

JET STREAM PROJECT

A Preliminary Report on its Soaring Aspects

by

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A field project with a scope as wide as this one (see "Soaring" July-August 1955, p. 20) is bound to be successful if two partners cooperate: equipment and weather. At first the outlook was black because neither seemed willing. During the greater part of March, generally one of the best wave and jet stream months, there was no flight of consequence. Unfortunate delays in contract formalities at UCLA had given us a delayed start and the race with the jet stream-wave-season was on.

That the glider equipment finally came into working shape was due to the relentless effort of this indefatigable group which forms the nucleus of high altitude soaring research in this country: Harold Klieforth (UCLA Meteorology Dept.), Betsy Woodward (tied down to nowhere, except wherever in the world a meteorological glider project is going on), Victor Saudek (old hand of SCSSA), Larry Edgar (now with Goodyear, too well known to need further comment) and the joined forces of the energetic and unselfish Frank Kearns and Lyle Maxie (both of Long Beach).

For a time the 'trouble lists' at Bishop seemed to grow with time in spite of night work. It was, however, somewhat comforting to us (though not to Lyle Maxie who had to leave Bishop by March 20th) to look over our shoulder and see that the weather and the Jet Stream Project's B-29 and B-47 did not do much better, thus sparing us the miserable feelings of missed opportunities.

As the end of the month approached we were 'almost' ready for a high altitude test when, on the 29th of March, everything happened at once. The wave season opened up in full with persistent strength. While both gliders with their chilly crews hovered on their first flight at a surprising 40,000 ft. a fast growing condensation trail under their nose revealed the arrival of the B-47 from MacDill AFB, Florida. All of its records and 5/6 of its engines were operating.

The B-47 crew got the first taste of the power of the mountain wave at 36,000 ft and brought home interesting instrument records. In perfect timing also, the B-29 arrived from Patrick AFB to land at Merced.

This luck was going to stay with us for another month. But the trouble sheets brought home from the first flight indicated no such routine cooperation from the equipment as the lists were again of familiar length. Even the most hectic endeavor did not enable us to keep up with the abundance of wave weather offered by nature. A measure of the effort is a

mountain of a half thousand dry batteries—changed mostly at night by back breaking manipulations—accumulated at Bishop airport.

The merciless pace once established and encouraged by nature had to be kept up, ignoring such old fashioned pleasures as week-ends. As the sailplanes gradually approached the state of being 'really ready' for the next flight, the mounting backlog of flight reports, data, films, was pressing our better selves. Fortunately unexpected forces joined us on several fronts. However it is not possible to describe at this point the amount of

Harold Klieforth and
Doctor Kuettner in
the Schweizer all
metal 2-25.

Photo: B. Woodward



CONQUERING THE TROPOPAUSE

Date	Altitude	Glider	Crew	Duration
March 29	40,500	P-R	Edgar—Woodward	3 hr 45 min.
March 29	40,300	2-25	Kuettner	3 13
April 1	39,500	P-R	Edgar—Klieforth	2 38
April 10	31,000	P-R	Edgar—Woodward	3 25
April 10	36,000	P-R	Edgar	3 25
April 10	40,000	2-25	Kuettner	4 20
April 13	36,000	P-R	Edgar—Woodward	4 07
April 14	40,150	P-R	Woodward	3 09
April 14	43,000	2-25	Kuettner	4 04
April 17	31,000	P-R	Edgar—Klieforth	2 20
April 25	39,400	P-R	Edgar	4 37
April 25	40,300	2-25	Kuettner	5 28
May 13	36,500	2-25	Kuettner	4 40

Supplementary information was obtained from the following 'visitors' flights:

April 14	36,000	TG-3	Schwarzenberger
April 14	36,500	TG-3	Schwarzenberger—Edgar
May 12	37,000	1-23	Goodhart
May 13	35,000	1-21	Dr. Stasey