

SUMMARY of the OBSERVATIONS made at the STATIONS included in the DAILY and WEEKLY WEATHER REPORTS, for the CALENDAR MONTH,

OCTOBER 1891.

(Issued as a Supplement to the Weekly Weather Report, 1891.)

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General Summary.—The month of October was exceedingly wet and stormy, especially over the southern parts of England. Thunderstorms occurred in most districts, and auroral displays were unusually prevalent in the north of Scotland. Pressure was below the average generally; temperature was below the normal at many of the western and northern stations, but above it elsewhere; the winds were Southerly or South-westerly, and gales of considerable severity were frequent. Rainfall was greatly in excess of the normal, excepting in some of the northern districts. The amount of bright sunshine was very considerable.

Pressure.—*Mean for the month at 8 a.m.* ranged from between 29·75 ins. and 29·78 ins. over the south-east of England and the eastern half of the Channel, to 29·5 ins. and less off the west of Scotland and the north-west of Ireland. The distribution was therefore favourable for winds from the Southward and South-westward, and the gradients were unusually steep. The mean values were below the average* in all parts of the kingdom, the deficit being greatest (0·27 in. to 0·33 in.) on the west coasts of Ireland and Scotland, and least (0·13 in. to 0·16 in.) in the south-east of England. *Highest* readings were recorded on the 30th or 31st, when the barometer rose above 30·5 ins. generally, and above 30·7 ins. over the northern parts of Great Britain. *Lowest* readings were observed as a rule during the passage of the deep depression of the 13th (see Map 2, Plate X.), when the barometer fell to 28 ins. or rather less in the extreme northern and north-western parts of the kingdom, to 28·5 ins. or less over Ireland and Scotland generally, and to between 28·7 ins. and 29·3 ins. over the greater part of England. In the south and east of England, however, equally low readings were registered between the 21st and 23rd of the month. *Range* was large, especially in the west and north, where it amounted to over two inches.

Depressions were very numerous, but in many cases their centres lay too far to the westward or northward of our Islands for the tracks to be laid down on Map 2, Plate X. The most important disturbance was that of the 13th, but the smaller system which traversed Ireland and Scotland on the 16th was of almost equal depth.

Anticyclones.—The anticyclones noticed over Europe were as a rule located far to the eastward or southward of our Islands. During the concluding week, however, a large area spread over the United Kingdom from the northward, and at the close of the month the central portion of this system embraced the greater part of north-western Europe.

Winds.—The prevailing winds were Southerly and South-westerly, the slight proportion of Easterly breezes being confined almost exclusively to the last week of the month. Gales were of unusual frequency, especially over the English Channel, no fewer than 16 being reported at Dungeness and 14 at Hurst Castle. On other portions of our coasts the maximum number was 12, this value being reached at Stornoway, Mullaghmore, Valencia, and Roche's Point. The Southerly to South-westerly gale of the 13th–14th was very general and of great violence.

Temperature.—*Mean at Sea Level* ranged from 56° at Jersey, and from between 52° and 55° on the south and south-east coasts of England, to a little below 47° over central Ireland, and many of the inland parts of Scotland. Over Ireland, the south-west of England, and at several stations situated in Scotland and the north of England the values were below the average,* but elsewhere they were above it, the excess being greatest on our south and south-east coasts. *Highest* readings were observed on somewhat irregular dates, but mostly on the 1st, 3rd, or 4th, when the thermometer rose above 60° in most districts, and above 65° in the south and east of England. *Lowest* readings occurred mostly between the 29th and 31st, excepting in Ireland, where they were registered on the 25th and 26th; sharp frost was recorded in many of the inland districts, the lowest reading of all being 20° at Braemar. *Range* was moderate. *Vapour Tension* varied from 0·26 in. or less over central Ireland and the central and eastern parts of Scotland to between 0·36 in. and 0·39 in. on the south coast of England. *Relative Humidity* was as low as 81 per cent. at Jersey and below 85 per cent. at one or two other stations on our eastern and western coasts; at Stornoway and Ardrossan it was 96, and at Hurst Castle 97.

Rainfall was less than the average* in the north and east of Scotland and some portions of the north of England, but considerably in excess in most other districts, the difference being especially large over the central and southern parts of England, where the aggregate fall was in many cases from two to three times as much as the average. The largest amounts recorded over England were 9·8 ins. at Southampton, 9·5 ins. at Hurst Castle, and 8·1 ins. at Falmouth. In the extreme north of England, and in many of the eastern Scotch districts, there was less than 2 ins. The number of rainy days was not particularly large in Ireland and Scotland, but at most of the English stations it was above the average for October.

Bright Sunshine.—Notwithstanding the generally unsettled character of the weather, the amount of bright sunshine was above the average* over the entire kingdom, the excess being especially great in the west. The per-centage of the possible amount of duration was above 30 in all localities, excepting the north of England and some isolated parts of Scotland, and above 40 at many of our western and southern stations, the highest of all being 50 at Dublin, 47 at Jersey, and 46 at Armagh.

* The averages employed are—Pressure and Temperature for the 20 years, 1871–90; Rainfall for the 25 years, 1866–90; Bright Sunshine for the 10 years 1881–90.