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## METEOROLOGICAL AND CLIMATOLOGICAL DATA FOR JULY 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 July 1947*

STATIONS AND MEAN SURFACE PRESSURES

| Standard pressure surface (mb.) | Albany, N. Y. (1,004.1 mb.) | | | | Albuquerque, N. Mex. (839.3 mb.) | | | | Apalachicola, Fla. (1,016.3 mb.) | | | | Atlanta, Ga. (982.5 mb.) | | | | Auburn, Calif. (956.5 mb.) | | | | Big Spring, Tex. (927.2 mb.) | | | | Bismarck, N. Dak. (955.2 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 | 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 | 19.9 | 85 | 31 | 1,620 | 27.9 | 28 | 31 | 5 | 25.7 | 79 | 31 | 300 | 23.6 | 69 | 31 | 501 | 24.8 | 30 | 31 | 774 | 29.5 | 39 | 31 | 505 | 23.6 | 68 |
| 1,000 | 31 | 121 | 20.1 | 83 | 31 | 32 | (*) | ---- | 31 | 147 | 25.3 | 76 | 31 | 145 | (*) | ---- | 31 | 106 | (*) | ---- | 31 | 93 | (*) | ---- | 31 | 100 | (*) | ---- |
| 950 | 31 | 571 | 19.0 | 78 | 31 | 511 | (*) | ---- | 31 | 602 | 22.7 | 74 | 31 | 597 | 23.2 | 63 | 31 | 563 | 24.5 | 30 | 31 | 557 | (*) | ---- | 31 | 554 | 23.4 | 64 |
| 900 | 31 | 1,028 | 15.9 | 79 | 31 | 1,000 | (*) | ---- | 31 | 1,066 | 19.8 | 72 | 31 | 1,065 | 19.9 | 66 | 31 | 1,031 | 21.3 | 30 | 31 | 1,039 | 28.6 | 36 | 31 | 1,025 | 21.7 | 53 |
| 850 | 31 | 1,512 | 12.7 | 80 | 31 | 1,506 | (*) | ---- | 31 | 1,557 | 16.7 | 71 | 31 | 1,555 | 16.2 | 69 | 31 | 1,522 | 17.7 | 29 | 31 | 1,545 | 24.5 | 40 | 31 | 1,518 | 18.0 | 55 |
| 800 | 31 | 2,019 | 9.3 | 79 | 31 | 2,042 | 25.4 | 27 | 31 | 2,072 | 13.7 | 63 | 31 | 2,068 | 12.5 | 69 | 31 | 2,036 | 14.2 | 25 | 31 | 2,072 | 20.0 | 48 | 31 | 2,034 | 14.5 | 51 |
| 750 | 31 | 2,559 | 6.1 | 75 | 31 | 2,608 | 21.1 | 29 | 31 | 2,618 | 10.4 | 61 | 31 | 2,610 | 9.0 | 63 | 31 | 2,583 | 10.9 | ---- | 31 | 2,624 | 15.1 | 57 | 31 | 2,583 | 11.2 | 46 |
| 700 | 31 | 3,114 | 2.9 | 73 | 31 | 3,196 | 15.9 | 35 | 31 | 3,184 | 7.1 | 54 | 31 | 3,175 | 5.7 | 54 | 31 | 3,147 | 7.3 | ---- | 31 | 3,206 | 10.6 | 61 | 31 | 3,149 | 7.8 | 38 |
| 650 | 30 | 3,718 | −.1 | 66 | 31 | 3,821 | 10.4 | 43 | 31 | 3,796 | 3.6 | 48 | 31 | 3,781 | 2.6 | 45 | 30 | 3,751 | 3.1 | ---- | 31 | 3,820 | 6.6 | 52 | 31 | 3,760 | 3.6 | 38 |
| 600 | 29 | 4,350 | −3.7 | 55 | 31 | 4,480 | 4.7 | 50 | 30 | 4,438 | .0 | 48 | 31 | 4,423 | −1.0 | 33 | 30 | 4,395 | −.8 | ---- | 31 | 4,473 | 2.7 | 42 | 31 | 4,400 | −.8 | 32 |
| 550 | 29 | 5,036 | −7.3 | 50 | 31 | 5,183 | −1.2 | 58 | 29 | 5,131 | −3.7 | 47 | 31 | 5,113 | −5.1 | ---- | 30 | 5,083 | −5.5 | ---- | 31 | 5,175 | −1.2 | 34 | 31 | 5,093 | −5.4 | 35 |
| 500 | 29 | 5,769 | −12.1 | 50 | 30 | 5,933 | −6.9 | 59 | 29 | 5,876 | −8.1 | 43 | 31 | 5,854 | −9.7 | ---- | 30 | 5,823 | −11.0 | ---- | 31 | 5,925 | −5.8 | ---- | 31 | 5,830 | −10.5 | 34 |
| 450 | 29 | 6,577 | −17.3 | 47 | 30 | 6,757 | −11.9 | 44 | 29 | 6,696 | −13.0 | ---- | 31 | 6,667 | −15.0 | ---- | 30 | 6,630 | −16.9 | ---- | 31 | 6,757 | −10.9 | ---- | 31 | 6,641 | −16.3 | 37 |
| 400 | 29 | 7,440 | −23.4 | ---- | 29 | 7,641 | −17.1 | ---- | 29 | 7,574 | −18.9 | ---- | 31 | 7,545 | −21.1 | ---- | 30 | 7,496 | −23.8 | ---- | 30 | 7,640 | −16.8 | ---- | 30 | 7,510 | −22.7 | ---- |
| 350 | 29 | 8,403 | −30.2 | ---- | 29 | 8,628 | −24.1 | ---- | 29 | 8,554 | −26.3 | ---- | 30 | 8,510 | −28.0 | ---- | 30 | 8,456 | −31.3 | ---- | 30 | 8,628 | −23.8 | ---- | 30 | 8,475 | −30.0 | ---- |
| 300 | 29 | 9,482 | −38.2 | ---- | 28 | 9,735 | −32.2 | ---- | 29 | 9,650 | −34.8 | ---- | 29 | 9,593 | −36.3 | ---- | 30 | 9,529 | −39.8 | ---- | 30 | 9,735 | −31.9 | ---- | 27 | 9,553 | −38.0 | ---- |
| 250 | 29 | 10,712 | −47.1 | ---- | 27 | 11,000 | −41.4 | ---- | 28 | 10,896 | −44.7 | ---- | 29 | 10,832 | −45.9 | ---- | 29 | 10,751 | −48.5 | ---- | 29 | 10,999 | −41.5 | ---- | 27 | 10,786 | −46.1 | ---- |
| 200 | 29 | 12,160 | −55.5 | ---- | 26 | 12,479 | −52.4 | ---- | 28 | 12,349 | −56.1 | ---- | 29 | 12,285 | −55.0 | ---- | 29 | 12,191 | −55.8 | ---- | 28 | 12,475 | −52.7 | ---- | 18 | 12,247 | −52.7 | ---- |
| 175 | 28 | 13,008 | −57.1 | ---- | 22 | 13,316 | −58.9 | ---- | 24 | 13,195 | −61.8 | ---- | 26 | 13,129 | −59.0 | ---- | 24 | 13,035 | −57.2 | ---- | 24 | 13,324 | −58.6 | ---- | 12 | 13,134 | −55.1 | ---- |
| 150 | 25 | 13,980 | −57.6 | ---- | 7 | 14,289 | −63.9 | ---- | 10 | 14,126 | −66.0 | ---- | 25 | 14,084 | −62.8 | ---- | 20 | 14,002 | −58.6 | ---- | 12 | 14,282 | −64.3 | ---- | 7 | 14,098 | −58.8 | ---- |
| 125 | 24 | 15,123 | −59.1 | ---- | ---- | ---- | ---- | ---- | 5 | 15,224 | −68.8 | ---- | 8 | 15,145 | −62.4 | ---- | 11 | 15,132 | −61.6 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| 100 | 10 | 16,503 | −59.4 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 5 | 16,507 | −62.6 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |

