

SUMMARY OF OBSERVATIONS.

OCTOBER, 1906.

General Summary.—Very changeable and unsettled atmospheric conditions were in the ascendant during the greater part of the period under review. The distribution of barometric pressure differed widely from what had been experienced for some time previously, disturbances being not only more numerous, but most of them passed across some portion of the country. On the other hand, there was an almost entire absence of areas of high pressure. The weather consequently was frequently wet, the number of days on which precipitation was measured being in nearly all districts considerably in excess of the normal for the time of year. Hail was experienced on various occasions in many districts, sleet or snow in some northern districts on the 13th, 19th, 30th and 31st. Thunderstorms were, for the season, rather frequent, being reported in various localities on the 1st, 2nd, 9th, 10th, 13th, 16th, 22nd, and 29th, thunder or lightning alone on several other days. Although the month was of a very disturbed character there were few days on which the wind force exceeded that of a fresh gale, but a strong gale was felt on the middle portion of the English Channel on the 2nd, in Caithness on the 19th, in Donegal on the 20th, and generally along the north-western and northern coasts on the 26th, when Malin Head reported the strength of a whole gale. Days on which fog occurred were rather numerous, but usually the fog was of no great density, and as a rule it was limited to the early part of the day. The most notable feature of the period was the almost uninterrupted mildness throughout England, while in Ireland and Scotland the only break was about the middle of the month. Frosts were rare, the night temperatures seldom passing below 30° anywhere, and in several neighbourhoods minima below 40° were uncommon. At some stations in the south-eastern quarter of England it was the mildest October on record. For the whole month pressure was well below the usual level; there was a decided excess of temperature; the winds were chiefly Southerly to Westerly in direction; rainfall was very frequent and above the normal; and bright sunshine was rather variable, in most places in defect. According to newspaper reports two earthquake shocks were felt in the valley of the Devon, Stirlingshire, early on the morning of the 8th.

Pressure.—*Mean at 8 a.m.* ranged from 29.92 ins. at Jersey, and above 29.8 ins. over the south and south-east of England to below 29.7 ins. over the more northern and north-western parts of the kingdom, 29.63 ins. at Malin Head and Stornoway. In all cases the values were less than the average*, the deficiency being 0.02 in. at Jersey, and 0.04 in. at Dungeness, while it was as much as 0.18 in. on the west and north coasts of Ireland. The general distribution of the mean results was rather different from the normal, the area of lowest values being off the north-western instead of beyond the northern coasts, so that the type of conditions was South-Westerly rather than Westerly, and the gradient was steeper than usual. *Highest* readings were registered on the 25th, when they were above 30.4 ins. in most parts of England, 30.46 ins. at Oxford. *Lowest* values were 29.08 ins. at Scilly on the 2nd, 29.15 ins. at Blacksod Point on the 8th, 29.09 ins. at Sumburgh Head on the 15th, 29.16 ins. at Stornoway on the 17th, and at Valencia on the 20th, and 28.99 ins. at Sumburgh Head on the 28th. *Range*, in the absence of any very high pressures, was moderate, from an inch at Birr Castle to 1.4 in. at Scilly, at most stations between 1.1 in. and 1.2 in.

Depressions.—The centres of most of the month's disturbances passed over some portion of the country, and, as will be seen from the preceding paragraph, several of them were of considerable depth. In one case the path of the minimum of pressure was an erratic one; at first advancing north-eastward, then southward outside the Irish coast, curving round to the mouth of the English Channel, thence taking a north-easterly course across England and disappearing off the Norwegian coast.

Anticyclones.—Nearly all the high pressure systems were found over Eastern Europe, the only anticyclone which visited these islands passing eastward across England on the 25th.

Winds.—Following closely the mean disposition of barometric pressure the winds were largely from Southerly to Westerly points of the compass, except in the Shetlands, where a South-Easterly current prevailed. The days on which the force of a gale was attained numbered 7 at Blacksod Point and Malin Head, 3 at Holyhead, Pembroke, Portland Bill and Laudale,

Temperature.—*Mean at sea level* ranged from nearly 57° at Guernsey and above 54° at several of the more southern and south-eastern stations to below 49° over the greater part of Scotland and in the inland parts of Ireland, 47° at Sumburgh Head. The general distribution agreed fairly with the normal, but with only two exceptions, both in Wales, the actual values were above the average*, the excess as a rule being very marked, especially in the southern districts, many stations showing an excess of more than 4° , a few more than 5° , Westminster 5.5° . Both the maximum and the minimum temperatures were recorded on very varied dates. *Highest* values, 74° at Whitby (10th), Cromer and Geldeston (11th), 72° at Cambridge (11th), Maidenhead (1st); 70° at Killarney (1st), 68° at Lairg (7th). *Lowest* values, 21° at Lairg (30th), 23° at Llangammarch Wells (20th), Nairn and Balmoral (30th), and 24° at Markree Castle (19th), and Kilkenny Castle (20th). *Range* exceeded 46° at Lairg and was 40° to 42° at a few other stations in England, Scotland and Ireland, but was only 24° at Deerness, 23° at Pembroke, and 22° at Scilly. *Vapour Pressure* ranged from 0.26 in. at Strathpeffer (9 a.m.) to 0.39 in. at Clacton-on-Sea (9 p.m.). *Relative Humidity* ranged from 82 per cent. at Dungeness and Yarmouth (6 p.m.), and Trinity College, Dublin (9 a.m.) to 97 per cent. at Malin Head (8 a.m.). *Mean Earth Temperature* at 1 ft. depth ranged from 50.5° at Bettws-y-Coed to 56° at Bath; and at 4 ft. depth from 50° at Aberdeen to 58° at Bath.

Rainfall.—At a few stations there was a deficiency of precipitation, at Stornoway to the extent of 3.7 ins., but generally it was above the average*, the excess amounting to more than 4 ins. at Pembroke and Marchmont. The aggregate totals for the month exceeded 7 ins. at a number of places in the west and north, 8.9 ins. at Fort William, and 9.1 ins. at Port Talbot, while the smallest were 1.9 in. at Broadstairs, and 1.8 in. at Margate. The number of days on which precipitation was measured was generally large, 31 at Roche's Point and Foynes, and 30 at Edenfel and Killarney, against 14 at Lowestoft and Southend-on-Sea, and 13 at Folkestone. Falls of an inch or more in 24 hours occurred on twelve days, the heaviest being over the north-eastern districts on the 18th and 19th, 2 ins. at Alwick Castle, and 2.1 ins. at Balmoral.

Bright Sunshine.—The duration of bright sunshine was somewhat variable, Stonyhurst returning a loss of 28 hours, and Felixstowe a gain of 31 hours. The percentage of the possible duration ranged from 18 at Glasgow and Manchester (Whitworth Park) to 45 at Felixstowe.

Observations in the Upper Air.—Kite observations were obtained on the 4th, 6th, 12th—15th, 17th, 18th (2), 19th, 20th (2), 23rd, 25th, 27th and 29th.

* The averages employed are—*Pressure, Temperature and Rainfall* for the 35 years 1871–1905; and *Bright Sunshine* for the 25 years 1881–1905. The values will appear in Appendix III. to the Weekly Weather Report for 1906.