

soaring

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Manic-depressive? George Moffat, U.S. Soaring Champion, Open Class, had said soaring was a manic-depressive sport. Sitting next to Wally Scott, his Open Class teammate, he had every right to depression as he listened to the announcement of the second day's task. After waiting two years for the World Championships the whole team—the two Standard Class pilots as well as Wally and he—had blown it on the first day!

He sat at the long pilots' table staring vacantly at the task board above the Contest Director's platform. But his mind's eye was drawn outside to the chalked figures (mercifully unreadable from the briefing enclosure) on the big standings and points board: 17th, 21st (his own position), 32nd, and 35th.

For the two U.S. Standard Class pilots the first day was especially bitter. During the three days preceding the opening, almost all the pilots had competed in practice tasks designed to acquaint them with the area. A. J. Smith, who would be defending his World Standard Class title, blazed around the courses to place 1-1-7, while Rudy Allemunn raised eyebrows when he pegged 3-2-7 on his debut against the world's best.

And they were the world's best-seasoned competitors, wise in the ways of point strategy, who knew the chances of overcoming one bad day against such opposition were practically nil.

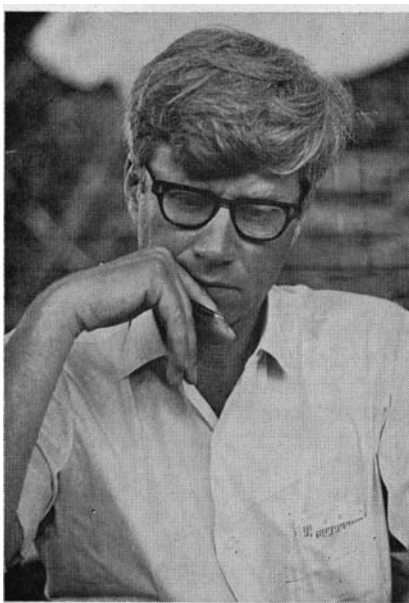
Practically.

There was a chance. Luck could change the numbers in contest flying, and pilots the caliber of these could still err, misjudge.



WITH THE U.S. TEAM AT MARFA

By JOSEPH C. LINCOLN



"21st place on the first day. Humm...."



Mofat picked up his pencil and began copying the task board's weather information on his flight pad...

By the fourteenth of June, all the years and the final frantic months of preparation for the 1970 International Soaring Contest were over. The aircraft had been shipped, pilots were prepared, the traveling had been done, and people arrive at Marfa, Texas. Most of the pilots and their crews were staying in dormitories at Sul Ross State College in Alpine. A few of the contest personnel were staying at motels or at the Paisano Hotel in Marfa.

From the office of The Soaring Society of America had come notices, bulletins, and all sorts of memoranda to interested people. The years of preparation and the discipline which went into the organizational part of the 1970 World Soaring Contest would make a book all of its own.

By the sixteenth of June, there were twenty-six countries represented on the list; thirty-nine ships and pilots were flying Open Class and forty-three were flying Standard Class. This made eighty-two sailplanes. The team from Peru had to leave because of the tragic earthquake in that country, and, as things worked out, neither the Indian nor Rhodesian teams were able to come to the contest. A letter from the Rhodesians was sent to the SSA: "We wish your Association every success in the Championships and request that Rhodesia's good wishes be conveyed to all participants and apologies tendered for our team's non-appearance."



Dutton

These aircraft were the most advanced and most carefully prepared in the world. Just looking at the instruments of some of them was a sobering experience. In the repair corner of the hangar one day during the practice period, you could see the German team taking out masses of equipment from carefully prepared boxes. Part of the maintenance crew was working on a wing while others were working on instruments. It was a performance which made me feel like an inexperienced beginner in soaring, yet a few weeks before, I had just made a successful flight which was good for a world record.

The ship that was there in the greatest numbers was the Libelle. Seventeen of these masterfully built sailplanes from Glasflugel were in the contest. There were eight Phoebuses there. A number of manufacturers had seven on the line. These included the new LS-1, the AS-W 15, the Cirrus, the AS-W 12, and the Kestrel. It should be noted that one of the Kestrels was the gigantic new 22-meter ship which was being flown by Walter Neubert of Germany. There were seven Diamants, four Standard Cirruses, three Cobras from Poland, two HP's, two BT-4s from Africa, two Urupemas from Brazil, one Sisu from the U.S., one each of the WA-26, BS-I from Germany, the AN-66, and the Nimbus flown by George Moffat. Three rows of these sailplanes were tied down on a flight line a half-mile in length.

Walking east on the flight line, one could see a white trailer with red trim on its tail dome. A maple leaf was stenciled on the trailer in red with the legend, *Canadian*

Gliding Team 1970. There was a Travelese Camper, a Condor Camper, an observation Cessna 170 painted white with orange tail feathers and orange wings. A cream-colored glider trailer had printed on its side, *Federacion de Vuelo a Vela Equipo Argentino*. In small lettering on the back of the trailer was the legend, *R. Argentina Sudamerica*.

As you walked on down the line you saw trailers of white with big antennae and lettering on them indicating which country they were from. There were aluminum trailers with horizontal stripes lettered in red and other colors.

There were shades which had been set up by the Marfa group-shelters under which pilots could get out of the sun. These were made with six light telephone poles impregnated with creosote and connected at the top by 2 x 6s, then covered over with corrugated galvanized iron. They were held down at the top against the wind by 2 x 4 boards. Under one of these shade areas the Australian team was rubbing down a wing. Farther along one saw a white trailer with two Union Jacks on it and the words, *British Team World Gliding Championship, Texas*. There was a trailer celebrating the Sabena Belgian World Air Lines and a notice where Sabena flies.

One trailer carried the words, *Glasflügel Libelle*. This one had a Texas license plate. Another trailer had the label, *Bolkow Messerschmitt Phoebus 17*. There was a round top trailer with English style sheet metal marked, *Delhi Gliding Club, India*.

All along the line, just behind the ramp, was the symbol of Marfa—the yucca plant, a spiny bayoneted bush. A slender spire climbed skyward, supporting flowers of pale yellowish-green, each flower having six moist waxy petals folding around six exquisite stamens. Down below the yucca, and behind the flight line, were souvenirs of earlier days, reminders that this field had been abandoned and was once a bomber training field. A red gas pump had been knocked down and filled with paper, discarded beer cans, and orange drink cartons. The circular numbered dials on the broken pump looked like parts of a broken slot machine.

Under the second shade patch there was a trailer for a Cirrus with the sign, *Schempp-Hirth*. Another bore the markings, *Glasflugel Kestrel*.

Along the ground, parallel with the edge of the concrete ramp, but behind it at perhaps the width of a hangar, was a great insulated rubber cable. At intervals 2 x 10 boards were driven vertically in the ground and four electrical outlets were attached approximately knee high to these. They enabled pilots and crews down the line to get electrical power. There was also a pipe which ran down the line providing pilots and crews with water for washing or tank ballasting.

Camper tents were pitched in the area behind the parking ramp where the sailplanes were tied down. The ships were tied in alphabetical order, beginning with Austria and Australia and winding up at the extreme end of the line with

West Germany and the U.S.A.

One of the trailers had the legend, *Championats du Monde, Marfa, Texas, Equipe de France*. Under one of the shade areas was a black oxygen tank the length of a small torpedo, mounted on a red trailer which had been built up from pipes. It was balanced and handled like a wheelbarrow with two hands. Crewmen worked, sanding on wings, going back and forth, walking toward the hangar and back toward the line. A boy pumped up a bicycle tire with a foot pump, and people were taking care of final adjustments on instruments—all getting ready for the first day of competition, June 22nd.

