

THE HALO COMPLEX OF MARCH 4TH, 1935.
AT ST. ANDREWS, N. B.

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ABSTRACT.

A halo complex occurred at St. Andrews, N. B., on March 4, 1935. In addition to the usual halos of 22° and 46° , the parhelia of 22° , and the circumzenithal arc, an upper contact arc, inverted in type, of the 22° halo was observed.

Although parhelia (sun dogs) are not uncommon, a halo complex is a rare phenomenon on the Canadian Atlantic coast. The writer, with the assistance of his associates at the Atlantic Biological Station, made certain notes on a halo

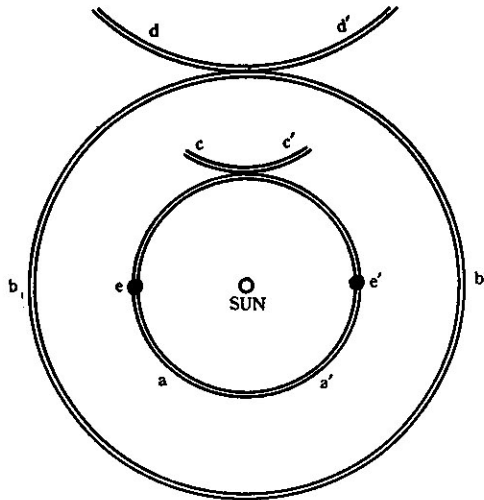


Fig I. The halo complex of March 4th,
at St. Andrews, N. B.

complex observed at St. Andrews, N. B., on March 4, 1935. The phenomenon occurred about 4:50 P.M., A.S.T., and lasted "in parte" and "in toto" for about twenty minutes. The outstanding features are noted in Fig. I where aa' represents

the halo of 22° , bb' the halo of 46° , ee' the parhelia of 22° , and dd' the circumzenithal arc¹. The halos were brilliantly coloured, as in the rainbow, but notes were not made either of the colours present or the relative positions of the colours. The sky was noted as "leaden sky" but the particular type of cloud formation was not recorded.

A general description of optical atmospheric phenomena is furnished in a publication of the Canadian Department of Marine². Attention is drawn therein to the so-called "arcs of contact", of which one, the upper tangent arc, is referred to in particular as being well known. In this connection, a feature of the halo complex herein described, and which was given particular attention, was an upper contact arc cc' of the halo of 22° (see Fig. I). To the eye, this arc would seem to be one of radius equal to that of the halo of 22° , and not concentric with the circumzenithal arc. The main feature would seem to be that it is of an inverted type and in this respect different from the more common forms described as "upper tangent arcs of the halo of 22° ".

¹ Humphreys. "*Physics of the Air*", McGraw-Hill Book Co., New York. 1929. pp. 483-527.

² Department of Marine. "*Temperature, Precipitation, Wind and Weather*", Ottawa. 1931. pp. 31-38.