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A Science Service Feature

? WHY THE WEATHER ?

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LOW AND AUDIBLE AURORAS

Are the electrical discharges of the northern and southern lights - the aurora polaris - confined to very lofty levels of the atmosphere, or do they sometimes extend down near to the earth's surface? Are these discharges ever audible? These questions seem to be irrepressible, despite the consensus of scientific opinion that the aurora is purely an upper-air phenomenon and that the rustling and swishing sounds often reported in connection with it are either the product of the observers' imaginations or come from some source other than the aurora. Dr. Samuel Sexton, an American physician, suggested years ago that the supposed auroral sounds are noises in the head; a complaint from which, it is said, about 50 per cent. of persons suffer. Other authorities, including F.J. Davies, of the Byrd Antarctic expedition, think they are the noises that result from the rapid freezing of the breath at very low temperatures. Low-level displays have also been variously explained as the result of malobservation. One reason why science is skeptical about both these things is that the auroral glow appears to be of such a nature that it could occur only in a highly rarefied atmosphere and hence only at great altitudes. Another is that a majority of residents and explorers of the polar and circumpolar regions have never heard an auroral display or seen one that appeared to be low.

Recently C.S. Beals, of the Dominion Astrophysical Observatory, at Victoria, B.C., has been collecting reports of both these manifestations from all over northern Canada. He has records of 144 persons who claim to have heard auroral sounds, as compared with only 40, among those to whom he sent his questionnaire, who do not! He has also received reports of 22 cases in which the auroral light was seen at low levels, including 10 in which a background object was clearly seen behind it and 8 in which the light appeared in actual contact with the ground. He is convinced that these phenomena are real and that existing theories of the aurora must be modified to take account of them.

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