FIRST CONTEST DAY

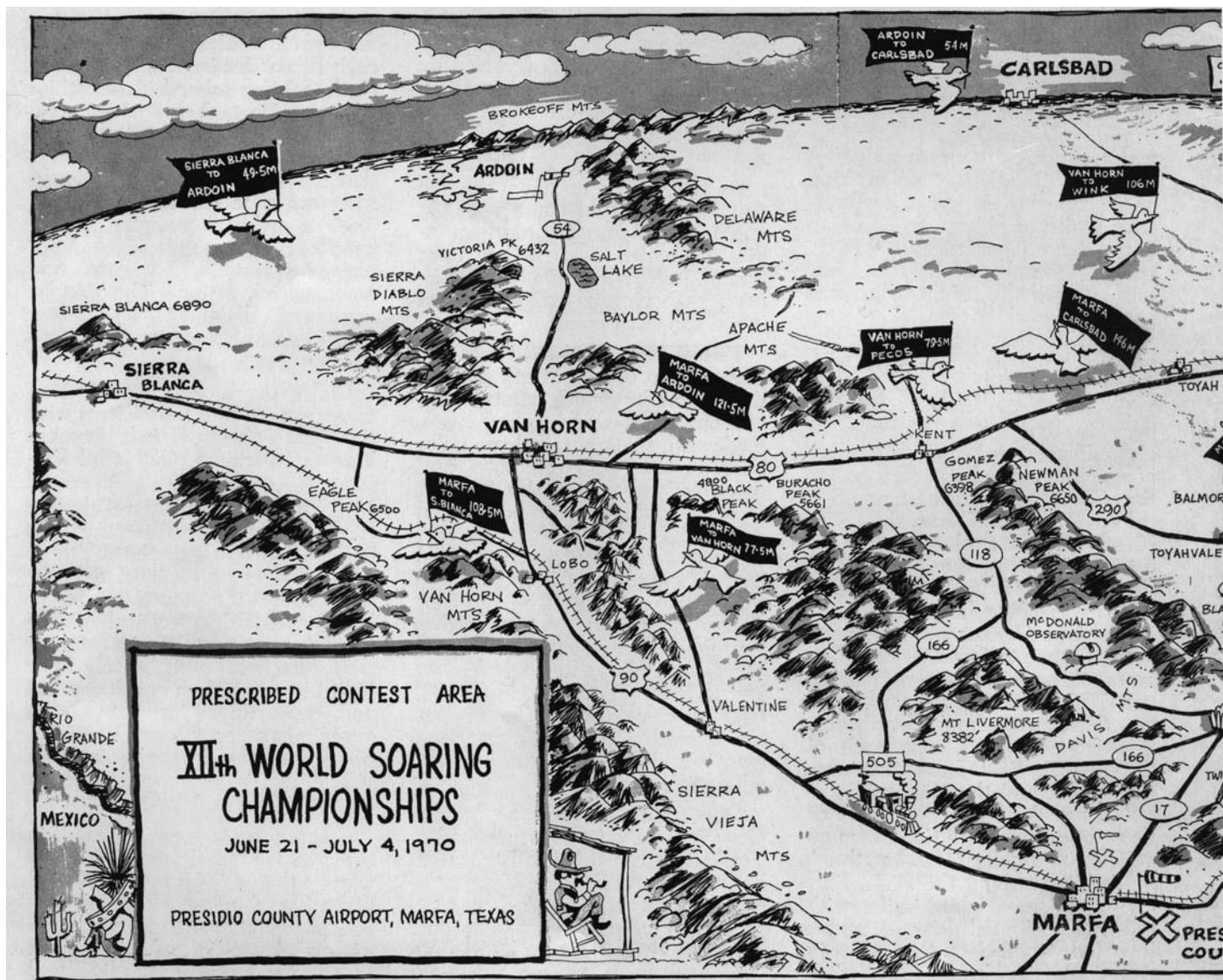
On the opening day of the contest a great wheel of high pressure

rotated slowly over the central U.S. Its periphery drew moisture from the Caribbean and bore it across the contest area from west to east in 10-knot winds. These vapors were visible at Presidio Airport in a sky three-quarters filled with cumulus whose heavy water burden seemed to press them down until they sagged only three thousand feet or so above the ground. This was certainly not the famed Marfa dew-line!

The Task Committee had specified a prescribed area distance task for the day and had declared Marfa, Sierra Blanca, Ardoin, Carlsbad, Wink, Odessa, and Big Lake as the boundary points enclosing the competition area (see Gil Parcell's map). Pilots were to travel as far as they could by flying around (and verifying photographically) previously designated

turnpoints. With minor restrictions they were free to choose the direction and sequence of turns. This represented an area of thousands of square miles—enough to permit pilots to fly from one local weather situation to another. Later Maurice Jackson of South Africa would comment,

“Our South African weather is more consistent over the whole area than yours is. Here the weather can change every twenty miles and you'd better be careful—well, I have to be careful—I probably fly a little too carefully, You can fly from here to Valentine and get a change in the weather; fly another twenty miles and get another change in the weather, then it might change again another twenty miles farther on. Also, the operating heights at



home are a lot higher. On my 500-kilometer record flight I was working at sixteen to seventeen thousand feet.”

Unlike free distance where contestants can fly downwind all day, the area distance task sooner or later requires a pilot to face a head or quartering wind. But this is an unpleasant necessity that most seem to avoid as long as possible, and by early afternoon the larger part of eighty sailplanes were winging their way toward Van Horn, Sierra Blanca, or Ardoin, the westerly turnpoints. In addition, there were those who noted the reported winds aloft indicated a slight veering to the north farther west — a minuscule advantage when the time came to turn, but advantage nevertheless.

