MONTHLY WEATHER REVIEW,

OCTOBER, 1879.

(General Weather Service of the United States.)

WAR DEPARTMENT,

Office of the Chief Signal Officer,

DIVISION OF

TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE.

INTRODUCTION.

In preparing this REVIEW the following data, received up to October 14th, have been used, viz: the regular tri-daily weather charts, containing the data of simultaneous observations taken at 157 Signal Service stations and 12 Canadian stations, as telegraphed to this office; monthly journals and means 133 and 132 respectively, from the former; reports from 29 Sunset stations; 249 monthly registers from Voluntary Observers; 52 monthly registers from United States Army Post Surgeons; Marine Records; International Simultaneous Observations; monthly reports from Voluntary Observers in, and the local Weather Service of, Missouri; reliable newspaper extracts; special reports.

BAROMETRIC PRESSURE.

Upon chart No. II is shown by the isobaric lines the general distribution of atmospheric pressure, as reduced to the sea level, for the month. The variations from the average pressure for the past seven years have been marked and general. East of the Mississippi river the pressure has been decidedly in excess save in the Gulf States. The excess in New England has ranged from 0.04 inch to 0.08 inch, except on Mount Washington, where it was 0.11. The greatest excess was in the Middle Atlantic States and the Lower Lake region, where it varied only from 0.09 inch to 0.11 inch. The deficiencies have been greatest in the Red River of the North valley, ranging from 0.08 to 0.11 inch, and in southern Florida from 0.04 to 0.06 inch. Deficiencies are reported in the Plateau District from Salt Lake of 0.03 inch, and from Virginia City of 0.04 inch, these being the only stations therein with seven years means. On the Pacific coast the pressure at San Deigo was normal, at San Francisco 0.01 inch in excess, and at Portland there was a deficiency of 0.035 inch.

The Local Barometric Ranges have been greatest in New England, over which section the severest storms of the month have passed. The ranges in that district have been unusually great, ranging from 1.38 inch at New Haven to 1.85 inch at Eastport. The range elsewhere of one inch and over includes the Middle Atlantic States, the Lake region, the Northwest, the Lower Missouri valley, North Carolina, the greater part of the Ohio valley, the Mississippi valley from Keokuk northward, and the Northern Plateau district. The range of 0.75 inch and below includes in its limits ten Gulf stations, the southern half of Texas and Georgia, the Southern Plateau district and southern California. The only ranges below 0.50 inch have been 0.40 at Los Angeles, 0.44 at Punta Rassa and 0.49 at Key West.

Areas of High Barometer.—Of these, seven have been deemed sufficiently marked to merit description.

No. I.—This area appeared on the Northern Pacific coast the afternoon of the 1st, and moving southeast by the morning of the 2nd was in Wyoming. Minimum temperatures of 32° were reported from Virginia City and Fort Custer, and 39° from Cheyenne. Moving northeast on the morning of the 3rd it had reached Minnesota, St. Paul barometer 0.23 above the normal. Its progress thus far had been marked by generally cool, clear weather, with no rain-fall. At that time freezing minimum temperatures were reported from northern Dakota and Minnesota. Moving slowly eastward its centre on the morning of the 4th was in Ontario; Toronto barometer 0.25 above the normal. Brisk southerly winds then prevailed on the Middle Atlantic coast, and at noon Cautionary Signals were displayed at Cape Hatteras and Kittyhawk. They

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