| Standard pressure surface (mb.) | Boise, Idaho (912.1 mb.) | | | | Brownsville, Tex. (1,013.1 mb.) | | | | Buffalo, N. Y. (988.5 mb.) | | | | Caribou, Maine (990.3 mb.) | | | | Charleston, S. C. (1,015.0 mb.) | | | | Ciudad Victoria, Mexico (974.0 mb.) | | | | Columbia, Mo. (988.7 mb.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Surface | 31 | 868 | 29.2 | 24 | 31 | 6 | 28.3 | 77 | 31 | 221 | 18.9 | 81 | 31 | 191 | 18.8 | 87 | 31 | 13 | 22.9 | 91 | 27 | 335 | 30.8 | 49 | 31 | 239 | 23.4 | 70 |
| 1,000 | 31 | 40 | (*) | ---- | 31 | 122 | 27.3 | 78 | 31 | 121 | (*) | ---- | 31 | 112 | (*) | ---- | 31 | 143 | 23.8 | 88 | 27 | 97 | (*) | ---- | 31 | 138 | (*) | ---- |
| 950 | 31 | 506 | (*) | ---- | 31 | 580 | 24.2 | 74 | 31 | 564 | 18.8 | 66 | 31 | 558 | 18.9 | 79 | 31 | 595 | 21.9 | 79 | 27 | 558 | 28.6 | 50 | 31 | 591 | 23.1 | 61 |
| 900 | 31 | 986 | 29.6 | 20 | 31 | 1,047 | 22.2 | 58 | 31 | 1,025 | 16.0 | 66 | 31 | 1,018 | 16.3 | 78 | 31 | 1,061 | 19.3 | 75 | 27 | 1,036 | 24.2 | 55 | 31 | 1,058 | 19.9 | 64 |
| 850 | 31 | 1,491 | 25.5 | 19 | 31 | 1,543 | 19.8 | 49 | 31 | 1,509 | 12.8 | 67 | 31 | 1,503 | 13.1 | 77 | 31 | 1,551 | 15.9 | 76 | 27 | 1,533 | 20.0 | 61 | 31 | 1,548 | 16.4 | 64 |
| 800 | 31 | 2,018 | 20.9 | 21 | 31 | 2,063 | 16.8 | 44 | 31 | 2,015 | 9.5 | 65 | 31 | 2,020 | 9.8 | 76 | 31 | 2,064 | 12.5 | 75 | 27 | 2,053 | 15.8 | 68 | 31 | 2,062 | 13.6 | 52 |
| 750 | 31 | 2,571 | 16.0 | 24 | 31 | 2,613 | 13.6 | 45 | 31 | 2,556 | 6.5 | 61 | 31 | 2,549 | 6.7 | 70 | 31 | 2,610 | 9.4 | 67 | 27 | 2,601 | 11.6 | 70 | 31 | 2,607 | 10.9 | 43 |
| 700 | 31 | 3,150 | 10.9 | 29 | 31 | 3,187 | 10.0 | 42 | 31 | 3,111 | 3.0 | 59 | 31 | 3,108 | 3.6 | 67 | 31 | 3,174 | 6.1 | 63 | 27 | 3,173 | 7.8 | 67 | 31 | 3,176 | 7.9 | 39 |
| 650 | 31 | 3,758 | 5.6 | 33 | 31 | 3,804 | 6.3 | 45 | 31 | 3,711 | −.6 | 56 | 31 | 3,710 | .1 | 65 | 31 | 3,784 | 2.9 | 52 | 27 | 3,784 | 4.3 | 60 | 30 | 3,790 | 4.4 | 40 |
| 600 | 31 | 4,410 | .1 | 39 | 31 | 4,451 | 2.1 | 46 | 31 | 4,344 | −4.4 | 55 | 31 | 4,344 | −3.5 | 56 | 31 | 4,422 | −.5 | 45 | 27 | 4,428 | .5 | 56 | 29 | 4,432 | .3 | 38 |
| 550 | 31 | 5,094 | −5.4 | 44 | 31 | 5,151 | −1.7 | 41 | 31 | 5,027 | −8.3 | 48 | 31 | 5,030 | −7.3 | 52 | 31 | 5,115 | −4.4 | 38 | 25 | 5,122 | −3.0 | 43 | 29 | 5,123 | −4.0 | ---- |
| 500 | 31 | 5,840 | −11.2 | 41 | 31 | 5,901 | −6.0 | 37 | 31 | 5,759 | −12.7 | 47 | 30 | 5,763 | −11.6 | 50 | 31 | 5,858 | −8.9 | ---- | 25 | 5,872 | −7.3 | 38 | 28 | 5,871 | −8.4 | ---- |
| 450 | 31 | 6,645 | −16.8 | ---- | 31 | 6,725 | −10.8 | 32 | 31 | 6,565 | −17.9 | ---- | 30 | 6,569 | −17.0 | 48 | 29 | 6,678 | −14.2 | ---- | 25 | 6,694 | −12.3 | 30 | 28 | 6,686 | −13.9 | ---- |
| 400 | 31 | 7,513 | −23.4 | ---- | 30 | 7,614 | −16.8 | 34 | 29 | 7,427 | −23.8 | ---- | 29 | 7,437 | −22.9 | ---- | 27 | 7,547 | −20.2 | ---- | 25 | 7,577 | −18.3 | ---- | 28 | 7,566 | −20.2 | ---- |
| 350 | 31 | 8,475 | −30.9 | ---- | 30 | 8,603 | −23.7 | ---- | 29 | 8,389 | −30.5 | ---- | 29 | 8,403 | −29.8 | ---- | 27 | 8,522 | −27.2 | ---- | 23 | 8,559 | −25.5 | ---- | 28 | 8,542 | −27.0 | ---- |
| 300 | 31 | 9,550 | −39.1 | ---- | 30 | 9,709 | −32.3 | ---- | 29 | 9,466 | −38.3 | ---- | 29 | 9,483 | −37.7 | ---- | 26 | 9,619 | −35.4 | ---- | 23 | 9,658 | −34.2 | ---- | 28 | 9,635 | −34.9 | ---- |
| 250 | 30 | 10,775 | −47.8 | ---- | 29 | 10,967 | −42.4 | ---- | 27 | 10,710 | −46.2 | ---- | 29 | 10,716 | −46.9 | ---- | 25 | 10,868 | −44.8 | ---- | 22 | 10,907 | −44.3 | ---- | 27 | 10,880 | −44.1 | ---- |
| 200 | 29 | 12,222 | −54.7 | ---- | 25 | 12,438 | −53.7 | ---- | 27 | 12,170 | −52.1 | ---- | 28 | 12,170 | −55.4 | ---- | 21 | 12,326 | −55.2 | ---- | 19 | 12,369 | −55.8 | ---- | 24 | 12,339 | −53.6 | ---- |
| 175 | 24 | 13,081 | −55.7 | ---- | 20 | 13,286 | −59.0 | ---- | 27 | 13,031 | −53.5 | ---- | 26 | 13,010 | −56.9 | ---- | 17 | 13,194 | −60.5 | ---- | 5 | 13,228 | −60.1 | ---- | 18 | 13,193 | −57.4 | ---- |
| 150 | 16 | 14,056 | −56.0 | ---- | 9 | 14,252 | −63.8 | ---- | 24 | 14,014 | −54.6 | ---- | 17 | 14,001 | −57.3 | ---- | 8 | 14,135 | −63.2 | ---- | ---- | ---- | ---- | ---- | 11 | 14,176 | −60.9 | ---- |
| 125 | 5 | 15,187 | −58.1 | ---- | ---- | ---- | ---- | ---- | 18 | 15,168 | −56.1 | ---- | 7 | 15,143 | −56.3 | ---- | 5 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 5 | 15,259 | −63.9 | ---- |
| 100 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 10 | 16,568 | −56.5 | ---- | 5 | 16,594 | −57.5 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| 80 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 6 | 17,958 | −54.5 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |

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 July 1947*—Continued

| Standard pressure surface (mb.) | Dodge City, Kans. (928.4 mb.) | | | | El Paso, Tex. (881.6 mb.) | | | | Ely, Nev. (810.4 mb.) | | | | Fort Worth, Tex. (990.7 mb.) | | | | Glasgow, Mont. (937.9 mb.) | | | | Grand Junction, Colo. (853.2 mb.) | | | | Great Falls, Mont. (887.1 mb.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity | Number of observations | Dynamic height | Temperature | Relative humidity |
| Surface | 31 | 787 | 25.1 | 55 | 31 | 1,195 | 29.9 | 27 | 31 | 1,908 | 22.7 | 24 | 31 | 211 | 29.4 | 48 | 31 | 648 | 26.5 | 40 | 31 | 1,474 | 27.8 | 27 | 31 | 1,128 | 23.6 | 33 |
| 1,000 | 31 | 105 | (*) | ---- | 31 | 51 | (*) | ---- | 31 | 26 | (*) | ---- | 31 | 128 | (*) | ---- | 31 | 74 | (*) | ---- | 31 | 41 | (*) | ---- | 31 | 63 | (*) | ---- |
| 950 | 31 | 567 | (*) | ---- | 31 | 529 | (*) | ---- | 31 | 497 | (*) | ---- | 31 | 591 | 27.5 | 47 | 31 | 536 | (*) | ---- | 31 | 516 | (*) | ---- | 31 | 526 | (*) | ---- |
| 900 | 31 | 1,041 | 25.0 | 52 | 31 | 1,016 | (*) | ---- | 31 | 982 | (*) | ---- | 31 | 1,061 | 24.0 | 52 | 31 | 1,011 | 25.0 | 36 | 31 | 1,002 | (*) | ---- | 31 | 1,005 | (*) | ---- |
| 850 | 31 | 1,540 | 22.1 | 51 | 31 | 1,521 | 28.4 | 25 | 31 | 1,487 | (*) | ---- | 31 | 1,559 | 20.1 | 57 | 31 | 1,509 | 21.2 | 37 | 31 | 1,507 | 27.8 | 28 | 31 | 1,500 | 22.2 | 30 |
| 800 | 31 | 2,065 | 19.0 | 48 | 31 | 2,054 | 24.1 | 29 | 31 | 2,020 | 24.2 | ---- | 31 | 2,079 | 16.4 | 56 | 31 | 2,030 | 17.0 | 41 | 31 | 2,041 | 24.6 | 26 | 31 | 2,022 | 18.2 | 31 |
| 750 | 31 | 2,620 | 15.4 | 48 | 31 | 2,617 | 19.2 | 35 | 31 | 2,580 | 19.9 | ---- | 31 | 2,629 | 13.4 | 42 | 31 | 2,580 | 12.7 | 44 | 31 | 2,603 | 20.0 | 29 | 31 | 2,576 | 13.5 | 36 |
| 700 | 31 | 3,198 | 11.4 | 46 | 31 | 3,201 | 13.9 | 43 | 31 | 3,167 | 14.5 | ---- | 31 | 3,203 | 9.8 | 41 | 31 | 3,151 | 8.3 | 45 | 31 | 3,191 | 14.8 | 35 | 31 | 3,146 | 8.9 | 42 |
| 650 | 31 | 3,815 | 7.3 | 42 | 31 | 3,825 | 8.3 | 51 | 31 | 3,784 | 8.8 | 28 | 31 | 3,819 | 5.9 | 41 | 31 | 3,761 | 4.0 | 45 | 31 | 3,812 | 9.2 | 43 | 31 | 3,756 | 3.9 | 48 |
| 600 | 31 | 4,466 | 2.9 | 40 | 31 | 4,475 | 3.1 | 52 | 31 | 4,441 | 3.0 | 35 | 31 | 4,466 | 1.7 | 44 | 31 | 4,404 | -.4 | 37 | 31 | 4,468 | 3.3 | 51 | 31 | 4,399 | -1.3 | 50 |
| 550 | 31 | 5,165 | -2.1 | 43 | 30 | 5,182 | -2.1 | 50 | 31 | 5,135 | -3.3 | 45 | 31 | 5,167 | -2.6 | 43 | 31 | 5,091 | -5.4 | 38 | 31 | 5,166 | -2.3 | 58 | 31 | 5,086 | -6.4 | 50 |
| 500 | 31 | 5,914 | -7.3 | 41 | 30 | 5,926 | -6.9 | 43 | 31 | 5,884 | -9.3 | 47 | 31 | 5,912 | -7.2 | 37 | 31 | 5,835 | -10.7 | 40 | 31 | 5,918 | -8.0 | 56 | 31 | 5,824 | -11.8 | 53 |
| 450 | 31 | 6,735 | -12.3 | ---- | 30 | 6,754 | -11.9 | ---- | 31 | 6,699 | -14.9 | ---- | 31 | 6,740 | -12.2 | ---- | 31 | 6,645 | -16.4 | ---- | 31 | 6,739 | -13.5 | 46 | 30 | 6,624 | -17.6 | 52 |
| 400 | 31 | 7,619 | -18.3 | ---- | 30 | 7,634 | -17.4 | ---- | 31 | 7,572 | -20.9 | ---- | 31 | 7,618 | -18.1 | ---- | 31 | 7,512 | -22.7 | ---- | 31 | 7,616 | -19.6 | 48 | 30 | 7,496 | -23.7 | ---- |
| 350 | 31 | 8,602 | -25.4 | ---- | 30 | 8,620 | -24.5 | ---- | 31 | 8,545 | -28.0 | ---- | 31 | 8,601 | -25.4 | ---- | 30 | 8,478 | -29.7 | ---- | 31 | 8,593 | -26.8 | ---- | 30 | 8,456 | -31.2 | ---- |
| 300 | 31 | 9,701 | -33.9 | ---- | 28 | 9,724 | -33.0 | ---- | 30 | 9,633 | -36.1 | ---- | 31 | 9,701 | -33.8 | ---- | 29 | 9,555 | -38.0 | ---- | 31 | 9,687 | -34.7 | ---- | 30 | 9,529 | -39.6 | ---- |
| 250 | 31 | 10,952 | -43.8 | ---- | 27 | 10,979 | -43.1 | ---- | 29 | 10,874 | -45.1 | ---- | 31 | 10,953 | -43.8 | ---- | 29 | 10,786 | -46.8 | ---- | 31 | 10,937 | -43.9 | ---- | 30 | 10,751 | -48.7 | ---- |
| 200 | 31 | 12,413 | -55.0 | ---- | 27 | 12,445 | -54.4 | ---- | 28 | 12,335 | -53.8 | ---- | 31 | 12,414 | -55.3 | ---- | 27 | 12,241 | -53.4 | ---- | 25 | 12,400 | -54.0 | ---- | 25 | 12,206 | -55.5 | ---- |
| 175 | 27 | 13,260 | -60.7 | ---- | 21 | 13,289 | -60.5 | ---- | 23 | 13,197 | -57.7 | ---- | 26 | 13,260 | -61.1 | ---- | 25 | 13,096 | -54.9 | ---- | 17 | 13,237 | -58.7 | ---- | 16 | 13,064 | -56.7 | ---- |
| 150 | 14 | 14,208 | -65.6 | ---- | 13 | 14,234 | -66.0 | ---- | 16 | 14,153 | -61.3 | ---- | 10 | 14,214 | -66.8 | ---- | 20 | 14,073 | -56.0 | ---- | 14 | 14,185 | -62.5 | ---- | 10 | 14,037 | -56.9 | ---- |
| 125 | 6 | 15,309 | -68.6 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 14 | 15,219 | -57.5 | ---- | 6 | 15,311 | -64.4 | ---- | ---- | ---- | ---- | ---- |
| 100 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 9 | 16,608 | -58.5 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |

| Standard pressure surface (mb.) | Greensboro, N. C. (985.2 mb.) | | | | Hatteras, N. C. (1,016.6 mb.) | | | | Havana, Cuba (1,010.5 mb.) | | | | Honolulu, T. H. (1,016.2 mb.) | | | | Huntington, W. Va. (996.3 mb.) | | | | International Falls, Minn. (973.8 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 | 31 | 273 | 20.7 | 82 | 31 | 3 | 23.9 | 86 | 31 | 49 | 25.3 | 89 | 31 | 3 | 27.8 | 59 | 31 | 172 | 19.3 | 88 | 31 | 360 | 19.6 | 75 | 31 | 178 | 19.6 | 78 |
| 1,000 | 31 | 143 | (*) | -- | 31 | 147 | 23.3 | 82 | 31 | 142 | 25.1 | 86 | 31 | 145 | 25.3 | 61 | 31 | 140 | (*) | ---- | 31 | 129 | (*) | ---- | 31 | 133 | (*) | ---- |
| 950 | 31 | 592 | 21.2 | 69 | 31 | 599 | 20.9 | 75 | 31 | 597 | 22.8 | 81 | 31 | 595 | 21.7 | 68 | 31 | 586 | 19.4 | 75 | 31 | 580 | 20.8 | 65 | 31 | 581 | 20.4 | 65 |
| 900 | 31 | 1,056 | 18.3 | 68 | 31 | 1,061 | 18.2 | 70 | 31 | 1,063 | 20.0 | 77 | 31 | 1,062 | 18.3 | 74 | 31 | 1,047 | 16.3 | 76 | 31 | 1,040 | 17.6 | 64 | 31 | 1,044 | 17.4 | 66 |
| 850 | 31 | 1,544 | 14.8 | 71 | 31 | 1,549 | 15.4 | 69 | 31 | 1,555 | 16.9 | 76 | 31 | 1,550 | 15.3 | 74 | 31 | 1,532 | 13.1 | 74 | 31 | 1,526 | 13.8 | 67 | 31 | 1,530 | 14.1 | 67 |
| 800 | 31 | 2,055 | 11.0 | 77 | 31 | 2,061 | 12.4 | 66 | 31 | 2,070 | 13.7 | 72 | 31 | 2,063 | 13.5 | 58 | 31 | 2,040 | 10.1 | 68 | 31 | 2,035 | 10.6 | 64 | 31 | 2,039 | 10.8 | 67 |
| 750 | 31 | 2,594 | 7.3 | 73 | 31 | 2,602 | 9.2 | 64 | 31 | 2,615 | 10.5 | 67 | 31 | 2,608 | 11.7 | 35 | 31 | 2,580 | 7.0 | 61 | 31 | 2,579 | 7.3 | 59 | 31 | 2,580 | 7.9 | 57 |
| 700 | 31 | 3,156 | 4.2 | 61 | 31 | 3,169 | 6.0 | 61 | 31 | 3,184 | 7.1 | 64 | 31 | 3,179 | 9.1 | 30 | 31 | 3,139 | 3.7 | 58 | 31 | 3,134 | 3.9 | 52 | 31 | 3,141 | 4.7 | 49 |
| 650 | 31 | 3,758 | 1.1 | 53 | 31 | 3,773 | 2.7 | 54 | 30 | 3,795 | 3.5 | 68 | 31 | 3,793 | 6.4 | ---- | 31 | 3,740 | -.1 | 58 | 31 | 3,739 | .0 | 49 | 31 | 3,743 | 1.5 | 42 |
| 600 | 31 | 4,396 | -2.8 | 50 | 31 | 4,417 | -.8 | 45 | 26 | 4,437 | -.2 | 74 | 31 | 4,442 | 3.1 | ---- | 30 | 4,373 | -3.7 | 53 | 31 | 4,371 | -3.7 | 45 | 31 | 4,382 | -2.3 | 39 |
| 550 | 30 | 5,082 | -6.5 | 42 | 31 | 5,108 | -4.6 | 44 | 26 | 5,143 | -3.8 | 67 | 30 | 5,145 | -1.1 | ---- | 29 | 5,060 | -7.4 | 44 | 31 | 5,056 | -7.8 | 43 | 31 | 5,067 | -6.2 | ---- |
| 500 | 30 | 5,821 | -10.9 | ---- | 31 | 5,851 | -9.3 | 49 | 26 | 5,877 | -8.4 | 64 | 30 | 5,896 | -6.0 | ---- | 29 | 5,794 | -12.2 | ---- | 31 | 5,788 | -12.6 | 39 | 31 | 5,807 | -11.2 | ---- |
| 450 | 30 | 6,631 | -16.0 | ---- | 30 | 6,666 | -14.5 | 48 | 25 | 6,696 | -13.3 | 60 | 30 | 6,722 | -11.6 | ---- | 29 | 6,597 | -17.7 | ---- | 31 | 6,592 | -17.9 | ---- | 31 | 6,611 | -16.6 | ---- |
| 400 | 30 | 7,502 | -22.0 | ---- | 30 | 7,542 | -20.4 | 54 | 24 | 7,575 | -19.3 | 59 | 27 | 7,606 | -17.5 | ---- | 29 | 7,463 | -23.9 | ---- | 31 | 7,456 | -24.0 | ---- | 31 | 7,484 | -22.9 | ---- |
| 350 | 30 | 8,469 | -29.6 | ---- | 29 | 8,517 | -27.2 | ---- | 21 | 8,563 | -26.4 | ---- | 27 | 8,591 | -24.8 | ---- | 29 | 8,423 | -31.3 | ---- | 31 | 8,416 | -31.2 | ---- | 31 | 8,449 | -29.8 | ---- |
| 300 | 30 | 9,549 | -37.7 | ---- | 29 | 9,608 | -35.6 | ---- | 18 | 9,651 | -35.1 | ---- | 27 | 9,694 | -33.1 | ---- | 29 | 9,497 | -39.3 | ---- | 31 | 9,490 | -39.5 | ---- | 31 | 9,530 | -38.0 | ---- |
| 250 | 29 | 10,785 | -46.9 | ---- | 29 | 10,849 | -45.5 | ---- | 17 | 10,896 | -45.5 | ---- | 27 | 10,951 | -42.3 | ---- | 29 | 10,723 | -47.5 | ---- | 28 | 10,721 | -47.7 | ---- | 31 | 10,762 | -46.6 | ---- |
| 200 | 24 | 12,226 | -55.9 | ---- | 28 | 12,298 | -56.0 | ---- | 13 | 12,352 | -57.0 | ---- | 23 | 12,424 | -53.6 | ---- | 28 | 12,181 | -54.0 | ---- | 22 | 12,155 | -52.7 | ---- | 29 | 12,209 | -53.1 | ---- |
| 175 | 18 | 13,066 | -58.3 | ---- | 21 | 13,131 | -59.3 | ---- | 7 | 13,171 | -64.0 | ---- | 22 | 13,271 | -59.4 | ---- | 27 | 13,027 | -55.7 | ---- | 20 | 13,012 | -53.2 | ---- | 26 | 13,059 | -54.3 | ---- |
| 150 | 16 | 14,036 | -61.6 | ---- | 16 | 14,070 | -60.3 | ---- | ---- | ---- | ---- | ---- | 18 | 14,233 | -64.5 | ---- | 22 | 14,001 | -57.0 | ---- | 13 | 13,985 | -53.3 | ---- | 24 | 14,036 | -56.1 | ---- |
| 125 | 8 | 15,157 | -63.9 | ---- | 5 | 15,251 | -63.0 | ---- | ---- | ---- | ---- | ---- | 7 | 15,328 | -66.6 | ---- | 17 | 15,134 | -59.1 | ---- | 8 | 15,196 | -55.0 | ---- | 19 | 15,189 | -58.6 | ---- |
| 100 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 9 | 16,522 | -60.4 | ---- | ---- | ---- | ---- | ---- | 7 | 16,590 | -60.6 | ---- |