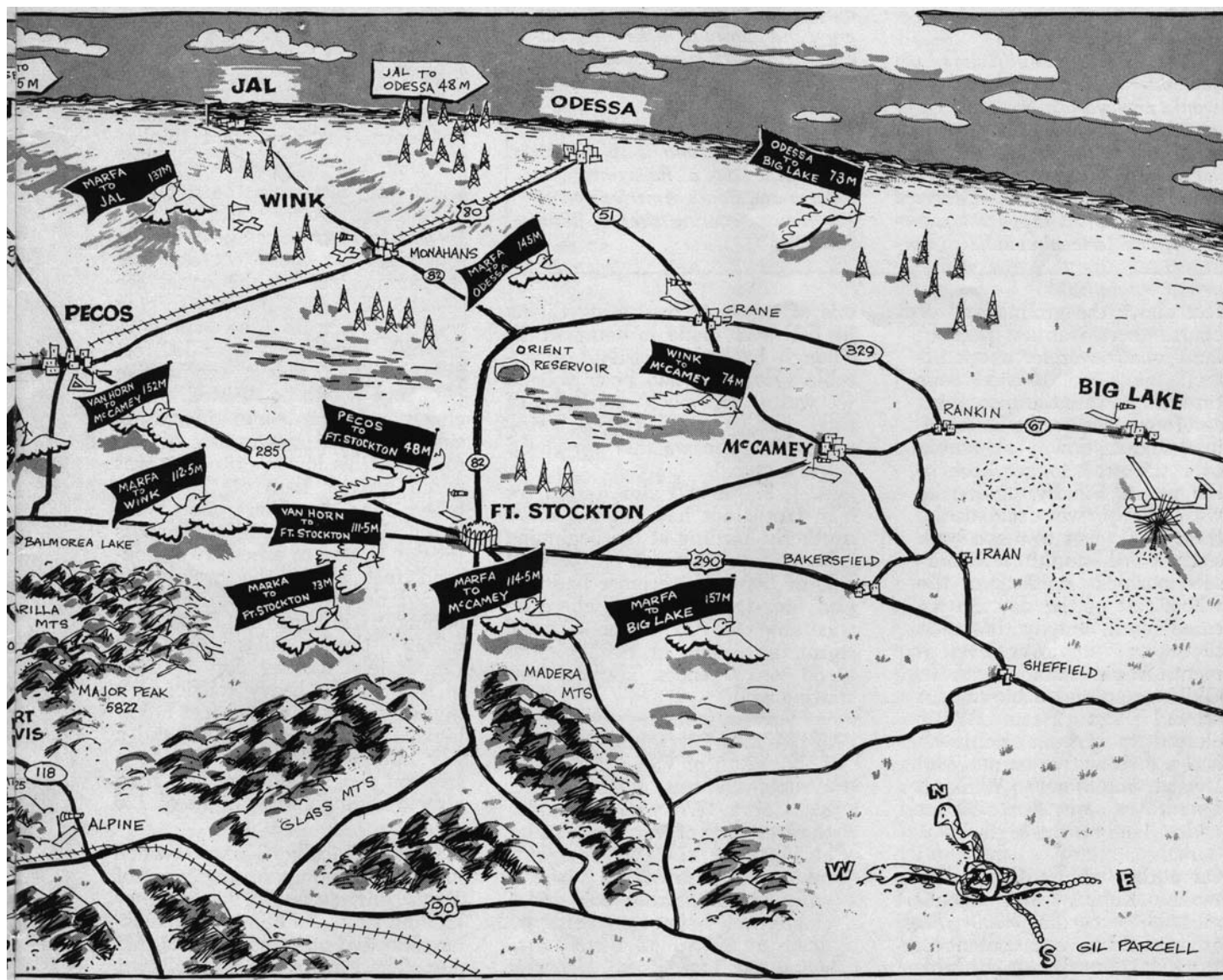
George Moffat had picked his

way among the cumulus until he suddenly came upon a clear area about twenty miles from Van Horn.

“This was an interesting situation because there was a large gap ahead of about twenty-five miles, and on the far side you could see clouds very much below your altitude, obviously based around 6000 to 6500 feet—long and dry, without any lift whatsoever. On the other side of Van Horn, just down below the ridges, having weaved between the clouds in order to get below them, I finally got a little lift—about one or two meters—and sort of inched through the valley. No real problems—just nervous perhaps—operating 1500 and 2000

feet above the terrain for about forty or forty-five miles into the first turn. At the first turn, ceilings had gone up again to about 2300 to 2400 feet above the ground and it looked good to go across the pass (Guadalupe Pass) northeast to Carlsbad, for the next turn. I think I was the first ship to arrive at Ardoin by quite a bit, about fifteen or twenty minutes ahead of Wally. Frankly, I didn’t anticipate any problems whatsoever, but it turned out a little different because as soon as I got into the mountains, there was no lift—in fact often heavy sink, obviously downwash from Guadalupe peak.

“The cloudbases seemed to be about 900, possibly 1000



Winning, Wooing, and Writing—at the Same Time, Yet! (How Do You Do It, Joe Lincoln?)

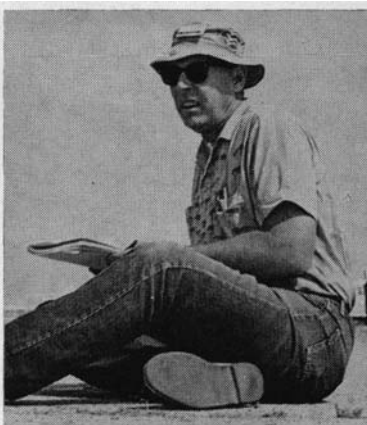
The phone rang at Soaring. Intuition told us it would be Joe Lincoln in Arizona, where we knew him to be in labor bringing forth the account you will read in this issue.

"My stuff will be a little late," he apologized, "but you'll have it day after tomorrow."

His stentorian basso became a little shaky. You see, I've got some important business I gotta take care of this afternoon—I'm getting married."

Just like that.

And just like that in Colorado, a few days before Marfa, Joe had won a new worlds two-place speed record in his famed 2-32, Cibola. And just like that he broke through language barriers, coralled pilot interviews, bulldozed officials, directed his photographer, supplied his tow-plane, and ferreted countless infor-



mation bits to produce scores of tapes and a thick notebook of long-hand that required days of labor by four secretaries to transcribe. The distillate of this prodigious effort was more than 20,000 words.

Except for the photography and art work, this issue is yours, Joe.

(If you don't believe it, look at the table of contents.) How else for Soaring to say thanks for your outpouring of time, thought, energy, and money to make the greatest meet in American soaring history come alive for stay-at-home readers?

But then, what else can one expect of a man who is taking his new bride on a honeymoon in Europe and South America—to all the famous soaring sites of those countries.

feet above the ground and of course there was no place to land whatsoever for about fifteen miles, so I tried four times to go into the mountains and four times I came back out, just about down, skimming over the peak to get back to the plains. Finally, conferring with Wally, we decided the thing to do was to move back south. We could see ourselves stuck at Ardoine the whole rest of the day. So we came south, but by that time there was an over-development, a big thunderhead in Old Mexico and a bit of rain around Van Horn. Wally elected to go due south—he had a mile or two on me—and I was trying to get to Wink, so I went east along Route 80 but had to land on the highway at Baracho Station."

On a day when Makula, Wroblewski, Kepka, and Neubert would be exceeding 300 miles, Moffat would have to content himself with 178 miles. It had been

one of the most frustrating flights he had ever made in competition. Though he had cruised at acceptable speeds, he had been obliged to waste enormous amounts of time just waiting and hovering around for the weather up ahead to get better.

A. J. Smith had also started for Van Horn, but had taken a more northerly heading at the beginning than Moffat. Thermals on the west side of Mount Livermore had carried him to cloud base where he was able to run under a small storm for fifteen or twenty miles at 80 to 100 knots. The day was starting well.

"That was on the west side of Mount Livermore up to Lobo, south of Van Horn, and Wroblewski was with me in his Cobra. We went around the west side of Van Horn still at 10,000 or 11,000 feet, right up to the base of the storm, with lots of smaller cu's and clouds well below us—perhaps down at 8000 feet. I ran out north of Van Horn Airport

into a little valley up towards Ardoine, and this area had been rained on. There were very few thermals—very few cumulus—lift was weak, one and two knots, and it went only to about 8000 feet, which would be about 4000 feet above the ground. Most of the time we were about 2000 feet above the ground. We worked our way north in that valley, then northwest along two ridges. Wroblewski was still with me. We passed Reichmann.

"At about this point we started to catch up with the tail end of the Open Class machines. As I turned into the valley and headed north up to Ardoine, the valley suddenly filled up with cumulus and I was able to run at very high speed and I got a little start on some machines that were with me, so I left them behind rapidly and caught five or six more Open Class machines as I went up through that valley and made the turnpoint at Ardoine. That's where I think I made my mistake."

Turning east from the salt flats of Ardoine, Smith could see the Delaware Mountains ahead of him—upwind. He could not only see the mountains, but he could see Open Class sailplanes forging ahead to cross the summits. Though they were 200 or 300 feet above him, it was a competitive challenge not to be resisted. Smith charged forward—into increasing sink from the downwash of the range. At his lower altitude it was much heavier than at the layers where the Open Class pilots were flying. With sickening suddenness his day turned to ashes. Two thousand feet above the ground he turned downwind toward Ardoine, hoping to salvage his flight, but within three miles he was desperately looking for a break in surprisingly heavy traffic on a highway a few hundred feet below him. He found an opening, and a few minutes later he rolled to a stop on the shoulder of the road after a disappointing flight of 126 miles.

