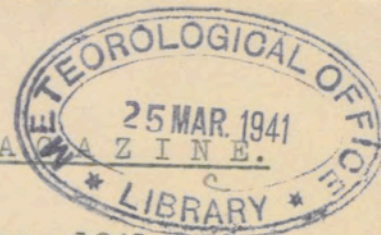


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METEOROLOGICAL MAGAZINE.



December 1940 and January 1941.

For various reasons it was not practicable to prepare a separate issue of the typescript Meteorological Magazine for December. The issues for December and January are therefore combined.

The New Year Honours List contains three names associated with meteorology:

Dr.E.V.Appleton, D.Sc., LL.D., F.R.S., Secretary to the Department of Scientific and Industrial Research, receives a K.C.B. Prof.Appleton is well known to meteorologists for his work on the ionosphere as well as on radio-telegraphy in general.

Mr.R.A.Watson Watt, Scientific Adviser on Telecommunication, Ministry of Aircraft Production, receives a C.B. Mr.Watson Watt was at one time in the Meteorological Office and subsequently became Superintendent of the Radio Research Stations of the Department of Scientific and Industrial Research, the Radio Department of the National Physical Laboratory and in 1936-38 of the Bawdsey Research Station. He has published a great deal of very valuable work on the occurrence and nature of atmospherics.

Mr.C.K.M. Douglas receives the O.B.E. The wide field covered by Mr.Douglas's researches is too well known to meteorologists to need description.

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RAINFALL OF NOVEMBER 1940.

Over England and Wales November 1940, with a general rainfall of 215 per cent., was the wettest November since comparable statistics are available back to 1870, apart from that of 1929 with 220 per cent. Over Scotland, with 147 per cent. there are ~~two~~<sup>three</sup> wetter Novembers in the series viz. those of 1877, 1890 and 1938 and 153, 147 and 158 per cent. respectively. It is of interest to note (a) that over England and Wales eleven of the last fifteen Novembers have given more than the average and this period includes the four wettest Novembers on record and (b) that 1940 and 1929 were similar in giving a cold spell at the beginning of the year as well as wet Novembers.

HALO PHENOMENON.

On November 6th, 1940, at 20h.43m. I observed the following from Caego, about two miles NW of Wrexham. Vertically above the moon appeared the arc of contact of the halo of  $22^{\circ}$ , together with a lunar pillar extending about  $2^{\circ}$  both above and below the moon. Both were colourless, as is usual with lunar optical phenomena, and there were no other haloes visible, not even that of  $22^{\circ}$ .

Lunar arcs of contact are not observed frequently, and I was surprised to see this one, with the moon only half-an-hour past first quarter. The sky was heavily covered with ci-st, with patches of st. here and there travelling from a westerly point. These quickly came up and obscured the moon and the optical phenomena, which were visible for only three minutes.

November 6th. 1940.

S.E. ASHMORE.



AURORAL NOTES, AUGUST TO OCTOBER, 1940.

Aurora was seen at Duntuilin in Skye on the night of August 27th, this being the first report of its occurrence in Great Britain since April 26th. The phenomenon was seen on one other occasion in August - on the 30th at Abbotsinch.

On September 1st, Leuchars, Abbotsinch and St. Abbs Head reported aurora. At 23h. on the 2nd, and under cloudy conditions an observer at Lerwick noted diffuse luminous surfaces of moderate intensity in the NW up to 45 degrees. On the 4th, Mr. G.E.D. Alcock of Peterborough observed a diffuse auroral arch of moderate brightness from 22h.30m. to 23h.45m. The arch was highest in the NNE, being some 20 degrees in width, and the lower sharper edge was eight degrees above the horizon. Other reports in early September were from Stornoway on the 3rd, Kirkwall on the 6th and 7th, Aberdeen on the 7th and from Lerwick on the 10th. On the 24th at Lerwick aurora of moderate intensity was seen through gaps in the clouds between 21h.20m. and 22h.20m. The most widely observed display in September was that on the 27th, reports of which were received from many places in Scotland and from as far south as Peterborough where Mr. Alcock noted a "quite bright" auroral glow followed by a few isolated streamers stretching up to 15 degrees of altitude. On the 28th aurora was seen from Skye and from Paisley and St. Abbs Head. Several northern stations reported it on the 29th.

There was frequent auroral activity during October, the phenomenon being noted on 12 nights in Shetland. On the 1st, displays were seen at many places between Lerwick in the north and Eskdalemuir in the south. At the former station, observations were made under an almost cloudless sky from 18h.35m. to 22h. At the beginning of this period active arcs of ray structure with waves of considerable intensity extended from NW to NE up to 25 degrees altitude. At 19h.20m. bands with ray structure in the North to 45 degrees were very active and of rather more than moderate intensity. The phenomenon continued in varying form and intensity until 22h. It was seen on the following night at Lerwick and Nairn and on the 5th at the former station. Displays from the 6th to the 8th were widely observed. Reports on the 6th included one from Valentia in southwest Ireland. Observing conditions were good at Lerwick on the 7th where aurora was seen from 19h.10m. to 22h.10m. At 20h.20m. rapidly fluctuating draperies spread over most of the northern sky, their colours being bright green with pink edges. About this time they were bright, or even very bright, and there was a corona overhead. On the same night auroral glows were seen from Foynes in Ireland and from Cardington in Bedfordshire.



On the 8th Lerwick again had a fine display which was brightest at 23h.22m. when arcs with ray structure, green and pink in color, were very active, rising to 40 degrees. Aurora on the 8th was seen behind clouds at Peterborough. Single reports of aurora on the 11th, 22nd, and 24th came from Skye, Aberdeen and Paisley respectively. On the 21st it was seen at Lerwick and at Foynes. At the latter place homogeneous arcs were noted at 21h. but cloud prevented observations of later developments. Displays were seen at several places in the north each night from the 25th to the 28th and at Lerwick also on the 31st.

H.E.C.

The following obituary notices may be of interest:-

Mr. John Ritchie, who died on 2nd August 1940, had maintained the Perth climatological station since 1918. He was well known as a natural history research worker and became Director of Perth's new Art Gallery and Museum when they were opened by the King and Queen in 1935. The meteorological records are being continued by the City Council.

Mr. James W. Robertson, whose death occurred on 25th November always showed keen interest in the meteorological records which he kept at Arbroath for 19 years. His son, Mr. S.J.W. Robertson, has succeeded him as observer.