

*Rented buildings occupied wholly by the Weather Bureau.*

| Station.                  | Annual rent. | Other items included.        |
|---------------------------|--------------|------------------------------|
| Alpena, Mich.....         | \$650.00     | Heat, light, water.          |
| Anniston, Ala.....        | 475.00       |                              |
| Charles City, Iowa.....   | 420.00       | Heat, light, water.          |
| Durango, Colo.....        | 440.00       | Heat, cleaner, water         |
| East Clallam, Wash.....   | 120.00       |                              |
| Flagstaff, Ariz.....      | 300.00       |                              |
| Helena, Mont.....         | 504.00       | Heat, water.                 |
| Independence, Cal.....    | 430.00       | Heat, light, water.          |
| Iola, Kans.....           | 468.00       | Heat, light, water.          |
| Kalispell, Mont.....      | 360.00       |                              |
| Lewiston, Idaho.....      | 540.00       |                              |
| Manteo, N. C.....         | 96.90        |                              |
| Moorhead, Minn.....       | 600.00       | Heat, light, water.          |
| Mount Tamalpais, Cal..... | 420.00       | Heat, light, water.          |
| Roseburg, Oreg.....       | 550.00       | Heat, light, water.          |
| Roswell, N. Mex.....      | 720.00       | Heat, cleaner, light.        |
| Santa Fe, N. Mex.....     | 360.00       |                              |
| Santo Domingo, W. I.....  | 480.00       |                              |
| Thomasville, Ga.....      | 420.00       |                              |
| Twin, Wash.....           | 100.00       |                              |
| Williston, N. Dak.....    | 450.00       | Heat, cleaner, light, water. |
| Winnemucca, Nev.....      | 360.00       | Heat, light, water.          |
| Yankton, S. Dak.....      | 500.00       | Heat, light, water.          |

*Stations at which observers' quarters are furnished by the Government separate from offices.*

| Station.              | Annual rent. |            |
|-----------------------|--------------|------------|
|                       | Office.      | Residence. |
| Havana, Cuba.....     | (a)          | \$300.00   |
| Honolulu, Hawaii..... | \$480.00     | 540.00     |

a Public.

**GENERAL CLIMATIC CONDITIONS.**

By Mr. W. B. STOCKMAN, Chief, Division of Meteorological Records.

**PRESSURE.**

The contour of isobars of mean pressure for the year departs considerably from the normal, the greatest variation appearing over the middle and northern slope regions and southwestern North Dakota.

The mean pressure for the year was below the normal in Maine, Vermont, northern New Hampshire, extreme eastern Massachusetts, the Peninsula of Florida, the western portions of the southern and middle Plateau and southwestern portion of the northern Plateau regions, and the south and middle Pacific and southern portion of the north Pacific districts; elsewhere it was above the normal.

In the middle and northern slope regions and southwestern North Dakota the mean pressure generally ranged from +.05 to +.07 inch above the normal; smaller variations from the normal obtained in the remainder of the area of positive departures. The negative departures were small; the greatest, -.05 inch, occurred over north-central California.

**TEMPERATURE OF THE AIR.**

The isotherm of 70° of mean temperature crosses the northern portion of the Peninsula of Florida, and takes in the extreme southwestern portion of Arizona. The isotherm of 60° of mean temperature trends westward from the Atlantic coast near the parallel of 35° until it reaches the meridian of 95°, where it bends to the southward until it reaches meridian 105°; thence it trends to the northwestward until the interior of central California is reached, where it turns to the southward. A small portion of north-central California also is inclosed by the isotherm of 60°. The isotherm of 50° follows closely parallel 41° from the Atlantic Ocean to meridian 100°, where it bends to the southward, with a decided dip along the 105° meridian into central New Mexico and a marked northward turn along the western boundary to southwestern Wyoming, thence westward to western Utah, thence southward to about the northern boundary of Arizona and westward to meridian 120°, where it turns sharply to the northward as far as the Canadian border, thence to the southwestward, passing off about the mouth of the Columbia River. Over north-central

**RECOMMENDATIONS CONCERNING APPROPRIATIONS FOR 1906.**

**STATUTORY SALARIES.**

*Weather Bureau.*—One clerk at \$1,200, one clerk at \$1,000, and one clerk at \$900 are submitted. This increase is made necessary by the natural growth and normal development of the work of the Bureau, and especially by the proposed increase of eight stations.