Quite logically Texas lawmen look askance upon the use of Texas highways for emergency landing strips, and Smith was luckier than two other contestants that day. The Australian, John Rowe,

landed his Cirrus on the highway after a flight of 122 miles, whereupon he was hauled before the local Justice of the Peace and fined \$100. Shortly afterwards Pat Beatty of South Africa was cited for doing the same thing in his BJ-4B. Here was something calling for quick, stern, western justice. The Magistrate raised the ante to \$150. When word of these happenings got back to the field, this affront to western hospitality was rectified in jig time when a hat—a Texas hat—was passed about the hangar, collecting \$250.

However, Beatty and South Africa had suffered a loss for which



Maurice Jackson, the BJ-4A, and sky.

there was no redress—the BJ-4B itself. During disassembly, a segment of the left wing extended over the right-of-way at windshield height. The wingtip's white color and small visible area effectively camouflaged it against the glare of the desert. A motorist smashed into it at high speed, damaging it beyond repair. Because of the BJ-4B's innovative features, its performance in the contest would have been watched with interest; its withdrawal was a keen disappointment to many others in addition to the South Africans.

At the end of the first day knots of spectators peered through the darkening gloom of the hangar at the growing list of chalked figures on the points & standings board. The timeless sport of speculation and debate began.

The Poles were back in the game! After their surprising slip from world dominance at the last Championships, they had swept the first day, winning the top spots in both classes. The Cobras, opined some, were not really a new design but a further refinement of the Foka series. How could these be expected to compete against the newer glass sailplanes? Ah, but perhaps they had been underestimated, and anyway, you'd have to admit they really looked mean. Maybe the answer lay in pilot preparation. The Polish Aero Club took the matter seriously, spending two years readying its team.

Yeah, and where were the long-wing ships? Just answer that. True, Grosse was up there in fifth place, but he was a champion, and the few extra inches on his AS-W 12 didn't put it in the same class with the 22-meter jobs. Of course Neubert still hadn't reported. Well, that could wait until morning. . . .

| OPEN CLASS | MILES | POINTS |
|--------------|-------|--------|
| 1. Makula | 315.5 | 1000 |
| 2. Hossinger | 306.5 | 972 |
| 3. Neubert | 300.5 | 954 |
| 4. Labar | 291.5 | 924 |
| 5. Grosse | 290.0 | 919 |
| 6. Zoli | 269.0 | 853 |
| 7. Munch | 253.0 | 803 |
| 8. Mercier | 251.5 | 797 |
| 9. Rizzi | 249.0 | 790 |
| 10. Ehrat | 242.5 | 768 |
| 17. Scott | 188.0 | 596 |
| 21. Moffat | 178.5 | 566 |

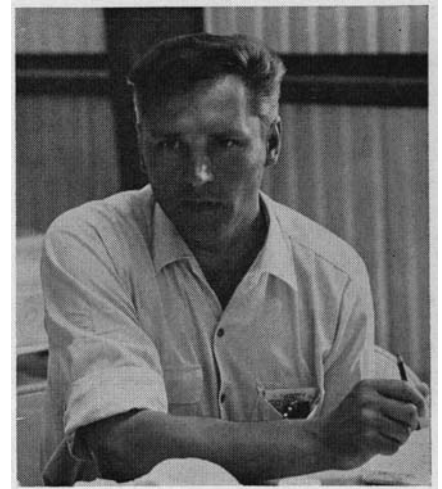
STD. CLASS

| | | |
|----------------|-------|------|
| 1. Wroblewski | 305.0 | 1000 |
| 2. Kepka | 304.5 | 998 |
| 3. Johannessen | 278.5 | 913 |
| 4. Greaves | 264.0 | 865 |
| 5. Cameron | 255.0 | 836 |
| 6. Reichmann | 251.0 | 823 |
| 7. Waibel | 210.5 | 689 |
| 8. Petroczy | 206.5 | 678 |
| 9. Junqueira | 195.0 | 638 |
| 10. Stouffs | 194.0 | 635 |
| 32. Smith | 126.0 | 413 |
| 35. Allemann | 97.0 | 318 |

SECOND CONTEST DAY

But when morning came, the fate of the potent 22-meter Kestrel and Neubert was still unknown. For Neubert that morning, the sands of time and a chance to win the Championships were slipping through his fingers.

In the closing minutes of the first day, having pushed through the



Walter Neubert, locked out by a farm.

lowering skies of the northwest quadrant and daring to cross terrain others rejected, he had stretched his final glide to the limit and had managed to bring his big bird to earth near a remote farmhouse. The Kestrel's wheel-well doors were damaged by the wiry scrub during the landing but, not enough that he would be prevented from competing the next day.

At a distance from the air he had spotted cars, livestock, a TV antenna, and other signs of occupancy. Though he didn't speak English he was relying on the card provided all contestants which said in part,

"This man is a glider pilot taking part in the 12th World Soaring Championships. . . . If he is not proficient in speaking English, he may need your assistance. . . . in contacting his crew. Any assistance you can give him will be greatly appreciated and offer you the opportunity to demonstrate American hospitality on a person-to-person basis to our visitors."

To his consternation he discovered the house empty and locked tight. If he broke in to use the phone what would the operator think when she heard a German voice? Even in desperation he could not bring himself to forcibly enter. How would that reflect on the German team? And then too, he was uncomfortable about this strange land. During his few days in Texas he had seen people wearing big hats, high boots, and strange clothing of the kind worn in American movies where characters were continually shooting at



Davis Mountains

one another. Of course that was make-believe. But then he remembered the TV clip of the horror in the Dallas jail's basement. That night the cockpit of the Kestrel was Neubert's uneasy bed. From time to time he would awake from fitful sleep to regard the myriad stars above him and ponder his strange predicament. . . .

#

The takeoffs on June 23rd were scheduled for 12:35. The atmosphere was more relaxed than it had been on the first day. Walking along the grid one could hear the ominous intermittent beeping of Wally Scott's variometer. Engines were starting on the towplanes at 12:30, and the first tow, ship FM, was launched at 12:33, carrying Camille Labar of France into the sky.

Eavesdropping on the line: Listening to Bengt Jansson, the Swedish team captain, "The worst flight the Poles ever made—all day long between 2000 and 4000 feet high and a lot of time over completely unlandable terrain. I heard Hossinger say he flew all day long without even looking down—he was afraid to. . . .

At eight minutes after three o'clock, more than two hours after the last of the Open Class is launched, the great Kestrel pulls into the field on a narrow trailer. Neubert is back! The fuselage under the left wing root is dusty. There is dried mud-splash on the edges of the trailer. One hears urgent speech in German and the ship is looked over by Eugen Hanle, maker of the Libelle and Kestrel. The landing gear is muddy and the doors have been damaged.

Eight minutes after the Kestrel trails in, the center section is put on. Another four minutes later the left outer wing panel is mounted. There are nine people working on

it doing the rigging, including the team captain, and a girl doing a wash job. At twenty-two minutes after three, ballast is going into the tanks. Walter Neubert stands waiting. He still has on his white sailor hat with the brim turned down, sun glasses, no belt, looking somehow rested and handsome. He has heelless shoes with gray socks and trousers, a long-sleeved blue shirt. He is tan with black hair and a touch of gray at the temples.

The filling of the ballast tanks goes on. Finally white plastic electrical tape is put over the joints between the center section and the outer wing panels.