| Standard pressure surface (mb.) | Lake Charles, La. (1,015.3 mb.) | | | | Lander, Wyo. (831.5 mb.) | | | | Las Vegas, Nev. (943.1 mb.) | | | | Little Rock, Ark. (1,006.6 mb.) | | | | Mazatlan, Mexico (1,008.1 mb.) | | | | Medford, Oreg. (968.0 mb.) | | | | Merida, Mexico (1,011.2 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 | 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 | 26.0 | 82 | 31 | 1,696 | 21.8 | 40 | 31 | 574 | 36.1 | 13 | 31 | 79 | 25.7 | 67 | 31 | 14 | 29.0 | 75 | 31 | 401 | 24.6 | 40 | 29 | 27 | 27.5 | 76 |
| 1,000 | 31 | 139 | 26.1 | 74 | 31 | 55 | (*) | ---- | 31 | 35 | (*) | ---- | 31 | 137 | 26.1 | 64 | 31 | 86 | 28.1 | 76 | 31 | 115 | (*) | ---- | 29 | 125 | 26.6 | 77 |
| 950 | 31 | 595 | 23.3 | 70 | 31 | 522 | (*) | ---- | 31 | 506 | (*) | ---- | 31 | 594 | 25.0 | 57 | 31 | 547 | 24.7 | 71 | 31 | 571 | 23.0 | 43 | 29 | 581 | 23.6 | 77 |
| 900 | 31 | 1,061 | 20.3 | 67 | 31 | 1,002 | (*) | ---- | 31 | 997 | 32.6 | ---- | 31 | 1,062 | 21.6 | 62 | 31 | 1,015 | 22.7 | 69 | 31 | 1,003 | 19.1 | 50 | 29 | 1,050 | 20.8 | 73 |
| 850 | 31 | 1,553 | 17.5 | 60 | 31 | 1,503 | (*) | ---- | 31 | 1,506 | 28.1 | ---- | 31 | 1,556 | 18.2 | 65 | 31 | 1,512 | 20.0 | 71 | 31 | 1,521 | 14.9 | 58 | 29 | 1,543 | 17.9 | 71 |
| 800 | 31 | 2,069 | 14.7 | 53 | 31 | 2,032 | 22.2 | 31 | 31 | 2,038 | 23.3 | ---- | 31 | 2,073 | 15.2 | 57 | 31 | 2,034 | 17.2 | 68 | 31 | 2,030 | 10.5 | 68 | 29 | 2,060 | 14.7 | 70 |
| 750 | 31 | 2,620 | 11.9 | 42 | 31 | 2,590 | 17.7 | 33 | 31 | 2,596 | 18.2 | 20 | 31 | 2,621 | 12.6 | 47 | 31 | 2,590 | 14.6 | 60 | 31 | 2,570 | 6.9 | 72 | 29 | 2,608 | 11.4 | 67 |
| 700 | 31 | 3,187 | 8.8 | 38 | 31 | 3,172 | 12.8 | 37 | 31 | 3,180 | 12.9 | 25 | 31 | 3,194 | 9.6 | 39 | 31 | 3,164 | 11.0 | 58 | 31 | 3,129 | 3.9 | 60 | 29 | 3,177 | 8.0 | 64 |
| 650 | 31 | 3,802 | 4.9 | 42 | 31 | 3,789 | 7.6 | 44 | 31 | 3,796 | 7.4 | 29 | 31 | 3,808 | 6.1 | 34 | 31 | 3,778 | 6.4 | 66 | 31 | 3,727 | .3 | 48 | 29 | 3,789 | 4.8 | 60 |
| 600 | 31 | 4,445 | .9 | 42 | 31 | 4,442 | 2.0 | 51 | 31 | 4,448 | 2.0 | 33 | 31 | 4,457 | 1.9 | 34 | 31 | 4,430 | 1.6 | 74 | 31 | 4,365 | -3.6 | 39 | 29 | 4,434 | 1.0 | 61 |
| 550 | 31 | 5,143 | -3.5 | 43 | 31 | 5,136 | -3.7 | 57 | 31 | 5,143 | -3.1 | ---- | 31 | 5,154 | -2.3 | ---- | 31 | 5,128 | -3.4 | 79 | 31 | 5,045 | -7.7 | 32 | 29 | 5,128 | -2.9 | 63 |
| 500 | 31 | 5,886 | -7.7 | 34 | 31 | 5,883 | -9.4 | 58 | 31 | 5,890 | -8.4 | ---- | 30 | 5,904 | -6.5 | ---- | 31 | 5,875 | -8.1 | 70 | 31 | 5,781 | -12.7 | ---- | 29 | 5,879 | -7.1 | 52 |
| 450 | 31 | 6,706 | -13.0 | 33 | 30 | 6,694 | -15.1 | 57 | 31 | 6,704 | -14.2 | ---- | 30 | 6,729 | -11.6 | ---- | 31 | 6,701 | -12.6 | 60 | 31 | 6,577 | -18.6 | ---- | 29 | 6,704 | -12.0 | 46 |
| 400 | 31 | 7,586 | -18.9 | 31 | 30 | 7,570 | -21.3 | 55 | 31 | 7,583 | -20.6 | ---- | 29 | 7,612 | -17.7 | ---- | 31 | 7,578 | -17.9 | 60 | 31 | 7,443 | -25.2 | ---- | 29 | 7,585 | -18.2 | 49 |
| 350 | 31 | 8,567 | -26.1 | ---- | 29 | 8,542 | -28.3 | 58 | 31 | 8,556 | -28.3 | ---- | 29 | 8,598 | -24.5 | ---- | 31 | 8,562 | -25.2 | 54 | 31 | 8,398 | -32.5 | ---- | 29 | 8,567 | -25.7 | ---- |
| 300 | 30 | 9,664 | -34.3 | ---- | 29 | 9,628 | -36.6 | ---- | 31 | 9,643 | -36.5 | ---- | 27 | 9,699 | -32.7 | ---- | 29 | 9,662 | -33.5 | 57 | 31 | 9,466 | -40.7 | ---- | 29 | 9,665 | -34.5 | ---- |
| 250 | 30 | 10,913 | -44.3 | ---- | 28 | 10,868 | -45.5 | ---- | 31 | 10,883 | -45.3 | ---- | 26 | 10,955 | -41.9 | ---- | 29 | 10,918 | -43.4 | ---- | 31 | 10,683 | -49.4 | ---- | 27 | 10,912 | -44.6 | ---- |
| 200 | 30 | 12,371 | -55.5 | ---- | 27 | 12,322 | -54.8 | ---- | 29 | 12,345 | -54.3 | ---- | 26 | 12,433 | -51.9 | ---- | 25 | 12,384 | -55.1 | ---- | 30 | 12,117 | -54.9 | ---- | 16 | 12,308 | -55.9 | ---- |
| 175 | 29 | 13,212 | -61.2 | ---- | 24 | 13,172 | -57.9 | ---- | 26 | 13,192 | -58.9 | ---- | 26 | 13,287 | -56.8 | ---- | 15 | 13,233 | -61.4 | ---- | 30 | 12,970 | -54.6 | ---- | ---- | ---- | ---- | ---- |
| 150 | 29 | 14,156 | -66.1 | ---- | 16 | 14,132 | -61.2 | ---- | 14 | 14,163 | -62.4 | ---- | 15 | 14,260 | -62.1 | ---- | 5 | 14,184 | -68.2 | ---- | 29 | 13,952 | -54.3 | ---- | ---- | ---- | ---- | ---- |
| 125 | 13 | 15,255 | -70.5 | ---- | 9 | 15,214 | -64.2 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 27 | 15,113 | -55.8 | ---- | ---- | ---- | ---- | ---- |
| 100 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 22 | 16,526 | -57.2 | ---- | ---- | ---- | ---- | ---- |
| 80 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 15 | 17,944 | -56.3 | ---- | ---- | ---- | ---- | ---- |

