnw. | 8,578 | Nov. 9 | Joliet, Ill. |
| South-Central [6] | 55.4 | sw. | 2,500 | Apr. 5 | Memphis, Tenn. | 65.0 | wnw. | 4,920 | Nov. 14 | San Antonio, Tex. | 96.4 | sw. | 10,530 | Jan. 18 | Little Rock, Ark. |
| Northwest [7] | 48.4 | nw. | 1,884 | Apr. 4 | Burns, Oreg. | 64.8 | w. | 4,936 | Oct. 2 | Ellensburg, Wash. | 86.0 | n. | 17,669 | Feb. 10 | Great Falls, Mont. |
| West-Central [8] | 49.4 | w. | 2,489 | Jan. 24 | Cheyenne, Wyo. | 76.0 | nw. | 4,820 | Jan. 13 | Oakland, Calif. | 97.0 | n. | 10,819 | Dec. 29 | Red Bluff, Calif. |
| Southwest [9] | 46.6 | sw. | 2,484 | Jan. 28 | Winslow, Ariz. | 66.0 | ssw. | 4,707 | Dec. 20 | Sandberg, Calif. | 98.0 | wsw. | 11,618 | Nov. 21 | 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.