Preflight photos are taken at twenty-eight minutes after three, after Walter Neubert personally cleaned the inside of the canopy in front of the cameras with a chamois. A few minutes later he is eating a sandwich. He puts on his parachute at thirty-four minutes after three and one minute later is in the cockpit. At thirty-nine and a half minutes after three, thirty-one and a half minutes after it rolls into the field, the Kestrel is rolling on takeoff. There is a magnificent sky east-by-south to south with a great cumulonimbus shower south-by-west. On course the sky looks bleak and ominous. There is a shaft of rain on course to Van Horn. A great rain sky all over the north is all one can see. Neubert goes through the gate at fifty-five minutes after three in the afternoon.

That day Wally Scott was the first Open Class finisher at thirty-seven minutes after four.

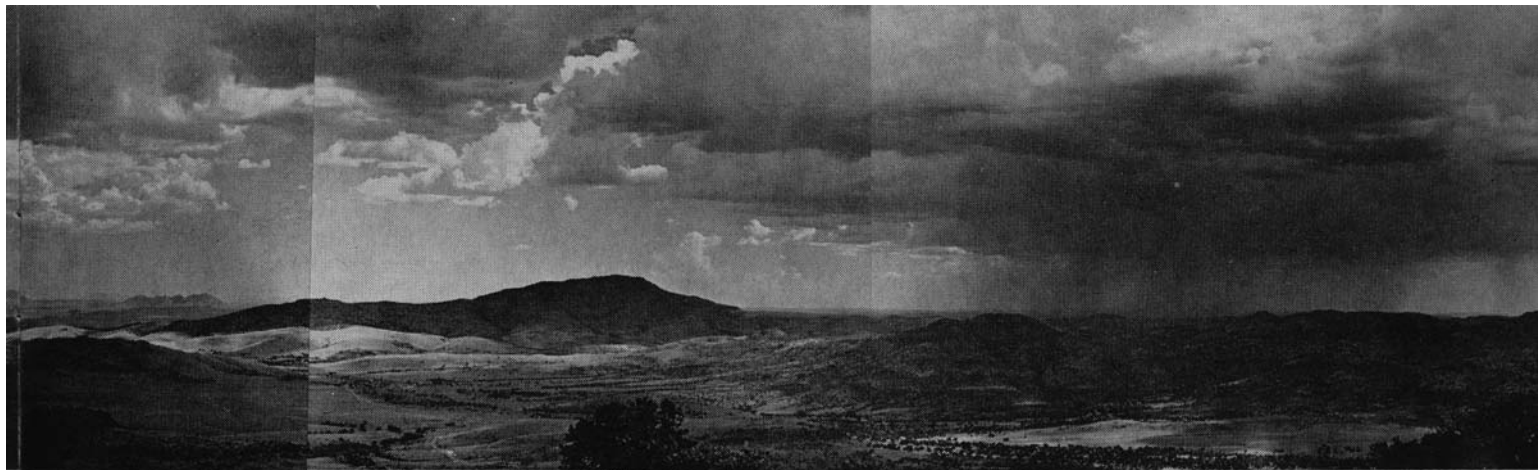
The valiant efforts of Neubert and his crew could not prevail against an impossible weather situation; the Kestrel was soon on the ground again after a 3.5-mile flight that netted 14 points. Fourteen points for a pilot and plane that would do better than an average of

950 points for each of the remaining days, and whose final cumulative score would trail first place by 641 points.

Maybe the name of the game was planes, but other influences were working, as Neubert's mishap suggested, and while Moffat, like everyone else, had noted his competitor's absence at the takeoff line, it is doubtful he permitted his mind to dwell upon it. For the Open Class, June 23rd's task was an out-and-return speed run north to Pecos, and speed tasks, rather than distance events, were his cup of tea. He turned his considerable strategic faculties to the problem.

"It became quite obvious from briefing on that it was going to be very important to get the earliest start, because those of us who knew local conditions were sure that it would over-build and overdevelop much earlier than forecast. By the time of takeoff, the first cumims to the north on course were already obscuring visible parts of the sky. It was beginning to rain just to the left of the course line. By the time the starting line opened, the rain was pretty general on the first part of the course. The start went quite well; cloudbase was perhaps 3500 feet above the ground at the time. The trick was getting around areas of rain.

"I took a chance on taking a direct line, dodging through squalls. I noticed another ship, the BJ-4, that went around instead, and lost about twenty minutes in the process. The flight out to Pecos was quite easy. All you had to do was to follow a sort of shear line of cloud into the wet Pecos valley, which was about seven miles east of the course. I went



along that line until almost to Pecos, then made a dart into the turn, then back out again from the dead area to the shear approximately parallel to course.”

Moffat had done very well on the 81-mile flight out to the turn-point—well enough to catch up with Wally Scott’s AS-W 12 which had gone through the start gate fifteen minutes earlier than the Nimbus. Both pilots succeeded in slipping through the developing storm that would scrape more than half the Open Class ships out of the sky that day. While they were making the turn the storm had matured and cycled. Their path back to the field was blocked by the storm’s vaporous debris sinking earthward. The two men conferred via radio,

“After considerable debate on radio as to which way it was possible to get back, we got to Balmorhea and decided that there was no way to return east of the storm line—that would have entailed a forty or fifty-mile final glide through the storm, which would have been impossible. The only alternative would have been to return to Bal-

morhea and wait until the sun had gotten a chance to heat up the mountain area. The storm was moving on. There was some sun in the mountains, and it was reasonable to suppose that within the hour there would be thermals, so we waited there, thermaling about very, very slowly in weak lift at Balmorhea. Mostly we were just wasting time until we thought we could go on.

“Finally, after half an hour we decided it would be worth a try. I went in first with Wally a little off my wing to scout for all possible thermals. We hit a small one ten miles from the storm ahead. Wally chose to stay there and mark the thermal so I could go ahead to investigate; if I found something good I’d radio to Wally to come and join me. But in point of fact, it turned out I was about five minutes too early getting to the storm—there was still strong down instead of lift. I was forced back out of the hills in order to stay in the air, clearing each ridge by about 50 or 100 feet as I came out of

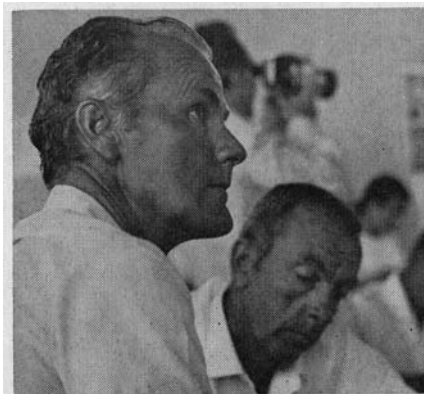
the hills, with my glide ratio being almost equal to the decline of altitude.”

Moffat made a beeline for the base of the thermal Scott was still marking with his spiral. Nothing. At the lower altitude no air rose. High above, Scott’s AS-W 12 was riding the last bubbles. There was nothing to stave off a landing but follow the gradual slope and retrace his course toward Balmorhea. Moffat fumed. Another bad day on top of the first one would sink him for sure.

When Scott saw Moffat chasing his Nimbus’ shadow back to the north he knew he could be of no further help to his teammate. From the radio chatter he sensed the pack was catching up. He would have to go it alone. Turning south, he picked his way carefully among the patches of sunlight, but by Fort Davis he knew it was still anybody’s ballgame.

By that time numbers of later ships were arriving in the Balmorhea area. Moffat succeeded in pulling himself off the deck at 500 feet and, using the thermals they marked, began again his trek to the south. He considered the situation,

Dick Johnson (right) served as U.S. Team Manager. Pictured here (left to right) are Wally Scott, A. J. Smith, and Rudy Allemann.



