

A Science Service Feature

Released on receipt  
but intended for use  
June 10, 1927

? WHY THE WEATHER ?

Mailed June 3, 1927

By Charles Fitzhugh Talman  
Authority on Meteorology

VISIBILITY

The advantage of a clear atmosphere over "thick weather" has always been fully appreciated by sailors. Many a good ship has come to grief because of the navigator's inability to distinguish nearby landmarks or dangers. It was only, however, with the coming of aviation that meteorologists began to observe what is now called "visibility" in a systematic way.

Visibility depends chiefly upon the amount of solid or liquid particles held in suspension by the air. On a cloudy day it is usually equally good in all directions, but on a sunny day objects can be seen more clearly when the observer is looking away from the sun than when he is looking toward it.

There are many odd things about visibility. For example, it often happens that an aeroplane can be seen from the ground when the ground cannot be seen from the plane. This happens when the ground is covered by a thin haze, while the plane is in full sunshine.

Both vertical and horizontal visibility may be observed and measured, but most observations relate only to the latter. Measurements are made on a scale of 10 degrees, based on the distance at which objects can be clearly seen. At weather stations where such measurements are regularly made, the limiting distances are laid off on a large-scale map of the country in the vicinity, and prominent objects, as nearly as possible at these distances, are selected as points of reference. The degrees of the scale are numbered from 0, meaning that prominent objects 50 meters away are invisible, up to 9, which means that mountains, islands, etc., can be distinguished at a distance of 50 kilometers (31 miles).

(All rights reserved by Science Service, Inc.)

-----  
SCIENCE SERVICE  
21st and B Sts.,  
Washington, D. C.