

A Science Service Feature

Released on receipt
but intended for use
April 12, 1928

? WHY THE WEATHER ? Mailed April 5, 1928

By Charles Fitzhugh Talman,
Authority on Meteorology

CLOUDS FORMED BY AIR WAVES

Several forms of cloud are due to waves in the atmosphere. The commonest of these arise from a process that a bygone English cloud specialist, Clement Ley, named "interfret". One of the clearest explanations of this process is given by a contemporary English authority on clouds, G.A. Clarke. He says:

"The beautifully waved structure seen in nearly all of the layer types of cloud, from cirrus down to strato-cumulus, is caused by the propagation upwards or downwards of the wave motion that is produced by the flowing of air currents of different velocities and directions over each other.

"Exactly similar patterns are formed by water currents rippling over sand, by the wind rippling the surface of aeolian sand dunes, and also by the wind on the surface of drifted snow. It is not always that the wave-cloud occurs at the shearing plane between two currents, but as the wave motion is propagated vertically it follows that wherever there may exist a layer near the point of saturation, any lifting of that layer will produce cooling and condensation. Consequently where the crests of the waves occur such a layer will be lifted and waves of cloud will be formed, while in the wave hollows the layer will be depressed and the depression will prevent condensation, thus producing the intervals of blue sky between cloud bands.

(All rights reserved by Science Service, Inc.)

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