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A Science Service Feature

? WHY THE WEATHER ? Mailed January 7, 1931

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AN AURORA OBSERVATORY

Rotogravure supplements of newspapers and some of the popular scientific magazines have recently published a picture showing a large box-like instrument, mounted on a low truck, attended by an observer clad in furs. This odd-looking contrivance, as one of the magazines correctly states, "splits the colors of the northern lights." The institution at which the picture was taken is not, as the same magazine tells us, "the farthest north of any observatory," but it enjoys the equally interesting distinction of being the only observatory (in the full sense of that term) devoted primarily to the study of the aurora. It is located at Tromsøe, Norway, and was erected with the aid of funds supplied by the Rockefeller Education Board.

The instrument above mentioned is a powerful spectrograph, for photographing the spectrum of the aurora. The lines in the auroral spectrum are the best clue we have to the composition of the atmosphere at the great heights where the aurora occurs, and this instrument takes pictures on such a scale as to permit the lines to be measured with great accuracy. Other photographic apparatus at the observatory is designed for determining the positions in space of the various auroral forms, together with variations in their positions, forms and structure. The intensity of the auroral light is measured at the same institution by means of the "photoelectric eye" that has lately found so many practical applications in the industries.

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