

Soaring To The Stratosphere

By HARLAND ROSS

ON the morning of January 27th, I was pleased to see, far to the north of Bishop, large lenticular clouds building to great heights. I had been expecting them, since the Weather Bureau report of the previous evening had forecast rain and snow in the northern Sierra Mountains for the next day. To the west and south of Bishop the Sierras were covered with stratus clouds which extended almost to the Owens Valley floor.

From inspection of the daily weather map, we were apparently ahead of a complex quasi-stationary front, which was slowly moving inland from the Pacific Ocean. The morning winds aloft at Bishop, Santa Maria and Oakland showed good velocities and the direction from 240 to 280 degrees was favorable for soaring in the wave. About eleven o'clock a definite clearing of the air took place along the Sierras and almost at once the alto-cumulus stationary roll cloud began to develope.

George Deibert and I had spent long hours rebuilding and modifying our Schweizer TG-3 glider for altitude soaring. We had installed glass-wool insulation, demand type oxygen equipment and new plexiglass in the canopy, which would expand and contract between metal strips which held it in place on the framework. Both canopies had been sealed with sponge rubber and a roll of masking tape was carried to seal all air leaks, which showed up after the takeoff. An extra piece of plexiglass about eight inches square was taped to the

front canopy, with an air space between, just in front of the pilot's face. Both cockpits had a complete set of blind flying instruments, with an extra Horn Variometer and temperature gauge in the front panel. A special compartment had been built aft of the rear cockpit to carry equipment and barographs.

At twelve o'clock I gave George a call and we decided to try a short flight in order to test the oxygen equipment in the rear cockpit, which had not been used since its installation. The problem of getting ready for one of the altitude flights is getting more complicated all the time. Both tanks in the glider must be filled to four hundred fifty pounds pressure from a portable tank of dry breathing oxygen. Two barographs must be smoked, wound, sealed and installed in towplane and glider. The pilot and passenger must be dressed in heavy clothing, fleece lined flying suits, boots and gloves. Heavy helmets with oxygen masks attached that fit your face snugly are necessary, a parachute with properly adjusted harness over the suit completes the picture.

At last three o'clock rolled around and we were ready to take off behind a Vultee BT-13 towplane flown by Robert Symons. The temperature was eight degrees centigrade and the air very smooth as we circled up over the airport to nine thousand feet and started west toward the roll cloud. A few miles down wind from the roll cloud we flew through the second wave, and I remarked to George that we would