**LUMP SUM APPROPRIATIONS.**

*Weather Bureau.*—An increase of \$20,000 is submitted under "Salaries, station employees," and is to cover the services of officials and employes required to establish and maintain eight new stations.

An increase of \$131,000 is submitted under "General expenses, Weather Bureau," as follows: \$96,000 for the purchase of ground and the erection of eight observatory buildings for the establishment of eight new stations; \$20,000 for the purchase of supplies and instruments for equipping eight new stations, and \$15,000 to cover the increased cost of supplies and telegraphing for old stations.

An increase of \$7,000 is submitted under "Buildings, Weather Bureau," to cover the increased cost of these buildings, due to the increased cost of building materials.

As it will not be necessary to construct any "Cable and land lines" the appropriation of \$35,000 for that purpose has been omitted.

Arizona there was a small area with mean temperature below 50°, while the greater portion of western Idaho was slightly above it. The isotherm of 40° passes north of the eastern portion of the United States until Upper Michigan is reached, where it passes westward to the western boundary of central North Dakota, where it turns northward into Canada. A small portion of northwestern Wyoming had a mean temperature of less than 40°.

The mean temperature for the year was above the normal generally over the Peninsula of Florida, over northeastern North Carolina, the extreme portions of southeastern Pennsylvania, southwestern New York, and northeastern Massachusetts, extreme northern New England, the central portion of northwestern New York, northern Lower Michigan, Upper Michigan, northern Wisconsin, Minnesota, Iowa, except the extreme northeastern portion, northwestern Missouri, northeastern Kansas, eastern Nebraska, South Dakota, except the extreme southwestern portion, North Dakota, Montana, Idaho, western Utah, northwestern Arizona, and the Pacific States, except the interior of central California; elsewhere the mean temperature was below the normal. The departures in but few instances exceeded 1°, the greatest +2.5°, occurred over the Red River of the North Valley.

By geographical districts the mean temperature was above the normal in the Florida Peninsula, upper Lake region, North Dakota, Missouri Valley, and the northern slope, northern Plateau, and Pacific regions; elsewhere it was below the normal. The greatest positive departure, +1.1°, occurred in North Dakota, and the greatest negative, -1.1°, in the southern slope region.

**PRECIPITATION.**

Over the country east of the Mississippi River the distribution of precipitation was not well marked as to geographic districts, as excesses and deficiencies of considerable amount occurred in the same district. To the westward of the Mississippi River the lines of demarcation between the excesses and deficiencies were much better defined as to geographical districts. Considering the geographic districts as a whole the

precipitation for the year was above the normal in the Florida Peninsula, Gulf States, Missouri Valley, slope and southern and middle Plateau and south Pacific regions; elsewhere it was below the normal.

Excesses of 10 inches, or more, occurred over east-central Florida, southwestern Alabama, Louisiana, the panhandle of Texas, central Missouri, the central portion of southern Michigan, southwestern South Dakota, southeastern Wyoming, and central Arizona. Deficiencies of 10 inches, or more, occurred in east-central New York, Massachusetts, east-central North Carolina, and eastern South Carolina—where it amounted to over 20 inches—northwestern California, western Oregon, and extreme western Washington. Over northwestern California and extreme northwestern Washington the deficiency ranged from 20 to over 28 inches.

Total precipitation, ranging in amount from about 63 to 93

inches, occurred in extreme northwestern Washington, east-central Florida, and the eastern part of the west and the western portion of the east Gulf States.

RELATIVE HUMIDITY.

The relative humidity was normal in the Middle Atlantic States, Florida Peninsula, and the north and south Pacific regions; below normal in New England, South Atlantic States, and northern Plateau and middle Pacific districts; elsewhere it was above the normal.

CLOUDINESS.

The cloudiness was normal in New England and the middle Pacific districts, below normal in the northern Plateau, and above normal in the remaining geographic districts.

RECORD OF EARTHQUAKES.

