

A Science Service Feature

Released upon receipt
but intended for use
April 20, 1932

? WHY THE WEATHER ? Mailed April 13, 1932

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REPORTING VISIBILITY

"What is the ceiling and the visibility?" is the question the aviator most often asks the weatherman. The ceiling is the height above which flying is not possible except in clouds; visibility is the greatest distance at which conspicuous objects, such as trees, buildings, etc., can be seen and identified by the unaided eye. Routine reports on the latter subject relate to visibility in a horizontal direction, though vertical visibility is also a subject of practical and scientific interest.

Two methods of reporting visibility are in use in the United States. In its system of coded telegraphic reports the Weather Bureau uses an international scale of visibility comprising ten numbered degrees, as follows:

0	Dense fog -- prominent objects not visible at	50 meters	(55 yds.)
1	Very bad -- prominent objects not visible at	200 "	(220 yds.)
2	Bad -- prominent objects not visible at	500 "	(550 yds.)
3	Very poor -- prominent objects not visible at	1,000 "	(1,100 yds.)
4	Poor -- prominent objects not visible at	2,000 "	(1-1/4 mi.)
5	Indifferent -- prominent objects not visible at	4,000 "	(2-1/2 mi.)
6	Fair -- prominent objects not visible at	10,000 "	(6-1/4 mi.)
7	Good -- prominent objects not visible at	20,000 "	(12-1/2 mi.)
8	Very good -- prominent objects not visible at	50,000 "	(31 mi.)
9	Excellent -- prominent objects visible beyond	50,000 "	(31 mi.)

In the Weather Bureau's airway service, however, where reports are usually sent by teletype or telephone, in plain language and not in code, no standard scale is used for reporting visibility, but the distance at which objects can be seen is given in miles or fractions thereof. If visibility is less than an eighth of a mile it is given in hundreds of feet.

At each place where visibility is regularly observed and reported the limiting distances are laid off on a large-scale map, prominent objects located as nearly as possible at these distances being selected as sighting points. Lights are used for this purpose at night.

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