



Looking South from Bishop Airport with a West wind blowing over the snow-covered Sierra-Nevadas on the right. The base of the Alto-cumulus is 9,000 feet above ground and a bout 25 miles away. The Lenticular cloud above is approximately 40,000 feet above sea level. The Alto-cumulus cloud was stationary for ten hours.

Standing Wave

By HARLAND ROSS

SINCE soaring records are established for altitude, distance, duration of flight, and speed, and combinations of these elements, it is mandatory to have a fast sailplane and proper atmospheric conditions if one wishes to better existing records. With the principal idea of better atmospherics in mind I moved to Bishop, California, where the meteorological and orographic conditions seemed excellent for both distance and altitude flights. After flying both sailplanes and airplanes in this area for the past several months, I will pass along some of my findings, which were made with cooperation of the U. S. Weather Bureau. To avoid repetition all altitudes mentioned in this article are measured from sea-level unless otherwise indicated.

The Bishop Airport, at an elevation of 4121 feet, where most of the flights originated, is situated between the Sierra-Nevada Mountains to the west and the White Mountains to the east. Both ranges average about 12,000 to 13,000 feet in height with peaks above 14,000 feet. The Owens Valley, in which Bishop is located, is

approximately 120 miles long and 25 to 40 miles wide. The Sierra-Nevada range extends north and south almost 400 miles. The White (including the Inyo Mountains at the south) Mountains are only about 100 miles long but White Mountain Peak at their northern end is within two hundred feet of the same elevation as Mount Whitney in the Sierra-Nevadas, the highest peak in the United States.

Storms reaching the Pacific Coast to the northwest generally swing into Owens Valley over the Sierra-Nevada range from the west. Due to the orographic uplift of the moist air, most of the rain and snow falls on the western slope of the Sierras, which results in a semi-arid desert region to the east of the mountains and on across the Great Basin.

Due to the high temperatures and low humidity in Owens Valley in the summer, and to the height of the mountains to the west and east, the cumulus cloud base are generally 10,000 to 12,000 feet above the ground over the valley, but the tops often build to great heights