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 July 1947*—Continued

| Standard pressure surface (mb.) | Miami, Fla. (1,017.0 mb.) | | | | Nantucket, Mass. (1,015.3 mb.) | | | | Nashville, Tenn. (995.7 mb.) | | | | New Orleans, La. (1,015.8 mb.) | | | | North Platte, Nebr.[1] | | | | Oakland, Calif. (1,015.5 mb.) | | | | Ogden, Utah (864.0 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 | 4 | 25.1 | 87 | 27 | 14 | 18.9 | 95 | 31 | 180 | 22.7 | 75 | 31 | 2 | 25.7 | 79 | | | | | 31 | 6 | 17.8 | 72 | 31 | 1,355 | 25.3 | 34 |
| 1,000 | 31 | 153 | 24.7 | 86 | 27 | 144 | 19.9 | 88 | 31 | 143 | (*) | | 31 | 141 | 26.2 | 73 | | | | | 31 | 137 | 16.4 | 75 | 31 | 43 | (*) | |
| 950 | 31 | 603 | 22.0 | 85 | 27 | 591 | 19.4 | 68 | 31 | 594 | 21.8 | 65 | 31 | 597 | 24.0 | 67 | | | | | 31 | 582 | 16.9 | 54 | 31 | 541 | (*) | |
| 900 | 31 | 1,072 | 19.3 | 82 | 27 | 1,052 | 16.9 | 63 | 31 | 1,058 | 18.7 | 68 | 31 | 1,065 | 20.9 | 66 | | | | | 31 | 1,035 | 18.3 | 25 | 31 | 995 | (*) | |
| 850 | 31 | 1,562 | 16.3 | 79 | 27 | 1,537 | 14.0 | 59 | 31 | 1,545 | 14.6 | 68 | 31 | 1,557 | 17.7 | 50 | | | | | 31 | 1,523 | 17.0 | 22 | 31 | 1,499 | 26.5 | 24 |
| 800 | 31 | 2,076 | 13.3 | 75 | 26 | 2,047 | 10.7 | 54 | 31 | 2,055 | 11.8 | 58 | 31 | 2,073 | 14.5 | 59 | | | | | 31 | 2,037 | 14.9 | 20 | 31 | 2,030 | 23.0 | 23 |
| 750 | 31 | 2,622 | 10.2 | 69 | 26 | 2,591 | 7.7 | 52 | 31 | 2,600 | 9.0 | 52 | 31 | 2,622 | 11.7 | 52 | | | | | 31 | 2,588 | 11.9 | | 31 | 2,590 | 18.1 | 26 |
| 700 | 31 | 3,189 | 7.0 | 64 | 26 | 3,148 | 4.5 | 46 | 31 | 3,162 | 5.9 | 49 | 31 | 3,191 | 8.5 | 49 | | | | | 31 | 3,152 | 8.5 | | 31 | 3,171 | 13.0 | 31 |
| 650 | 31 | 3,797 | 3.4 | 66 | 26 | 3,753 | 1.4 | 38 | 31 | 3,766 | 2.5 | 49 | 31 | 3,805 | 4.9 | 46 | | | | | 30 | 3,762 | 4.9 | | 31 | 3,786 | 7.3 | 36 |
| 600 | 31 | 4,441 | −.3 | 65 | 26 | 4,388 | −2.1 | 37 | 31 | 4,408 | −1.4 | 46 | 31 | 4,449 | 1.3 | 42 | | | | | 30 | 4,408 | .8 | | 31 | 4,439 | 1.7 | 41 |
| 550 | 29 | 5,137 | −4.1 | 65 | 26 | 5,073 | −5.9 | 35 | 31 | 5,095 | −5.7 | 44 | 30 | 5,148 | −2.6 | 34 | | | | | 30 | 5,102 | −3.8 | | 30 | 5,135 | −4.2 | 46 |
| 500 | 29 | 5,883 | −8.4 | 65 | 26 | 5,815 | −10.3 | 41 | 31 | 5,836 | −10.1 | 38 | 30 | 5,894 | −6.8 | | | | | | 30 | 5,846 | −9.0 | | 30 | 5,878 | −10.2 | 53 |
| 450 | 29 | 6,702 | −13.3 | 67 | 25 | 6,624 | −15.4 | | 31 | 6,650 | −15.2 | | 30 | 6,717 | −12.0 | | | | | | 30 | 6,661 | −14.8 | | 30 | 6,692 | −16.0 | 49 |
| 400 | 28 | 7,581 | −19.0 | 65 | 24 | 7,502 | −21.2 | | 31 | 7,522 | −21.0 | | 30 | 7,601 | −18.2 | | | | | | 30 | 7,535 | −21.3 | | 30 | 7,560 | −21.8 | |
| 350 | 28 | 8,562 | −25.8 | | 24 | 8,473 | −27.9 | | 31 | 8,495 | −28.0 | | 30 | 8,584 | −25.5 | | | | | | 30 | 8,505 | −28.6 | | 30 | 8,529 | −28.6 | |
| 300 | 28 | 9,660 | −34.2 | | 24 | 9,561 | −36.0 | | 31 | 9,582 | −36.2 | | 28 | 9,682 | −33.8 | | | | | | 29 | 9,590 | −36.5 | | 30 | 9,615 | −36.7 | |
| 250 | 28 | 10,910 | −44.2 | | 23 | 10,807 | −45.1 | | 31 | 10,824 | −45.1 | | 26 | 10,936 | −43.6 | | | | | | 29 | 10,831 | −44.9 | | 30 | 10,853 | −45.6 | |
| 200 | 27 | 12,369 | −55.9 | | 22 | 12,269 | −54.6 | | 31 | 12,287 | −53.6 | | 24 | 12,395 | −54.9 | | | | | | 23 | 12,310 | −52.5 | | 30 | 12,310 | −54.4 | |
| 175 | 24 | 13,207 | −62.1 | | 20 | 13,116 | −57.8 | | 30 | 13,141 | −57.2 | | 22 | 13,246 | −60.3 | | | | | | 12 | 13,182 | −54.2 | | 26 | 13,159 | −57.6 | |
| 150 | 18 | 14,146 | −66.8 | | 17 | 14,094 | −58.4 | | 26 | 14,111 | −60.4 | | 6 | 14,162 | −65.8 | | | | | | 8 | 14,170 | −56.7 | | 13 | 14,120 | −60.4 | |
| 125 | 7 | 15,246 | −69.6 | | 9 | 15,236 | −58.2 | | 16 | 15,219 | −62.1 | | | | | | | | | | | | | | 5 | 15,282 | −64.6 | |
| 100 | | | | | | | | | 9 | 16,594 | −62.8 | | | | | | | | | | | | | | | | | |

| Standard pressure surface (mb.) | Oklahoma City, Okla. (970.3 mb.) | | | | Omaha, Nebr. (979.9 mb.) | | | | Phoenix, Ariz. (968.8 mb.) | | | | Pittsburgh, Pa. (972.1 mb.) | | | | Portland, Maine (1,011.9 mb.) | | | | Rapid City, S. Dak. (904.2 mb.) | | | | St. Paul, Minn. (977.8 mb.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Surface | 31 | 391 | 25.6 | 69 | 31 | 308 | 25.0 | 64 | 31 | 339 | 36.9 | 21 | 29 | 382 | 19.5 | 76 | 31 | 20 | 18.9 | 90 | 31 | 980 | 21.6 | 67 | 31 | 317 | 20.9 | 71 |
| 1,000 | 31 | 122 | (*) | | 31 | 129 | (*) | | 31 | 49 | (*) | | 29 | 136 | (*) | | 31 | 122 | 20.0 | 87 | 31 | 91 | (*) | | 31 | 120 | (*) | |
| 950 | 31 | 575 | 26.0 | 61 | 31 | 584 | 24.1 | 56 | 31 | 520 | 37.3 | 19 | 29 | 588 | 19.1 | 73 | 31 | 571 | 19.9 | 76 | 31 | 550 | (*) | | 31 | 575 | 21.4 | 60 |
| 900 | 31 | 1,054 | 24.1 | 57 | 31 | 1,051 | 21.0 | 57 | 31 | 1,009 | 33.2 | 20 | 29 | 1,044 | 16.0 | 74 | 31 | 1,031 | 17.2 | 72 | 31 | 1,021 | 22.2 | 61 | 31 | 1,034 | 18.3 | 61 |
| 850 | 31 | 1,552 | 21.0 | 56 | 31 | 1,544 | 17.8 | 63 | 31 | 1,520 | 28.7 | 23 | 29 | 1,528 | 12.8 | 75 | 31 | 1,518 | 14.0 | 70 | 31 | 1,519 | 21.6 | 52 | 31 | 1,521 | 14.9 | 63 |
| 800 | 31 | 2,074 | 18.1 | 51 | 31 | 2,060 | 14.8 | 56 | 31 | 2,054 | 23.9 | 26 | 29 | 2,034 | 9.5 | 70 | 31 | 2,027 | 10.8 | 67 | 31 | 2,042 | 17.8 | 54 | 31 | 2,032 | 11.7 | 58 |
| 750 | 31 | 2,625 | 14.6 | 45 | 31 | 2,607 | 11.9 | 44 | 31 | 2,616 | 18.9 | 31 | 29 | 2,578 | 6.5 | 59 | 31 | 2,566 | 7.4 | 65 | 31 | 2,596 | 14.2 | 53 | 30 | 2,575 | 9.0 | 44 |
| 700 | 31 | 3,203 | 10.9 | 46 | 31 | 3,179 | 9.0 | 33 | 31 | 3,200 | 13.7 | 38 | 29 | 3,130 | 3.4 | 56 | 31 | 3,127 | 4.4 | 61 | 31 | 3,171 | 10.2 | 46 | 30 | 3,138 | 6.2 | 36 |
| 650 | 31 | 3,820 | 6.7 | 45 | 31 | 3,790 | 5.3 | 33 | 31 | 3,825 | 8.5 | 43 | 28 | 3,735 | −.1 | 52 | 31 | 3,730 | 1.0 | 58 | 31 | 3,784 | 5.6 | 46 | 29 | 3,744 | 2.6 | 35 |
| 600 | 31 | 4,470 | 2.5 | 44 | 31 | 4,437 | .9 | 36 | 31 | 4,475 | 3.2 | 47 | 27 | 4,367 | −3.6 | 40 | 30 | 4,366 | −2.4 | 56 | 31 | 4,431 | .5 | 45 | 29 | 4,387 | −1.2 | 32 |
| 550 | 29 | 5,168 | −1.8 | 41 | 31 | 5,130 | −3.8 | | 30 | 5,179 | −2.3 | 50 | 27 | 5,052 | −7.5 | | 30 | 5,052 | −6.3 | 55 | 31 | 5,122 | −4.4 | 44 | 27 | 5,073 | −5.6 | |
| 500 | 29 | 5,921 | −6.3 | 40 | 31 | 5,877 | −8.8 | | 30 | 5,924 | −7.2 | 46 | 27 | 5,785 | −12.4 | | 30 | 5,792 | −10.4 | 46 | 31 | 5,868 | −10.0 | 48 | 26 | 5,819 | −10.4 | |
| 450 | 29 | 6,744 | −11.4 | | 30 | 6,692 | −14.1 | | 30 | 6,750 | −12.4 | | 27 | 6,589 | −17.9 | | 29 | 6,603 | −15.5 | 48 | 30 | 6,681 | −15.4 | 44 | 26 | 6,628 | −15.6 | |
| 400 | 29 | 7,632 | −17.5 | | 30 | 7,568 | −20.3 | | 30 | 7,628 | −18.4 | | 27 | 7,454 | −23.9 | | 29 | 7,477 | −21.1 | | 30 | 7,554 | −21.5 | | 25 | 7,501 | −21.8 | |
| 350 | 28 | 8,615 | −24.6 | | 29 | 8,547 | −27.2 | | 29 | 8,611 | −25.6 | | 27 | 8,415 | −30.8 | | 29 | 8,449 | −28.2 | | 29 | 8,522 | −28.7 | | 24 | 8,473 | −28.7 | |
| 300 | 28 | 9,718 | −32.8 | | 28 | 9,633 | −35.2 | | 29 | 9,710 | −34.0 | | 26 | 9,488 | −38.9 | | 29 | 9,535 | −36.5 | | 29 | 9,608 | −36.8 | | 24 | 9,558 | −36.8 | |
| 250 | 28 | 10,977 | −42.2 | | 28 | 10,879 | −44.3 | | 29 | 10,962 | −43.7 | | 26 | 10,714 | −47.5 | | 29 | 10,773 | −46.1 | | 29 | 10,847 | −45.7 | | 24 | 10,797 | −44.9 | |
| 200 | 23 | 12,448 | −53.1 | | 27 | 12,351 | −54.0 | | 23 | 12,421 | −54.8 | | 25 | 12,162 | −53.7 | | 28 | 12,217 | −56.1 | | 25 | 12,314 | −53.8 | | 23 | 12,273 | −52.2 | |
| 175 | 14 | 13,320 | −57.3 | | 26 | 13,195 | −58.4 | | 19 | 13,263 | −60.4 | | 21 | 13,014 | −54.7 | | 28 | 13,061 | −58.2 | | 16 | 13,164 | −57.0 | | 15 | 13,139 | −54.3 | |
| 150 | 8 | 14,266 | −61.3 | | 23 | 14,153 | −61.7 | | 8 | 14,186 | −66.6 | | 18 | 13,998 | −56.6 | | 28 | 14,030 | −58.6 | | 5 | 14,110 | −60.6 | | 12 | 14,119 | −56.4 | |
| 125 | | | | | 15 | 15,274 | −65.2 | | | | | | 16 | 15,139 | −58.4 | | 22 | 15,169 | −58.5 | | | | | | 5 | 15,201 | −57.2 | |
| 100 | | | | | | | | | | | | | 13 | 16,531 | −57.5 | | 12 | 16,567 | −58.8 | | | | | | | | | |