Dutton



Dutton



Dutton

"By then Wally was reporting great difficulty near Fort Davis and I decided the whole trick was going to be to get back at all. I realized not many people would and that the 300 extra points that one did get for merely finishing were going to be more important than speed points, so from that point on I was extremely cautious. I did all the glides at maximum glide angle, climbed in everything, and after using two more thermals crept in comfortably, but certainly I was not fat on final glide. The final glide went through a fair period of rain and a certain amount of down which made me very happy to have a few extra feet of altitude. Wally got home quite a few minutes earlier than I did."

The weather on a speed run 77 miles west to Van Horn had been kinder to the Standard Class, permitting 38 out of 39 starters to complete the task. But though Smith's and Allemann's speeds (51.8 mph & 44.2 mph) exceeded Scott's and Moffat's (46.7 mph & 43.7 mph) they had had to content themselves with 19th and 36th placings in the Standard Class, while Scott and Moffat moved into the coveted top-ten winners' circle with a 5th and 8th place in Open Class. Generally speaking, for the U.S. team things were looking up.

| OPEN CLASS | MPH | POINTS |
|--------------|------|--------|
| 1. Wiitanen | 49.1 | 1000 |
| 2. Makula | 48.2 | 982 |
| 2. Labar | 48.2 | 982 |
| 4. Burton | 47.4 | 964 |
| 5. Scott | 46.7 | 951 |
| 6. Delafield | 46.6 | 948 |
| 7. Mercier | 44.9 | 913 |
| 8. Moffat | 43.7 | 890 |
| 9. Perez | 43.3 | 880 |
| 10. Schubert | 42.5 | 865 |

| STD. CLASS | MPH | POINTS |
|--------------|------|--------|
| 1. Reichmann | 64.8 | 1000 |
| 2. Mix | 63.3 | 976 |
| 3. Piludu | 62.4 | 962 |
| 4. Clifford | 62.2 | 960 |
| 5. Cameron | 60.3 | 931 |
| 6. Petroczy | 59.8 | 923 |
| 7. Tury | 58.4 | 901 |
| 8. Gough | 58.3 | 900 |
| 9. Lyon | 58.0 | 896 |
| 9. Perotti | 58.0 | 896 |
| 19. Smith | 51.8 | 799 |
| 36. Allemann | 44.2 | 682 |

THIRD CONTEST DAY

On the next day things would look up, but not for everyone, thanks to a low pressure trough that began to sag in the skies over the Marfa area. To avoid air masses from the east still bearing tropical moisture from the Caribbean, the Task Committee sent both classes westward toward the ephemeral Marfa dew line. A speed run around a flattened triangle that included Van Horn and Sierra Blanca, the farthest-west tip of the contest area, might get the pilots to drier air.

The trough became a rapidly-filling sump that overflowed into massive rain clouds directly over the field. But not until most pilots had succeeded in getting away. Moffat was one of these. Taking the tide at its flood he whipped the Nimbus around the course at 66.1 mph to pocket 1000 points and first place for the day. Alas! Events at the field put a damper on Scott's second-day rally.

The take-off line went quite normally for a time and at the field it looked like the day was going well. Then things began to happen.

First, a Libelle was seen landing on the long runway and Contest Manager Fritz Kahl shouted, "My God, that's Rudy Allemann. He didn't get away!" He and Ed Butts sent Red Wright over in the blue Jeep with its yellow flags and two line boys to take over a towrope and get set for a relight without moving Rudy's Libelle. Two minutes later a Cirrus rolled in behind Rudy.

At 12:38 there were raindrops falling on the ramp.

More ships came in. Another Libelle landed and was towed off without the pilot even having left his ship. At 2:15 in the afternoon, Wally Scott trailered in. He had a very fast rerig. It was finished seven minutes after he drove in. Wally Scott looked unhurried but tense. He was still in the battle and was soon airborne a second time. At 2:20 Maurice Jackson was trailered in. I was sitting by the fence, writing. He called over to me, "Hey, Joe, I'm sure glad we're flying in the best weather in the U.S., not the worst."

LW, the ship from Argentina, trailered in. At 2:28, Wally Scott landed the second time. It was

raining steadily now. Two hours before, I had seen Wally lying in his cockpit with the canopy already latched down. Seen from the side with only the side of his face and his knees visible, he was motionless and expressionless as a corpse in a coffin. Then there was a single motion, hand raised and one forefinger pointing forward to signal Wally Jr, that he was ready to go. Now the day looked different. But the stakes were high. Would the third time be the charm?

Number 14, with Howland from Australia flying, landed. He towed off again into a sky full of despair only to land again in rain which was even heavier. Nothing daunted, he launched and landed, launched and landed.

At 2:48 Wally Scott landed without using the AS-W 12's chute. The downpour was hopelessly heavy. A BS-1 and New Zealander Ivan Evans' Cirrus were derigging in the hangar. In this sanctuary Evans recounted his recent experience,

"I never even went through the gate—just wandered about for nearly two hours, then landed in a paddock owned by the Marfa Fairgrounds. What a squash! Mud all over the place.

"We derigged in pouring rain. There were a lot of us. People were wonderful, getting soaked there right along with me. We had to lift everything over the fence to put it in the box. The gate was locked—pouring down rain. Then just about when I had it all put away, I looked over at one of the cars and inside saw a bloke photographing the whole thing with a bloody TV camera."

By 3:30 in the afternoon, Number 14, with Howland of Australia, had had one start and six restarts. Someone asked at the gate, "What's he doing, shooting touch-and-goes?"

At 3:32 Number 14 took off again on his eighth try and went silently off into the gloom.

Wally Scott towed off again at 3:37, Alf Schubert of Austria towed off at 3:39 and landed at 3:53. Starting gate people got soaked in a thundershower which had a 180-degree wind shift within a period of twenty-five minutes. Alice Johnson and her helper were crouch-

ing under waterproof canvas covers to work their machines.

The first finisher came in at 4:04 in the afternoon. Ten minutes later there were gigantic mammato-cumulus clouds, great udders of gray in the sky overhead.

A. J. Smith finished at 4:10 and four minutes later Moffat finished with the parachute out. For the next half-hour there was a mass of finishers.

At 3:43 Rudy Allemann finished. One minute later Wally Scott once again went through the start gate.

At 4:55 the BJ-4 with Maurice Jackson took off in cool air. It was cold enough now that a ski jacket felt comfortable on and zipped up. For a change there was enough sun to crash through the cirrus stratus overcast and make a faint shadow on the ground. Sailplane NT took off again at 4:57. Number 14 was waiting on the line. A towplane came up and towed him aloft. Ivan Evans took off at two minutes before five.

A few minutes later we noticed a sailplane which for a time looked like he might make it back through the gate. He maneuvered violently a few feet short of the finish line, then he did a 180 degree turn followed by a 90 degree turn and landed. We did not know if the sailplane was wrecked or not. A search plane flew over the area and John Ryan was in touch with him on radio. John asked for information and got the reply "The pilot is dismounting from his aircraft."

At 5:45 that afternoon a black squall line approached the field. It was very near the field at 6:05 and brought heavy rain. That was the squall line which stopped Ed Makula just short of the finish line and the day had shot down many pilots without going any farther than Marfa to Marfa Municipal Airport north of the town. This is the day that shot Ed Makula out of the sky when he had almost finished the task and out of the lead in the contest. He tells his story:

"I was 3500 feet over Marfa town, that means 3500 feet over the ground here." While he said this he was tapping the pavement of the takeoff apron with a hand holding a cigarette. "Five miles before the airport here was the strong headwind with a big down. There was much rain and dust.



