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A Science Service Feature

? WHY THE WEATHER ?

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OBSERVATIONS OF CLOUD HEIGHTS FOR AVIATORS

When an aviator embarks on a flight one of the things he wishes to know is the height of the lower clouds along his route. This is most readily determined at weather stations by sending up a pilot-balloon. Such a balloon is inflated with hydrogen with the aid of apparatus that measures the "lift" of the balloon. A certain lift corresponds to a definite speed of ascent, which remains nearly constant throughout the flight. Hence after the balloon is released the time elapsing before it disappears in the clouds indicates the height of the latter above the ground. At night the balloon carries up a small paper container, like a Japanese lantern, with a lighted candle inside.

Sometimes the height of the clouds is observed by a so-called "ceiling light," which projects a spot of light at an angle of 45 degrees. The observer paces off or otherwise measures the distance from the projector to a point directly under the light on the clouds, and this distance is, of course, the same as the height of the clouds.

In the absence of balloons or ceiling lights the cloud height is estimated by eye observation.

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