| Standard pressure surface (mb.) | San Antonio, Tex. (986.9 mb.) | | | | San Juan, P. R. (1,016.1 mb.) | | | | Santa Maria, Calif. (1,006.5 mb.) | | | | Sault Ste. Marie, Mich. (988.0 mb.) | | | | Spokane, Wash. (943.6 mb.) | | | | Swan Island, W. I. (1,013.1 mb.) | | | | Tacubaya, Mexico (775.5 mb.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Surface | 27 | 240 | 29.0 | 59 | 31 | 15 | 26.8 | 79 | 30 | 71 | 16.4 | 75 | 31 | 221 | 16.5 | 80 | 31 | 598 | 26.7 | 29 | 29 | 10 | 26.9 | 82 | 30 | 2,306 | 16.4 | 68 |
| 1,000 | 27 | 121 | (*) | | 31 | 157 | 25.3 | 81 | 30 | 126 | 15.4 | 76 | 31 | 118 | (*) | | 31 | 82 | (*) | | 29 | 125 | 26.1 | 82 | 30 | 75 | (*) | |
| 950 | 27 | 580 | 27.7 | 58 | 31 | 610 | 21.3 | 85 | 30 | 575 | 18.1 | 52 | 31 | 565 | 18.2 | 65 | 31 | 543 | (*) | | 29 | 580 | 23.0 | 84 | 30 | 538 | (*) | |
| 900 | 27 | 1,057 | 24.1 | 63 | 31 | 1,075 | 18.3 | 84 | 30 | 1,028 | 21.3 | 26 | 31 | 1,021 | 16.5 | 65 | 31 | 1,012 | 23.3 | 30 | 29 | 1,047 | 20.1 | 79 | 30 | 1,017 | (*) | |
| 850 | 27 | 1,554 | 20.4 | 67 | 31 | 1,564 | 15.7 | 73 | 30 | 1,521 | 20.0 | 24 | 31 | 1,506 | 13.3 | 68 | 31 | 1,507 | 18.8 | 35 | 29 | 1,539 | 17.5 | 69 | 30 | 1,511 | (*) | |
| 800 | 27 | 2,076 | 16.5 | 67 | 31 | 2,078 | 14.0 | 54 | 30 | 2,040 | 16.7 | 28 | 31 | 2,013 | 10.0 | 65 | 31 | 2,023 | 14.2 | 39 | 29 | 2,056 | 15.0 | 58 | 30 | 2,041 | (*) | |
| 750 | 27 | 2,623 | 13.2 | 58 | 31 | 2,622 | 11.2 | 39 | 30 | 2,592 | 13.2 | 24 | 31 | 2,554 | 6.6 | 63 | 31 | 2,572 | 9.4 | 47 | 29 | 2,603 | 11.8 | 54 | 30 | 2,591 | 14.0 | 70 |
| 700 | 27 | 3,201 | 10.2 | 50 | 31 | 3,193 | 7.8 | 33 | 30 | 3,161 | 9.7 | | 31 | 3,111 | 3.4 | 58 | 31 | 3,132 | 5.4 | 43 | 29 | 3,174 | 8.3 | 53 | 30 | 3,168 | 9.5 | 74 |
| 650 | 25 | 3,815 | 6.7 | 43 | 31 | 3,805 | 3.8 | 35 | 30 | 3,776 | 6.2 | | 30 | 3,715 | .0 | 56 | 31 | 3,735 | 1.4 | 42 | 29 | 3,787 | 4.6 | 52 | 30 | 3,783 | 5.1 | 85 |
| 600 | 25 | 4,466 | 2.7 | 36 | 31 | 4,445 | −.3 | 33 | 29 | 4,421 | 2.2 | | 30 | 4,348 | −4.0 | 54 | 31 | 4,373 | −3.0 | 43 | 29 | 4,431 | .5 | 54 | 30 | 4,430 | .7 | 90 |
| 550 | 24 | 5,168 | −1.0 | 37 | 30 | 5,134 | −4.1 | | 29 | 5,118 | −2.7 | | 29 | 5,031 | −7.9 | 45 | 31 | 5,055 | −7.6 | 41 | 29 | 5,127 | −3.7 | 53 | 29 | 5,129 | −3.4 | 87 |
| 500 | 24 | 5,919 | −5.5 | | 30 | 5,881 | −8.2 | | 28 | 5,865 | −8.1 | | 28 | 5,763 | −12.6 | 41 | 31 | 5,790 | −12.8 | 39 | 29 | 5,872 | −7.9 | 50 | 29 | 5,874 | −7.3 | 69 |
| 450 | 24 | 6,748 | −10.9 | | 30 | 6,700 | −13.2 | | 28 | 6,686 | −14.0 | | 28 | 6,568 | −18.2 | | 31 | 6,591 | −18.3 | | 28 | 6,691 | −12.6 | 52 | 29 | 6,699 | −11.9 | 56 |
| 400 | 23 | 7,633 | −16.9 | | 30 | 7,579 | −19.3 | | 28 | 7,558 | −20.3 | | 27 | 7,429 | −24.5 | | 31 | 7,455 | −24.5 | | 28 | 7,573 | −18.1 | 49 | 29 | 7,581 | −18.0 | 53 |
| 350 | 22 | 8,622 | −23.8 | | 30 | 8,558 | −26.3 | | 26 | 8,534 | −27.8 | | 24 | 8,381 | −31.7 | | 30 | 8,410 | −31.9 | | 28 | 8,557 | −25.0 | | 28 | 8,564 | −25.4 | |
| 300 | 22 | 9,729 | −32.0 | | 30 | 9,653 | −34.9 | | 26 | 9,624 | −35.9 | | 22 | 9,454 | −39.2 | | 30 | 9,480 | −40.2 | | 28 | 9,658 | −33.7 | | 27 | 9,661 | −33.9 | |
| 250 | 22 | 10,990 | −41.8 | | 28 | 10,899 | −44.8 | | 25 | 10,869 | −44.2 | | 12 | 10,680 | −46.2 | | 30 | 10,699 | −49.0 | | 28 | 10,910 | −44.0 | | 19 | 10,919 | −43.9 | |
| 200 | 22 | 12,466 | −52.9 | | 27 | 12,352 | −56.2 | | 19 | 12,362 | −51.9 | | | | | | 30 | 12,142 | −54.1 | | 28 | 12,367 | −56.3 | | | | | |
| 175 | 21 | 13,310 | −58.7 | | 23 | 13,190 | −62.1 | | 14 | 13,207 | −55.5 | | | | | | 26 | 12,987 | −52.7 | | 24 | 13,200 | −63.3 | | | | | |
| 150 | 8 | 14,276 | −63.1 | | 15 | 14,130 | −67.2 | | 9 | 14,183 | −59.5 | | | | | | 24 | 13,985 | −52.8 | | 14 | 14,135 | −70.3 | | | | | |
| 125 | | | | | 10 | 15,233 | −70.5 | | | | | | | | | | 19 | 15,147 | −53.7 | | | | | | | | | |
| 100 | | | | | | | | | | | | | | | | | 12 | 16,566 | −54.2 | | | | | | | | | |
| 80 | | | | | | | | | | | | | | | | | 5 | 18,005 | −53.3 | | | | | | | | | |