Summary of earthquakes recorded by the Bosch-Omori seismograph at Washington, D. C., during 1905.—Seventy-fifth meridian line.

By Prof. C. F. MARVIN, in charge of Instrument Division.

| Date.               | Component, N.-S. or E.-W. | Time of day.                     |                                   |                          |                          |                    | Duration of—               |                             |                    |                 | Period of pendulum. | Magnification of record. | Maximum double amplitude of actual displacement of the earth at the seismograph. |
|---------------------|---------------------------|----------------------------------|-----------------------------------|--------------------------|--------------------------|--------------------|----------------------------|-----------------------------|--------------------|-----------------|---------------------|--------------------------|--|
|                     |                           | First preliminary tremors began. | Second preliminary tremors began. | Principal portion began. | Principal portion ended. | End of earthquake. | First preliminary tremors. | Second preliminary tremors. | Principal portion. | Earthquake.     |                     |                          |  |
| 1905.               |                           | <i>h. m. s.</i>                  | <i>h. m. s.</i>                   | <i>h. m. s.</i>          | <i>h. m. s.</i>          | <i>h. m. s.</i>    | <i>m. s.</i>               | <i>m. s.</i>                | <i>m. s.</i>       | <i>h. m. s.</i> | <i>Sec.</i>         | <i>Times.</i>            | <i>mm.</i>   |
| January 20, p. m.   | N-N                       | 1 06 37                          | 1 10 58                           | 1 14 38                  | 1 20 32                  | 1 29 15            | 4 21                       | 3 40                        | 5 54               | 0 23 38         | 28                  | 10                       | 0.22   |
| February 14, a. m.  | N-N                       | 4 14 10                          | 4 23 00                           | 4 31 21                  | 4 35 36                  | 5 20 00            | 3 50                       | 8 21                        | 5 54               | 1 05 50         | 28                  | 10                       | 0.22   |
| March 22, p. m.     | N-N                       | 10 59 32                         | 11 12 42                          | 11 24 06                 | 11 26 17                 | 0 13 12            | 13 12                      | 11 24                       | 2 11               | 1 13 40         | 28                  | 10                       | 0.35   |
| April 3, p. m.      | N-N                       | 8 14 49                          | 8 36 13                           | 8 51 15                  | 8 54 13                  | 10 45 07           | 21 24                      | 15 02                       | 2 58               | 2 30 18         | 28                  | 10                       | 1.23   |
| May 9, a. m.        | N-N                       | 2 53 42                          | 3 07 32                           | 3 15 52                  | 3 15 52                  | 3 15 52            | 3 50                       | 1 16                        | 1 16               | 0 22 10         | 28                  | 10                       | 0.10   |
| July 9, a. m.       | N-N                       | 5 04 35                          | 5 22 07                           | 5 33 42                  | 5 46 27                  | 6 34 25            | 17 32                      | 11 35                       | 12 45              | 1 29 50         | 27                  | 10                       | 0.81   |
| July 14, a. m.      | N-N                       | 4 05 00                          | 4 05 00                           | 4 05 00                  | 4 05 00                  | 4 24 00            | 4 24 00                    | 4 24 00                     | 4 24 00            | 0 19 00         | 27                  | 10                       | 0.01   |
| July 21-23, p. m.   | N-N                       | 10 10 13                         | 10 25 33                          | 10 39 00                 | 10 59 00                 | 0 21 30            | 12 20                      | 13 27                       | 20 00              | 2 11 17         | 26                  | 10                       | 5.40   |
| September 14, p. m. | N-N                       | 10 11 00                         | 10 24 00                          | 10 30 40                 | 10 53 00                 | 0 46 15            | 13 00                      | 6 40                        | 22 20              | 2 35 15         | 30                  | 13.2                     | 5.40   |
| September 15, a. m. | N-N                       | 3 02 30                          | 3 17 30                           | 3 17 30                  | 3 23 00                  | 4 05 47            | 5 30                       | 5 30                        | 5 30               | 1 03 17         | 26                  | 10                       | 0.20   |
| September 15, a. m. | N-N                       | 1 13 45                          | 1 23 35                           | 1 37 45                  | 2 01 10                  | 2 46 18            | 9 50                       | 14 10                       | 23 25              | 1 32 33         | 32                  | 10                       | 0.35   |
