

A Science Service Feature

Released on receipt
but intended for use
December 19, 1934

? WHY THE WEATHER ? Mailed Dec. 12, 1934

THE UNDERSUN

By Charles Fitzhugh Talman
Authority on Meteorology

The undersun - otherwise known as the pseudhelion or pseudohelion - is an interesting member of the large family of optical phenomena collectively called halos. In order to see it you must be above the clouds; hence it was rather unfamiliar to humanity before the present era of aerial locomotion began. It is, however, sometimes visible from mountaintops as well as from aircraft, and it has been photographed from both. The first picture of this sort was, I believe, taken from a balloon by Dr. Alfred Wegener, in 1910. A splendid photograph was taken in January 1928, from the Zugspitze, the highest summit of the Bavarian Alps.

The undersun is a brilliant image of the sun, seen on a horizontal sheet of cloud lying below the observer's level. Its position corresponds to that of the sun's image as seen reflected on a water surface. Like other halos, it is formed only by clouds composed of ice crystals, and not by those consisting of water drops. The undersun has sometimes been seen surrounded by a circular halo of 22 degrees radius, and in other cases by a very much smaller circular or elliptical halo.

The corresponding phenomenon of the "undermoon" has also been reported.

(All rights reserved by Science Service, Inc.)

SCIENCE SERVICE
21st and Constitution Ave.
Washington, D.C.