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 July 1947*—Continued

| Standard pressure surface (mb.) | Tampa, Fla. (1,016.4 mb.) | | | | Tatoosh Island, Wash. (1,014.1 mb.) | | | | Toledo, Ohio (992.6 mb.) | | | | Washington, D. C. (1,013.2 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 | Number of observations | Dynamic height | Temperature | Relative humidity |
| Surface | 31 | 9 | 24.7 | 85 | 31 | 31 | 14.4 | 88 | 31 | 191 | 19.7 | 77 | 31 | 25 | 22.9 | 77 |
| 1,000 | 31 | 152 | 24.9 | 82 | 31 | 149 | 13.7 | 86 | 31 | 126 | (*) | ---- | 31 | 139 | 23.1 | 69 |
| 950 | 31 | 605 | 22.6 | 76 | 31 | 583 | 11.5 | 79 | 31 | 572 | 19.6 | 66 | 31 | 588 | 20.7 | 66 |
| 900 | 31 | 1,072 | 19.9 | 73 | 31 | 1,032 | 9.7 | 70 | 31 | 1,034 | 16.5 | 68 | 31 | 1,051 | 17.3 | 69 |
| 850 | 31 | 1,563 | 16.9 | 71 | 31 | 1,505 | 7.4 | 67 | 31 | 1,518 | 13.0 | 71 | 31 | 1,537 | 13.9 | 69 |
| 800 | 31 | 2,078 | 13.6 | 71 | 31 | 2,002 | 4.6 | 67 | 31 | 2,026 | 9.6 | 70 | 31 | 2,046 | 10.4 | 69 |
| 750 | 31 | 2,623 | 10.5 | 68 | 31 | 2,530 | 1.8 | 65 | 31 | 2,564 | 6.5 | 65 | 31 | 2,585 | 7.1 | 65 |
| 700 | 31 | 3,192 | 7.2 | 64 | 31 | 3,079 | −1.2 | 62 | 31 | 3,122 | 3.3 | 59 | 31 | 3,146 | 3.9 | 63 |
| 650 | 31 | 3,801 | 3.5 | 63 | 31 | 3,669 | −4.2 | 51 | 31 | 3,725 | .2 | 50 | 31 | 3,745 | .5 | 58 |
| 600 | 31 | 4,444 | .0 | 55 | 31 | 4,294 | −8.0 | 51 | 31 | 4,358 | −3.6 | 48 | 31 | 4,384 | −3.0 | 51 |
| 550 | 31 | 5,138 | −3.9 | 56 | 31 | 4,966 | −12.1 | 44 | 31 | 5,042 | −7.9 | 44 | 31 | 5,066 | −7.0 | 46 |
| 500 | 31 | 5,884 | −8.0 | 54 | 31 | 5,687 | −16.8 | 46 | 31 | 5,775 | −12.4 | ---- | 30 | 5,806 | −11.6 | 41 |
| 450 | 29 | 6,704 | −12.7 | 55 | 31 | 6,477 | −22.2 | ---- | 31 | 6,580 | −17.8 | ---- | 30 | 6,612 | −16.9 | 38 |
| 400 | 29 | 7,587 | −18.4 | 56 | 31 | 7,327 | −27.8 | ---- | 31 | 7,443 | −24.2 | ---- | 30 | 7,481 | −23.1 | ---- |
| 350 | 29 | 8,569 | −25.3 | ---- | 30 | 8,277 | −34.4 | ---- | 31 | 8,402 | −31.6 | ---- | 29 | 8,445 | −30.4 | ---- |
| 300 | 29 | 9,669 | −33.6 | ---- | 30 | 9,338 | −41.8 | ---- | 30 | 9,467 | −39.8 | ---- | 29 | 9,522 | −38.7 | ---- |
| 250 | 29 | 10,919 | −43.9 | ---- | 28 | 10,562 | −47.9 | ---- | 30 | 10,693 | −47.0 | ---- | 29 | 10,748 | −48.3 | ---- |
| 200 | 28 | 12,377 | −55.8 | ---- | 28 | 12,022 | −50.0 | ---- | 27 | 12,145 | −52.6 | ---- | 28 | 12,185 | −56.8 | ---- |
| 175 | 24 | 13,210 | −61.6 | ---- | 24 | 12,910 | −49.1 | ---- | 19 | 12,994 | −53.2 | ---- | 23 | 13,023 | −58.8 | ---- |
| 150 | 20 | 14,149 | −66.2 | ---- | 16 | 13,908 | −48.8 | ---- | 14 | 13,964 | −54.1 | ---- | 18 | 13,985 | −59.8 | ---- |
| 125 | 9 | 15,230 | −69.1 | ---- | 9 | 15,114 | −49.0 | ---- | 8 | 15,120 | −56.2 | ---- | 13 | 15,107 | −61.6 | ---- |
| 100 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 6 | 16,483 | −60.4 | ---- |

[1] Data not yet received.

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

NOTE.—All observations scheduled between 0300 and 0500, G. C. T. except at Ciudad Victoria, Mazatlan, and Merida, where they are taken near 0200, G. C. T.

"Number of observations" refers to those of dynamic height only. (In a few cases temperature or humidity data may be missing for one or more standard pressure surfaces of some 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 2.—*Free-air resultant winds based on pilot-balloon observations made near 5 p. m., E. S. T. (2200 G. C. T.), during July 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. (1,603 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 | Observation | Direction | Velocity |
| Surface | 31 | 127 | 3.3 | 31 | 241 | 2.9 | 31 | 287 | 1.8 | 31 | 98 | 1.2 | 31 | 240 | 1.8 | 31 | 322 | 4.0 | 31 | 116 | 6.1 | 30 | 234 | 3.9 | 28 | 203 | 1.5 | 30 | 169 | 2.1 | 31 | 267 | 1.9 | 31 | 25 | 1.1 | 31 | 125 | 2.1 |
| 500 | --- | --- | --- | --- | --- | --- | 31 | 296 | 2.2 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 31 | 117 | 7.2 | 30 | 251 | 4.9 | 28 | 219 | 4.0 | 30 | 173 | 3.6 | 31 | 278 | 2.1 | --- | --- | --- | --- | --- | --- |
| 1,000 | 31 | 135 | 4.1 | --- | --- | --- | 31 | 299 | 3.0 | --- | --- | --- | 31 | 248 | 2.0 | 31 | 322 | 4.0 | 31 | 126 | 5.9 | 30 | 258 | 6.1 | 28 | 234 | 4.6 | 28 | 209 | 2.5 | 31 | 293 | 3.0 | --- | --- | --- | --- | --- | --- |
| 1,500 | 31 | 138 | 4.0 | --- | --- | --- | 31 | 312 | 3.1 | 31 | 107 | 2.3 | 31 | 249 | 3.0 | 31 | 316 | 2.8 | 30 | 128 | 3.8 | 26 | 262 | 6.9 | 26 | 244 | 5.0 | 28 | 253 | 1.9 | 30 | 299 | 4.1 | --- | --- | --- | 31 | 130 | 2.9 |
| 2,000 | 31 | 143 | 4.0 | 31 | 242 | 3.0 | 30 | 310 | 3.3 | 31 | 127 | 2.7 | 29 | 258 | 4.4 | 31 | 262 | 1.8 | 28 | 120 | 2.1 | 22 | 267 | 7.0 | 25 | 255 | 6.2 | 22 | 307 | 1.7 | 27 | 304 | 5.6 | 31 | 46 | 2.4 | 31 | 129 | 3.3 |
| 2,500 | 30 | 147 | 3.3 | 31 | 227 | 2.2 | 29 | 313 | 3.6 | 31 | 169 | 2.7 | 26 | 272 | 6.0 | 31 | 222 | 3.1 | 26 | 111 | 2.6 | 16 | 265 | 6.6 | 20 | 254 | 6.0 | 19 | 283 | 3.3 | 24 | 307 | 5.4 | 31 | 62 | 1.8 | 31 | 120 | 3.2 |
| 3,000 | 28 | 139 | 2.7 | 31 | 189 | 1.9 | 25 | 317 | 3.9 | 31 | 216 | 3.2 | 26 | 285 | 6.7 | 31 | 224 | 6.1 | 24 | 98 | 2.5 | 16 | 276 | 6.7 | 17 | 260 | 6.9 | 18 | 277 | 4.1 | 19 | 305 | 5.2 | 31 | 72 | 1.5 | 31 | 112 | 4.0 |
| 4,000 | 24 | 103 | .7 | 31 | 160 | 2.7 | 20 | 311 | 6.1 | 31 | 253 | 6.7 | 25 | 292 | 10.0 | 31 | 215 | 10.5 | 24 | 102 | 3.3 | 11 | 279 | 7.4 | 15 | 257 | 5.8 | 16 | 271 | 4.9 | 13 | 314 | 6.9 | 28 | 286 | 2.0 | 29 | 109 | 4.7 |
| 5,000 | 24 | 28 | 2.0 | 31 | 162 | 2.2 | 13 | 314 | 5.9 | 30 | 264 | 10.4 | 23 | 295 | 11.6 | 30 | 216 | 13.6 | 23 | 91 | 3.0 | --- | --- | --- | --- | --- | --- | 10 | 287 | 4.3 | --- | --- | --- | 26 | 287 | 5.3 | 29 | 105 | 3.9 |
| 6,000 | 21 | 20 | 4.1 | 31 | 186 | 1.8 | 11 | 305 | 7.7 | 29 | 260 | 13.7 | 22 | 293 | 14.8 | 27 | 219 | 15.5 | 20 | 73 | 3.8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 25 | 283 | 7.3 | 26 | 100 | 2.9 |
| 8,000 | 16 | 6 | 4.4 | 28 | 202 | 4.1 | --- | --- | --- | 25 | 262 | 17.8 | 18 | 287 | 17.7 | 19 | 218 | 19.6 | 12 | 59 | 3.8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 20 | 273 | 11.0 | 24 | 129 | 4.0 |
| 10,000 | 12 | 4 | 4.9 | 25 | 226 | 5.8 | --- | --- | --- | 18 | 250 | 20.9 | 13 | 293 | 21.9 | --- | --- | --- | 11 | 59 | 3.4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10 | 277 | 15.1 | 22 | 147 | 3.3 |
| 12,000 | 11 | 24 | 5.3 | 21 | 220 | 8.5 | --- | --- | --- | 10 | 260 | 25.9 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 17 | 174 | 3.7 |
| 14,000 | --- | --- | --- | 16 | 206 | 7.8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 13 | 249 | 3.5 |

