

SUMMARY OF OBSERVATIONS.

NOVEMBER, 1905.

General Summary.—During the greater part of the period under review the atmospheric conditions were of an exceedingly unsettled type, due to the number of disturbances which advanced from the Atlantic, some skirting the western coasts going northward, others crossing the country in various directions. But while many of the depressions were deep, and in three instances very deep, the general freedom from wind storms, which had been a characteristic feature since the early spring months, was maintained until nearly the close of November, a fresh, strong or whole gale being experienced in the course of the 26th or 27th on practically every section of our coasts, the wind direction being Southerly to Westerly and North-Westerly. Most of the time the weather was cold and unpleasant, sharp frosts occurring in many localities after the middle of the month. The atmosphere was humid, and in most districts rain was frequent, and at times heavy. From time to time there were falls of hail, sleet or snow pretty generally. Fog was reported on several days, more especially over the inland and eastern and south-eastern counties of England, being very dense occasionally. Thunderstorms, or thunder or lightning alone, occurred on various dates at a number of places. On the evening of the 15th there was a brilliant display of aurora borealis practically all over the kingdom, extending southwards into France. At the same time a magnetic storm was registered at Kew Observatory. Relatively sharp earthquake shocks were felt in Manchester and the surrounding districts at about 3.45 a.m. on the 25th. For the month as a whole pressure was everywhere well under the normal; the winds were very variable in direction and gales were felt in some localities on several days; temperature was in defect at nearly every station; rainfall was in excess over the greater part of England, variable in Ireland and Scotland; and bright sunshine was generally in excess.

Pressure.—*Mean at 8 a.m.* ranged from 29.71 ins. at Jersey and about 29.70 ins. along the Thames Valley to below 29.60 ins. in the north-west and north, 29.58 ins. at Stornoway. The values were all below the average*, the deficiency amounting to 0.12 in. at Sumburgh Head and to as much as 0.25 in. at Pembroke and Scilly. The distribution of mean pressure was more irregular than the normal and the gradient was slight. *Highest* readings occurred on the 17th and 18th, 30.28 ins. to 30.25 ins. at several places. On the 22nd Jersey touched 30.25 ins. *Lowest* values were recorded on the 1st and 2nd, 28.88 ins. at Portland Bill; 12th and 13th, 28.68 ins. at Valencia; and 26th and 27th, 28.61 ins. at Malin Head. At all stations the mercury passed below 29 ins. on one or more occasions. *Range* was consequently large, and unusually uniform, from 1.3 in. at Bath and Yarmouth to 1.6 in. at Aberdeen and Malin Head.

Depressions.—The low pressure systems were numerous, and their paths very varied. A deep disturbance which appeared at the mouth of the English Channel on the morning of the 1st followed a tortuous path, occupying a week in reaching the Shetlands, finally passing beyond the Arctic Circle, and crossing Lapland to the White Sea region. A deeper depression reached the south-west of Ireland on the 12th, and travelling quickly on an east-south-easterly course traversed the north of France to South Germany, Austria and Russia. A slightly deeper one arrived over the north-west of Ireland on the 26th, followed a north-easterly course to the Norwegian coast, and eventually crossed the White Sea. The other disturbances were of more moderate depth, the majority of them keeping to the north-eastward outside our north-western and northern coasts, but the paths of two were eastward across France.

Anticyclones.—The high pressure areas of the month were in nearly all cases far distant, either in the extreme south-west, south-east or north-east of Europe. A small one, in which the readings were slightly above 30.1 ins., appeared over Britain on the 9th, immediately passing away to the north-eastward. The highest barometer readings were recorded at a time when the centre of the anticyclone lay over Bavaria and Austria.

Winds.—With the irregular distribution of pressure and the very varied paths of disturbances, winds from all quarters were experienced, there being no decided preponderance from any one direction. Gale force was attained on 5 or more days in several localities, on 8 days at Jersey, Portland Bill, Pembroke and Yarmouth, and on 10 days at Deerness.

Temperature.—*Mean at sea level* ranged from 48° at Guernsey and above 45° along the south-west coast of England, from the Isle of Wight to Pembroke, to slightly below 41° at various inland stations in the southern counties of England and Wales, and below 40° at some places in Ireland and Scotland, mostly inland. The general distribution was similar to the normal, but the actual values were, almost without an exception, below the average*, the deficiency exceeding 4° at Birr Castle, Kilkenny Castle, and Bettws-y-Coed, and amounting to 5.2° at Cardiff. *Highest* readings occurred on very varied dates, but mainly about the 2nd, 22nd and 26th. A maximum of 59.5° was reached at Eastbourne (2nd), 58° at Killarney (4th), and 57° at Jersey and Maidenhead (2nd), Clongowes Wood College (3rd), and Wokingham (11th). *Lowest* values were recorded between the 16th and 22nd, in the majority of cases on the 18th or 19th. Braemar touched 5°, and a number of stations reported minima between 13° and 20°. *Range* was, as a rule, only moderate, less than 35°, but Braemar had 45°, Clongowes Wood College 41°, and Crathes and Wokingham 40°, while Scilly and Sumburgh Head had only 19°, and Malin Head and Deerness 18°. *Vapour Pressure* ranged from 0.27 in. at Scilly and Jersey to 0.20 in. at Birr Castle and Nairn. *Relative Humidity* was generally high, from 95 per cent. at Birr Castle to 84 per cent. at Scilly and Jersey.

Rainfall.—In Scotland, Ireland and the south-west of England the rainfall was rather variable in amount; over the rest of England and Wales it was above the average*. At a dozen stations there was an excess of more than 2 ins., as much as 3.1 ins. at Braemar and Clathick, 3.3 ins. at Guernsey, and 3.4 ins. at Alnwick Castle. Nowhere was there a large deficiency. Aggregate totals exceeding 5 ins. were numerous, Crathes returning as much as 9.4 ins. Several places in the eastern counties of England received less than 2 ins., Yarmouth 1.5 ins. The number of days on which precipitation was measured ranged from 29 at Blacksod Point and Guernsey to 11 at Dunmow. Falls of more than an inch in a day were uncommon, the largest being 1.7 in. at St. Leonards, and 2.3 ins. at Crathes, both on the 11th.

Bright Sunshine.—The duration of bright sunshine was above the average* at nearly all stations. The excess was mostly small, but Torquay had 43 hours more than usual, and the excess at Blackpool, Tenby, Plymouth and Scilly amounted to 30 hours or more. The percentage of possible duration ranged from 41 at Scilly, and 40 at Salcombe and Torquay to 11 at Westminster and Glasgow, 10 at Prestwich and 9 at Manchester, Whitworth Park.

* The averages employed are—*Pressure and Temperature* for the 30 years 1871–1900; *Rainfall* for the 35 years 1866–1900; and *Bright Sunshine* for the 20 years 1881–1900. See Appendix III. "Weekly Weather Report," 1901.