

A Science Service Feature

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? WHY THE WEATHER ?

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LOFTY CLOUDS

The highest clouds ordinarily observed are those known as cirrus, composed of ice needles floating at heights ranging from 5 miles in high latitudes to 7 miles in the tropics. In the eighties of the last century, however, there were many reports of luminous clouds seen late at night and supposed to be far above the level of cirrus, since they were believed to shine by reflected sunlight. Measurements of the heights of these "noctilucent" clouds made in Europe by Jesse and Stolze indicated that they were something like 50 miles above the earth.

Noctilucent clouds were seen after the great eruption of the East Indian volcano Krakatau, in 1883, and have since been reported after other violent explosive eruptions, which send fine dust to great heights in the atmosphere, where it may float for months or years. They have generally been thought to consist of volcanic dust, though several other hypotheses concerning their nature have been proposed.

The clouds just mentioned are seen in summer and are described as bluish white. Still another variety of luminous cloud seen at night in winter shows marked iridescence. Clouds of this type are called in German "Perlmutterwolken" (mother-of-pearl clouds) and English writers have sometimes called them "nacreous clouds." They were at one time confused with noctilucent clouds, but numerous photographic measurements of their heights recently made in Norway by Prof. Stoermer, the celebrated student of the aurora, showed them to be only 14 to 16 (in one case 17) miles above the earth. This height, however, places them far above the cirrus level and well within the stratosphere. Their further observation may throw new light upon the physical conditions prevailing in the latter region.

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