Polish repose: Edward Makula and the Cobra.

Two kilometers, one mile from the finish gate I saw a place to land. I had to turn.

"When downwind, I lost control of the glider. I pushed the stick far forward and gained control perhaps 40 feet above the ground and landed. I could have gone through the far end of the finish gate, but there was no place to land. I might have broken the glider."

At 4:55 Wally Scott passed through the start gate. He made a long glide into a sky that looked like it might just possibly have lift and enable him to make the course. Northeast of Marfa Municipal Airport he got a thermal at 1000 feet and gained altitude up to 1600 feet. He worked the area for fifty minutes and then landed. Harro Woodl was there. They worked together.

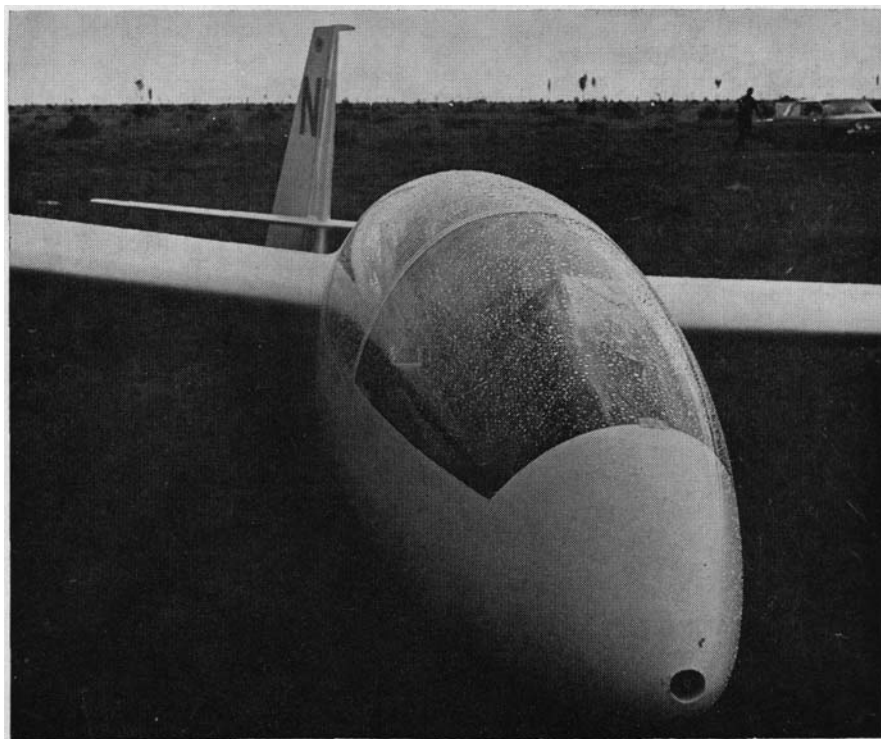
Wally went north and returned to the airport. They circled low and landed at 5:45. He wondered what would have happened if he had made his start a little later. Thirty minutes later there was a beautiful cloudstreet over Marfa Municipal Airport toward Mount Livermore.

While Scott was yo-yoing in the tragicomic, turn of events at the field, the rest of the U.S. team was out on course covering ground. Of the three, it looked for a time as if Allemann might suffer the same fate as the rained-out misfortunates,

"I released in rain but was able to climb up to starting altitude. I just glided and glided until I reached Marfa town at about 1500 feet. I came over some fire—some smoke—and found lift and was almost immediately joined by what seemed like a hundred sailplanes. I was right over the town. I guess the Swiss Nietenlispach outclimbed me—a very good pilot.

"We started tiptoeing on the clouds, getting 400 to 500 feet per minute, and I stayed right in the valley. I think A. J. Smith went over the mountains to the right which might have been a little better. He beat me to the turnpoint and was there when I got there."

At the beginning A. J. Smith had also seen smoke from the fire,





It's not easy to photograph a glider gaggle of two or three. Geo. Uveges did even better.

"I made a run through the start line and also flew straight to the city of Marfa. There was a thermal over the town being fed by heat from the city dump. It was a four or five-knot thermal of 400 to 500 feet per minute. There were probably about ten sailplanes in that first thermal and those of us who were on top left earlier, of course.

"We started running up a cloudstreet which was actually part of a storm over-developing. It led up to Mount Livermore, and I think we ran straight ahead then for about fifteen miles until we got to the base of the mountain. Instead of going right over the top, we turned back towards the course—turned left—and picked up another cloudstreet that was leading on towards the first turnpoint.

"From that point on until Van Horn we probably didn't work more than three thermals. Most of the time we were just cruising straight ahead under clouds and pulling up under good parts of the streets; we maintained an altitude of about 10,000 or 10,500 feet on the way into the turnpoint. The clouds were just east of the turnpoint about four miles, so we stayed east of Van Horn—right up to the turnpoint. We got some large cu's which formed just east of the airport and ran under those, climbing up to 11,000 feet.

"That was the first time we were beginning to get appreciably higher altitudes than on other previous flights. While we climbed, the cloud drifted back over the turnpoint. We made our last turn under the cloud, took our photographs, and started out towards Sierra Blanca."

Allemann had trouble after the turnpoint at Van Horn,

"I made my real mistake after turning at Van Horn and going on to Sierra Blanca. Since we had a north wind, I stayed to the north side of the course in the interest of being blown back onto course when I found some lift, but what I found was strong sink and downwash from the hills to the north there, and it seems it was funneling through a pass and down, and I lost about 5000 feet and was down to around 7000 and struggling with choppy lift. I couldn't sustain any steady climb, although there must have been some strong core somewhere. I just couldn't find it. Eventually I did get up and rolling again, but I could never make up the time lost."

While Rudy struggled to the north of the second leg course line, A. J. flew on the opposite side as far south as Eagle Peak with much better luck. Over the mountain he ran into the dew-line interface which worked like a shear but ran across the course north to south. Since he was south of course anyway, he turned 180 degrees and

climbed steadily until he reached 12,000 feet under a cloud about three miles north of the line. From there he turned into the clear air ahead and glided twelve miles to Sierra Blanca for his turnpoint photo. By the time he got back, the cloud had drifted onto the course line.

"We climbed back up under that to 12,000, then ran about three cloudstreets of sort of a scalloped pattern—the first one back over Eagle Peak, the second one between Eagle Peak and the ridges south to Lobo, and the third scallop from Lobo to south of Valentine along the ridges. All the time we were getting rates of climb from 700 to 1000 feet per minute and they were very nice, smooth thermals—the best ones yet.

"From that point on it was pretty much straight cumulus clouds until we got about twenty-five miles from the finish. Then we came in under the edge of the storm. By this time there were only two pilots who were still with me—Stouffs and Waibel—and they were both quite a bit lower and a few miles behind. But as they came under the edge of the storm behind me, they got a 1500-foot per minute thermal which took them up to cloudbase, and they were able to glide straight in under the storm to the finish line. I didn't get quite enough altitude, so I was a little bit leery about coming in under the storm. I stayed well left of course and went over Marfa Municipal Airport, always, keeping close enough to the sunlight so I could get out of the storm if I ran into trouble, and I made a big semi-circle pattern over the airport and came in about three or four minutes after Stouffs and Waibel. They had about two minutes shorter time than I had."

Smith's third place for the day boosted him ten places from his opening standing, but he was still a long way from a spot in the sought-after top ten. Here too the Poles had relinquished a first place. The new leader was a surprising Silver Badge pilot from West Ger-

many, Helmut Reichmann, flying an LS-1.

