

A Science Service Feature

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? WHY THE WEATHER ? Mailed Feb. 6, 1935

NOCTILUCENT CLOUDS

By Charles Fitzhugh Talman  
Authority on Meteorology

Nothing in the high atmosphere is more interesting than the "noctilucent" clouds -- so called because they shine at night -- that have been found by accurate photographic measurements to lie about 50 miles above the earth. A series of measurements made last summer in Norway at the stations maintained by Prof. Stoermer for photographing auroras gave an average height of 51 miles. Like drifting meteor trails, many of which have been observed at considerably greater heights than noctilucent clouds, the latter serve as wind-vanes and anemometers of the atmosphere at the levels where they occur, and both give evidence that winds of hurricane speed blow at such heights. The clouds recently measured by Stoermer were moving at speeds of from 180 to 185 miles an hour from east to west.

The same authority, in common with Vestine, a Canadian student of these clouds, believes them to consist of cosmic dust coming from interplanetary space into the upper atmosphere in the same way as do meteors. They have been supposed by others to consist of volcanic dust or of ice crystals condensed from the water vapor discharged by volcanoes, but it does not now seem that explosive volcanic eruptions capable of affecting the atmosphere at such heights occur often enough to explain the frequent observation of these clouds. Stoermer and Vestine also think that their blue-white color points rather to dust than to ice.

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