

cation, tests of stabilizing means, and similar matters, which will make possible a considerable saving of time in the forthcoming tests.

Flights can not be resumed immediately, as the entire experiment plant at Roswell was dismantled in 1932, and must first be reassembled and put

in working order.

The importance of the work lies in the possibility of sending rockets equipped with recording instruments, or with instruments having short wave radio transmitters, to greater heights in the stratosphere than balloons can reach.—*Science Service.*

NOTES

The Sylvanus Albert Reed Award for 1934 of The Institute of the Aeronautical Sciences was presented on Jan. 30 in New York to Professors Carl-Gustav Rossby and Hurd C. Willett of the Meteorological Division of the Massachusetts Institute of Technology "for practical application of the polar front theory to American practice in aerology and weather forecasting." This award consists of the income from a fund donated by Mr. Reed and is to be given each year "For a notable contribution to the aeronautical sciences resulting from experimental or theoretical investigations, the beneficial influence of which on the development of practical aeronautics is apparent."

Pilots Photograph Clouds.—To aid weather-science, pilots and copilots of TWA, Inc., have been instructed regularly to photograph the upper surfaces and interfaces of clouds. The form and texture of the underside of cloud-layers at present is useful in weather-study. Meteorologists believe that regular study of the upper surfaces will be equally valuable. Each photograph will be accompanied by

information relative to the location, date, time, altitude, of cloud top-layer, altitude of the plane, air-temperature, and weather conditions.—*Lit. Digest*, Dec. 22, 1934, p. 18.

Colored hail again.—In reviewing the notes by T. A. Blair and C. H. Pierce on muddy or colored hail stones in the December BULLETIN, pp. 307-8, C. F. Talman in *Why The Weather?* recalls that Thomson in his "Introduction to Meteorology" mentions a shower of red hail that occurred in Italy in 1813 and that Humboldt heard of a similar case in South America; he adds that there is no reason, however, to suppose that colored hail is very rare.—*R. G. S.*

A Great Variation in Annual Precipitation is remarked on by K. M. Hutchins, Neenah, Wis., in a communication to the editor. The data for Malden Island in the South Pacific given in *World Weather Records*¹ indicates a range from 3.95 inches in 1908 to 93.58 inches in 1914 for the mean annual precipitation.

¹Smith. Misc. Coll., v. 79, 1927, p. 1161.

PUBLICATIONS

A Study of the Minor Fluctuations of Atmospheric Pressure (I), by Tadao Namekawa. *Memoirs of the College of Science, Kyoto Imperial University, Series A*, Vol. XVII, No. 6, 1934, pp. 405-430. The author studies the internal gravitational waves recorded on a microbarograph. Examples are given and the values of the constants for various waves given. The author concludes that:

"1. Applying the modified form of Lamb's equation of atmospheric oscillations, he gets a simple approximate solution for the internal gravitational waves at the surface of discontinuity between two baroclinic fluid strata.

2. After deducing the various working formulae he proposes a new method for the analysis of waves of pressure recorded on the microbarograph.

3. As for the period, amplitude and propagation velocity of the waves,