| 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 | 31 | 209 | 6.4 | 31 | 277 | 2.3 | 31 | 215 | 0.9 | 31 | 256 | 0.7 | 29 | 126 | 1.7 | 31 | 325 | 1.6 | 31 | 186 | 3.0 | 31 | 130 | 0.4 | 30 | 316 | 3.8 | 31 | 137 | 2.1 | 31 | 18 | 0.4 | 30 | 313 | 1.1 | 31 | 184 | 4.3 |
| 500 | --- | --- | --- | --- | --- | --- | 31 | 218 | 1.7 | --- | --- | --- | 29 | 145 | 1.5 | 31 | 322 | 2.5 | --- | --- | --- | 31 | 88 | .6 | 30 | 315 | 4.0 | 31 | 135 | 3.6 | 31 | 197 | .4 | 30 | 320 | 2.9 | 31 | 211 | 5.6 |
| 1,000 | --- | --- | --- | --- | --- | --- | 31 | 241 | 2.3 | 31 | 236 | .8 | 29 | 234 | 1.2 | 30 | 312 | 2.8 | 31 | 187 | 5.7 | 31 | 360 | .5 | 30 | 318 | 4.3 | 30 | 148 | 3.2 | 30 | 8 | 1.2 | 30 | 308 | 3.6 | 26 | 232 | 5.6 |
| 1,500 | --- | --- | --- | 31 | 276 | 2.4 | 31 | 261 | 2.9 | 31 | 214 | 1.6 | 28 | 286 | 2.2 | 27 | 312 | 3.4 | 31 | 188 | 6.5 | 30 | 346 | 1.3 | 28 | 301 | 2.4 | 30 | 167 | 2.6 | 29 | 357 | 2.4 | 30 | 304 | 4.3 | 25 | 248 | 5.5 |
| 2,000 | 31 | 210 | 6.7 | 31 | 278 | 3.2 | 31 | 266 | 3.7 | 31 | 212 | 2.5 | 27 | 285 | 3.5 | 24 | 316 | 5.8 | 31 | 190 | 6.7 | 25 | 336 | 3.2 | 28 | 226 | 2.8 | 28 | 189 | 2.4 | 26 | 8 | 3.8 | 28 | 306 | 4.2 | 25 | 256 | 5.9 |
| 2,500 | 31 | 207 | 7.4 | 31 | 270 | 2.9 | 30 | 279 | 4.2 | 30 | 221 | 4.0 | 27 | 277 | 4.4 | 22 | 325 | 5.8 | 31 | 199 | 6.8 | 23 | 340 | 5.1 | 27 | 204 | 5.2 | 27 | 197 | 3.4 | 22 | 3 | 4.0 | 23 | 295 | 4.1 | 23 | 266 | 5.4 |
| 3,000 | 31 | 203 | 7.1 | 30 | 260 | 2.9 | 29 | 282 | 5.3 | 30 | 238 | 5.8 | 24 | 275 | 4.5 | 20 | 330 | 6.9 | 31 | 208 | 7.0 | 23 | 343 | 6.1 | 26 | 196 | 8.1 | 27 | 198 | 4.6 | 21 | 360 | 4.1 | 17 | 296 | 3.3 | 20 | 263 | 4.9 |
| 4,000 | 31 | 198 | 7.5 | 30 | 230 | 4.1 | 27 | 284 | 6.6 | 26 | 257 | 9.1 | 19 | 278 | 6.5 | 12 | 342 | 9.6 | 31 | 216 | 7.8 | 20 | 344 | 7.1 | 25 | 210 | 11.7 | 22 | 205 | 4.6 | 14 | 338 | 6.7 | 14 | 323 | 5.4 | 13 | 278 | 6.3 |
| 5,000 | 31 | 206 | 8.4 | 29 | 222 | 6.0 | 23 | 281 | 7.9 | 25 | 257 | 12.0 | 16 | 268 | 6.9 | --- | --- | --- | 26 | 216 | 9.5 | 18 | 337 | 9.3 | 25 | 218 | 4.3 | 13 | 202 | 4.2 | 10 | 324 | 9.3 | --- | --- | --- | --- | --- | --- |
| 6,000 | 28 | 218 | 11.6 | 26 | 221 | 7.1 | 18 | 266 | 8.7 | 19 | 265 | 14.5 | 12 | 280 | 7.6 | --- | --- | --- | 24 | 223 | 8.8 | 11 | 327 | 11.3 | 24 | 218 | 15.9 | 10 | 213 | 2.8 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8,000 | 23 | 222 | 15.2 | 24 | 233 | 10.6 | 13 | 262 | 9.3 | 14 | 263 | 14.6 | --- | --- | --- | --- | --- | --- | 14 | 220 | 9.2 | --- | --- | --- | 18 | 224 | 20.3 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10,000 | 19 | 221 | 26.8 | 19 | 236 | 15.3 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12,000 | 13 | 232 | 33.4 | 13 | 248 | 20.2 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

| 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. (603 m.) | | | Washington, D. C. (24 m.) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity |
| Surface | 31 | 262 | 6.6 | 31 | 158 | 4.0 | 31 | 161 | 1.9 | 31 | 284 | 1.3 | 31 | 141 | 1.9 | 31 | 288 | 2.2 | 30 | 257 | 1.9 | 31 | 134 | 3.4 | 31 | 270 | 3.1 | 29 | 289 | 2.8 | 31 | 238 | 2.9 | 31 | 206 | 1.8 | 31 | 202 | 3.1 |
| 500 | 31 | 273 | 6.4 | 31 | 158 | 4.3 | 31 | 167 | 2.8 | 31 | 271 | 2.5 | --- | --- | --- | 31 | 284 | 3.4 | 30 | 249 | 2.6 | 31 | 121 | 3.8 | 31 | 288 | 4.0 | 29 | 284 | 4.1 | 31 | 230 | 3.3 | --- | --- | --- | 31 | 210 | 4.2 |
| 1,000 | 31 | 276 | 5.6 | 31 | 170 | 4.4 | 31 | 186 | 3.0 | 31 | 261 | 3.1 | 31 | 142 | 2.0 | 31 | 294 | 3.5 | 30 | 249 | 3.1 | 31 | 117 | 4.0 | 31 | 292 | 3.5 | 28 | 291 | 4.5 | 31 | 215 | 4.2 | 31 | 220 | 3.5 | 31 | 230 | 4.7 |
| 1,500 | 31 | 264 | 5.1 | 31 | 197 | 3.7 | 31 | 217 | 2.9 | 31 | 253 | 3.0 | 31 | 164 | 2.2 | 31 | 321 | 3.7 | 30 | 262 | 3.8 | 31 | 120 | 3.9 | 31 | 292 | 3.0 | 28 | 295 | 4.8 | 29 | 207 | 4.8 | 31 | 222 | 3.9 | 31 | 242 | 5.2 |
| 2,000 | 31 | 241 | 4.3 | 30 | 231 | 3.1 | 29 | 263 | 3.8 | 31 | 236 | 2.5 | 31 | 196 | 2.0 | 30 | 322 | 5.6 | 28 | 274 | 4.8 | 31 | 116 | 3.6 | 31 | 272 | 2.8 | 26 | 302 | 5.1 | 27 | 203 | 5.1 | 31 | 216 | 3.7 | 30 | 253 | 5.5 |
| 2,500 | 31 | 235 | 4.9 | 29 | 265 | 2.5 | 29 | 287 | 6.3 | 31 | 236 | 2.3 | 30 | 213 | 2.8 | 30 | 322 | 6.8 | 24 | 284 | 5.8 | 29 | 98 | 2.9 | 31 | 242 | 3.6 | 24 | 313 | 5.3 | 26 | 202 | 5.8 | 31 | 215 | 5.1 | 28 | 261 | 5.5 |
| 3,000 | 31 | 222 | 5.6 | 29 | 276 | 2.6 | 26 | 294 | 6.7 | 31 | 228 | 2.0 | 28 | 252 | 4.0 | 30 | 322 | 7.8 | 18 | 285 | 4.6 | 27 | 100 | 2.9 | 30 | 229 | 4.5 | 20 | 331 | 5.1 | 20 | 203 | 8.3 | 30 | 214 | 6.9 | 26 | 266 | 5.4 |
| 4,000 | 31 | 215 | 7.6 | 28 | 301 | 4.2 | 25 | 307 | 9.4 | 30 | 183 | 1.8 | 28 | 280 | 7.1 | 26 | 329 | 9.6 | 14 | 301 | 6.5 | 23 | 92 | 2.3 | 30 | 216 | 6.1 | 16 | 338 | 7.0 | 15 | 209 | 11.1 | 29 | 213 | 11.8 | 21 | 270 | 7.6 |
| 5,000 | 30 | 220 | 9.7 | 25 | 327 | 5.8 | 23 | 313 | 11.1 | 25 | 170 | 3.3 | 27 | 289 | 8.8 | 22 | 330 | 12.3 | 12 | 294 | 8.2 | 16 | 84 | 1.4 | 29 | 210 | 7.5 | 10 | 345 | 9.3 | 13 | 210 | 13.8 | 23 | 220 | 16.5 | 17 | 262 | 8.9 |
| 6,000 | 30 | 222 | 11.5 | 22 | 330 | 7.0 | 22 | 315 | 13.4 | 22 | 181 | 3.9 | 23 | 293 | 10.5 | 17 | 333 | 15.0 | 12 | 305 | 11.3 | 13 | 77 | 2.9 | 28 | 208 | 6.9 | --- | --- | --- | 13 | 213 | 16.2 | 19 | 220 | 18.9 | 13 | 257 | 9.0 |
| 8,000 | 26 | 219 | 14.2 | 17 | 351 | 7.4 | 17 | 316 | 19.7 | 17 | 188 | 9.0 | 15 | 263 | 12.8 | 12 | 322 | 17.5 | --- | --- | --- | --- | --- | --- | 19 | 188 | 5.0 | --- | --- | --- | 12 | 220 | 20.6 | 14 | 219 | 20.8 | --- | --- | --- |
| 10,000 | 18 | 225 | 15.7 | --- | --- | --- | 14 | 313 | 24.3 | 12 | 205 | 14.1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 11 | 228 | 25.1 | --- | --- | --- |
| 12,000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10 | 215 | 15.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

TABLE 3.—*Maximum free-air wind velocities (m. p. s.) for different sections of the United States based on pilot balloon observations during July 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] | 33.3 | ssw. | 2,500 | 22 | Boston, Mass. | 38.0 | ssw. | 3,345 | 22 | Boston, Mass. | 66.0 | sw. | 7,552 | 3 | Caribou, Maine. |
| East-Central [2] | 29.6 | sw. | 1,288 | 18 | Hatteras, N. C. | 26.6 | sw. | 5,000 | 9 | Raleigh, N. C. | 58.0 | nnw. | 13,960 | 11 | Nashville, Tenn. |
| Southeast [3] | 25.2 | w. | 1,728 | 16 | Birmingham, Ala. | 26.6 | sw. | 5,000 | 9 | Charleston, S. C. | 58.0 | nw. | 14,768 | 23 | Birmingham, Ala. |
| North-Central [4] | 32.6 | w. | 1,768 | 30 | Green Bay, Wis. | 46.0 | w. | 3,228 | 30 | Duluth, Minn. | 68.0 | nw. | 11,518 | 2 | St. Cloud, Minn. |
| Central [5] | 34.8 | wsw. | 1,286 | 30 | Omaha, Nebr. | 32.0 | w. | 3,749 | 14 | Columbia, Mo. | 63.0 | nw. | 10,926 | 21 | Omaha, Nebr. |
| South-Central [6] | 29.8 | nnw. | 2,338 | 20 | Little Rock, Ark. | 30.0 | nw. | 4,763 | 21 | Little Rock, Ark. | 72.8 | n. | 13,399 | 9 | Little Rock, Ark. |
| Northwest [7] | 39.9 | nw. | 1,143 | 19 | Ellensburg, Wash. | 45.8 | w. | 4,780 | 29 | Glasgow, Mont. | 76.0 | ssw. | 10,903 | 7 | Tatoosh Island, Wash. |
| West-Central [8] | 27.2 | sw. | 1,873 | 11 | Sheridan, Wyo. | 28.9 | sw. | 4,267 | 3 | Salt Lake City, Utah. | 58.0 | sw. | 13,090 | 24 | Oakland, Calif. |
| Southwest [9] | 28.7 | sw. | 1,555 | 3 | Las Vegas, Nev. | 25.5 | ssw. | 4,980 | 9 | Las Vegas, Nev. | 59.6 | sw. | 13,166 | 23 | Fresno, Calif. |

[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.