| September 15, a. m. | N-N                       | 1 17 20                          | 1 33 05                           | 1 38 40                  | 1 57 37                  | 3 36 20            | 15 45                      | 5 35                        | 18 57              | 2 19 00         | 43                  | 13.2                     | 0.87   |
| October 15, p. m.   | N-N                       | 4 46 00                          | 4 54 20                           | 4 54 45                  | 4 58 10                  | 5 06 35            | 3 25                       | 3 25                        | 3 25               | 0 20 35         | 28                  | 10                       | 0.10   |
| October 15, p. m.   | N-N                       | 4 45 46                          | 4 49 20                           | 4 53 05                  | 4 54 20                  | 5 40 22            | 3 24                       | 3 45                        | 1 15               | 0 54 36         | 43.1                | 13.2                     | 0.30   |
| October 24, p. m.   | N-N                       | 12 55 00                         | 1 00 00                           | 1 00 00                  | 1 03 30                  | 1 23 15            | 3 30                       | 3 30                        | 3 30               | 0 28 15         | 32                  | 10                       | 0.35   |
| October 24, p. m.   | N-N                       | 1 00 00                          | 1 00 00                           | 11 03 00                 | 1 05 00                  | (?)                | 2 00                       | 2 00                        | 2 00               | 43.1            | 13.2                | 0.11                     |  |
| November 8, p. m.   | N-N                       | 5 27 30                          | 5 39 00                           | 5 39 00                  | 5 45 35                  | 6 02 00            | 6 35                       | 6 35                        | 6 35               | 0 34 30         | 27.5                | 10                       | 0.08   |
| November 8, p. m.   | N-N                       | 5 27 25                          | 5 42 00                           | 5 42 00                  | 5 51 00                  | 7 08 30            | 9 00                       | 9 00                        | 9 00               | 1 41 05         | 23.8                | 13.2                     | 0.26   |
| December 10, a. m.  | N-N                       | 7 52 00                          | 8 02 45                           | 8 05 32                  | 8 13 50                  | 9 04 30            | 10 45                      | 2 47                        | 8 18               | 1 12 30         | 28                  | 10                       | 0.33   |
| December 10, a. m.  | N-N                       | 7 52 35                          | 8 03 14                           | 8 06 42                  | 8 25 46                  | 9 08 44            | 10 39                      | 3 28                        | 19 04              | 1 16 09         | 21.2                | 10.5                     | 0.59   |
| December 17, a. m.  | N-N                       | 12 42 45                         | 12 47 42                          | 12 47 42                 | 12 51 24                 | 1 43 05            | 3 42                       | 3 42                        | 3 42               | 1 00 20         | 28                  | 10                       | 3.00   |
| December 17, a. m.  | N-N                       | 12 31 30                         | 12 42 44                          | 12 47 50                 | 12 51 20                 | 1 47 00            | 11 14                      | 5 06                        | 3 30               | 1 15 30         | 21.2                | 10.5                     | 2.00   |
| December 17, a. m.  | N-N                       | 4 47 34                          | 4 52 44                           | 4 52 45                  | 4 55 09                  | 5 21 46            | 2 24                       | 2 24                        | 2 24               | 0 34 12         | 28                  | 10                       | 0.60   |
| December 17, a. m.  | N-N                       | 4 47 34                          | 4 52 44                           | 4 02 00                  | 4 56 00                  | 5 42 10            | 5 10                       | 2 16                        | 1 00               | 0 54 36         | 21.2                | 10.5                     | 0.50   |
| December 17, a. m.  | N-N                       | 6 33 30                          | 6 33 30                           | 6 33 30                  | 6 33 30                  | 6 50 05            | 3 33                       | 3 33                        | 3 33               | 0 16 35         | 28                  | 10                       | 0.02   |
| December 17, a. m.  | N-N                       | 6 33 00                          | 6 33 00                           | 6 36 45                  | 6 40 18                  | 7 32 15            | 3 33                       | 3 33                        | 3 33               | 0 59 15         | 21.2                | 10.5                     | 0.01   |