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A Science Service Feature

? WHY THE WEATHER ?

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LIGHTED PILOT-BALLOONS

The small pilot-balloons that the weatherman sends aloft and sights through a theodolite in order to determine the drift of the winds at various levels are used chiefly during the daylight hours. There is, however, a growing demand on the part of weather forecasters and aeronauts for upper-wind data obtained during the night, and several varieties of illuminated pilot-balloon have been used to obtain such information.

As long ago as the year 1910 experiments were made in Germany with balloons lighted by means of a small electric bulb and dry cell. Originally this was placed inside the balloon. Before and during the world war the Germans used a similar electric lamp suspended from the balloon. One disadvantage of this plan is that the light is easily mistaken for a star. A method recently followed in Germany is to attach to the balloon a small pyrotechnical "candle", such as is often used for signaling purposes, which burns with a flickering flame and is thus easily distinguished from the stars.

American and British meteorologists attach to the balloon a small white paper lantern containing an ordinary paraffin candle.

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