

July 9. Goal and return flight WNW to Moulins (distance 37 miles each way), 55 miles. Best flight of the day, Kumpost, 57 miles.

This turned out to be another thunderstorm day. Because I had a comfortable lead in the contest, I decided to play safe and watch Juez, Gorzelak, Saradic and Ivans, in 2nd, 3rd, 4th, and 5th positions, and do what they did—this way I could not advance much or lose much. This plan worked not at all, because none of these fellows would start on the course early. (Gorzelak's Jaskolka was still being repaired from having the fuselage break into two parts landing the previous day.) In the Moulin region it could be seen that the clouds were towering menacingly. So I went off by myself, hoping to get back before the storm broke. The first ten miles were very weak—I was below 1,000 feet occasionally—and then the good clouds and lift began. It is of interest to note that the only good upcurrents were above cloud base. Soon I left a 2,200 fpm upcurrent in a towering cumulus at 10,000 feet because I was only 5 miles from Moulins (without other arrangements turns had to be made under 1,000 meters). On the return trip I headed ENE off course in a vain attempt to outdistance the dead area around the storm. Each little cloud puff would collapse just as I reached it. I would gain 200 feet and lose 400 feet going to the next cloud—which would then collapse. It was as frustrating as a man on crutches trying to walk up a "down" escalator. This continued until I had to land, downwind up a steep slope on a tiny field almost within sight of St. Yan. Being considerably off course I did not get credited with the full distance flown.

July 11. Race to St. Auban, 190 miles, speed 26 mph. Best flight of day: Niellispach, 40 mph.

In direction and terrain, and the use of thermals, slopes and waves this flight was the same as the July 3 trip to Hyeres. *But*, this time the crags of the Hautes Alps were in the clouds, and a 50-knot wind (even stronger in spots) whistled through the area. As before I reached the mountains, this time SE of Lyon. The more southeast one went the flatter the weather became, until finally at the mountains I was under a thick solid overcast at 3,000 feet MSL with scattered clouds still below me. For one and one-half hours I waited at the north end of a N-S ridge for the weather to improve or the wind to change, but nothing altered. The wind

at that spot was from the NE, meaning no soaring on the west edge of the ridge. Finally I had to take the chance and start S along the west slope of the ridge. For the first mile there was nothing, then a small subridge stuck out against the wind which at that spot was from the north and it got me up to 1,800 feet above the valley floor. The wind was about 15 degrees from the line of the main slope and one could stay aloft on very rough bubbles and eddies. The flying was the roughest I have ever experienced—and this includes 8G's in the Bishop Wave—and the worst was still to come. Progressing southward under the edges of the clouds I reached E-W ridges with strong slope currents. Although the slope lift went higher, the clouds prevented me from climbing above 3,500 feet MSI or so for the dash to the next slope. At one point I got caught in the pocket of a double slope, where the upcurrent

remaining 40 miles to St. Auban.

Needless to say, this was the most fatiguing flight in my experience. Late at night at St. Auban there were rumors about Bill Ivans' accident, and this worry plus the general fatigue almost made me ill. I think that if all the sailplanes had gone the same direction I did, quite a few would have been destroyed by turbulence or emergency landings in tiny fields. I was lucky. I will never push my luck by letting myself get in a similar predicament. Imagine the load you would get in the turbulence around that double slope by flying out of an 80-foot per second downcurrent into an 80-foot per second upcurrent—the resulting 160-foot per second gust is about 4 times as much as an aircraft is designed to withstand. The only safety lies in flying extremely slowly—and then a 20 mph shift of wind puts you in a stall in which the controls are temporarily useless.

The beautiful two-place German HKS-1 was not designed for landing in small fields!

Photo: B. Woodward



from the second slope mixed with the downcurrent from the front slope. The sailplane would be dashed almost to the trees, then be hurled a thousand feet up, then smashed down again in a blind bowl from which the only exit was up. The only thing to do was hang on and work. After several minutes I got out, and the rest of the flight was safe and easy because I was able to stay relatively high. I moved down several more ridges, and was finally able to climb through clear spots in the clouds (this was why I stayed at the west edge of the mountains) and go up in the wave on top. The clouds themselves showed characteristics of slope lift, thermals, and rotor clouds. The cumuliform tops were at about 7,500 feet MSL, with an occasional wavelike form a little higher. It was no trouble reaching 14,000 feet with smooth lift that was sometimes 1,200 fpm. The wind at this altitude was a gentle 25 knots or so. Through some rifts in the clouds I could finally identify my position, and make a straight glide the

A question often asked is what should one do to make the best possible contest flights. In my opinion the most important single rule is to concentrate every minute of the flight, being especially concerned with the next thermal rather than the thermal you are in. Even the distraction of occasional radio transmission is detrimental. The best practice for contest flying is record flying or contest flying itself; ordinary "week-end" flying does not put the pilot under the pressure required to achieve maximum performance. The physical and mental strain is so great that I doubt if a pilot could get much benefit from more than about ten flights per summer. The most important factor in contest performance will probably always be luck; one should try hard to give good luck every possible break, but competition soaring involves so much guesswork predicated on unknown future weather that luck must feature in the results of every decision.