In the Open Class cumulative standings, Moffat's third-day victory raised him from seventeenth to fifth place. Still above him were John Delafield (fourth place for Great Britain in an AS-W 12), George Burton (third place, also flying for Britain in the 19-meter Kestrel), Makula (Poland, now dropped to second place), and the new leader, Hans-Werner Grosse (flying an AS-W 12 for West Germany).

| OPEN CLASS | MPH | POINTS |
|----------------|------|--------|
| 1. Moffat | 66.1 | 1000 |
| 2. Jinks | 65.8 | 995 |
| 2. Neubert | 65.8 | 995 |
| 4. Burton | 62.2 | 941 |
| 5. Zoli | 61.2 | 926 |
| 6. Grosse | 60.1 | 909 |
| 7. de Dorlodot | 59.5 | 901 |
| 8. Delafield | 58.6 | 887 |
| 9. Ax | 58.4 | 883 |
| 10. Pettersson | 57.5 | 870 |
| 30. Scott | 10.5 | 27 |

| STD. CLASS | MPH | POINTS |
|----------------|------|--------|
| 1. Waibel | 60.2 | 1000 |
| 2. Stouffs | 60.1 | 998 |
| 3. Smith | 58.8 | 977 |
| 4. Nietlispach | 58.5 | 972 |
| 5. Reichmann | 58.3 | 969 |
| 6. Reid | 57.4 | 954 |
| 7. Cameron | 55.8 | 927 |
| 8. Reparon | 55.6 | 924 |
| 9. Lindhardt | 55.2 | 917 |
| 10. Mix | 55.1 | 915 |
| 27. Allemann | 50.9 | 846 |

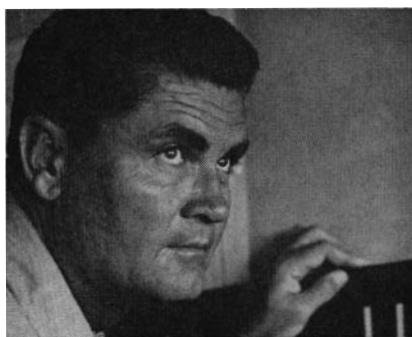
"Miles (Did not complete task)

FOURTH CONTEST DAY

Except for those who had been victimized by the storm over the field, most pilots felt the weather of the third day had been the best to date. The Task Committee—possibly reasoning that if one of something is good, then two is even better—announced a repeat of the third day's task, a speed triangle through Van Horn and Sierra Blanca.

Wally Scott seemed to accept the previous day's debacle philosophically, although it ended whatever hopes he may have had for winning a first. For him, there could still be a place in the top ten—"the winner's circle"—to shoot for.

These ten pilots really were the



Ed Butts

The untimely death of Marshall Claybourn shortly before the Internationals caused considerable uneasiness as well as sorrow. His humor, firmness, and experience eminently qualified him for Competition Director, a most critical job. Who could replace him?

"For me there were two heroes at Marfa—one was on the ground," Joe Lincoln reported. "When Ed Butts took on Claybourn's job, he took on a difficult situation and made it go. Not only made it go, but made it go superbly. Whatever criticism are made of the running of the meet, no one can fault Operations.

Ed was right on center from the dawn of each day, sometimes until the start of the next. Task setting, pilots' meeting, launching, start and finish gate—you name it—he provided rock-steady muscle where it was needed most.

"This isn't to take any credit from the tremendous work of Bill Ivans or all the others—I could write another story about that—but the work of two years came to a focus on Ed in those nine days. He was the guy who had to say yes or no. He had the responsibility. He made the decisions.

"There's a loneliness about this kind of thing most of us don't see. It's like being a military commander, or a sea captain, or a doctor. Setting in motion an apparatus that sends 80 pilots and twice that number of crewmen scattering about the skies and emptiness of southwest Texas requires a certain command presence, compassionate toughness, and the capability to make such decisions. Ed Butts has these qualities. The SSA had a good man on the job."

elite of the competitive soaring world; Scott would be well content to win membership there.

During the night Moffat had awakened to find himself uncomfortably hot. But he instantly knew it was not from the Texas heat. Nausea and thermometer confirmed what he feared. He had a fever. The thought of not flying the next day never even crossed his mind. But what would his condition do to his decision-making capacities?

Not much. He upped his speed from the previous day's 66.2 miles per hour to 79.4 miles per hour, won another task-day first place, leapfrogged over Delafield and Makula to third place in the cumulative standings, and discovered he was now only ninety-one points from the summit. It was a remarkable performance. "How did he do it?" someone wanted to know. The answer was obvious, "Flu."

As remarkable as was Moffat's flight, Scott didn't have to stand in his shadow. The AS-W 12 pilot not

only took second, but completed a second circuit on the chance the weather might have improved. The combined distance of the two flights equaled 442 miles. Scott had begun his first run more or less by accident,

"I didn't have any idea that my first start would count. I was going to test the gate more than anything. I went through it and out toward a dissipating cu with one edge that looked like it was recycling and rebuilding. It gave me 800 feet per minute right up to cloudbase. It is very seldom you can get that good a start, so I just decided to go ahead. It looked real good out on course. I didn't have any problems at all. I got high—probably 12,500 feet about twenty-five miles this side of Van Horn.

"There was good lift to that point, but it was clear blue from there into Van Horn and beyond towards Sierra Blanca. I could only see a few scraggly

cu's between Van Horn and Sierra Blanca. I was getting 600 to 800 feet per minute, and then out in the clear area I ran through a couple of thermals. They were giving me about 600 feet per minute, so I knew that there wouldn't be any problem; I just went bombing toward the turnpoint, took my picture, and worked the first thermal which was about 500 feet per minute beyond the first turn. Finally I connected with the cu between Van Horn and Sierra Blanca and I would say that I was probably a good forty-five minutes too early at that point, but the lift was good, but very erratic and broken up, probably averaging about 600 to 700 feet per minute—one side would be 1000, the other side would be maybe 500. Then I contacted the good cu's about halfway back on the final leg.

"It was so early when I finished that the team captain and I thought it might warrant another start. We knew the day would last long enough to get back and who knows, maybe a cloudstreet or something like that would have enabled me to beat my first go-around with the second timing. I think it took me about fifteen minutes longer. What I wish," he said wryly, "is that since I went around twice today they would let one of them count for yesterday."

For the first time there were no retrieves; every contestant in both classes completed the task. Returning crews and pilots swelled the modest crowd lining the runway. Laughter, friendly banter, excitement, and jubilation for the moment turned soaring into a spectator sport as ship after ship came hissing in off the course.

One felt (whether true or not) that in their styles of finishes some pilots were vying with one another for the crowd's approval. The wing benders were particular favorites, of course. These would come whistling by the gate at yucca-top level before they pulled up. One pilot spent his Diamant's energy in a vertical climb that ended with full stall to the accompaniment of a variety of comments from the groundlings. Another equally flamboyant

stylist added the fillip of burning off his speed in a steep bank near the ground that set off the beautiful full-span planform of his ship against the blur of the Texas countryside. Sedate types making conservative high passes through the gate deigned to acknowledge the gallery with restrained pull-ups followed by sensible approaches.

Despite the doubts expressed by sundry individuals as to its efficacy on such aircraft, the side slip, as employed by some pilots, proved a crowd pleaser. To see wings of such dimensions handled at such proximities to the ground and with such aplomb, was a little breathtaking to those accustomed to making approaches and touch-downs by the pattern book. But all's well that ends well, and by the end of the day all the big birds and their pilots had come home to roost with nary a scratch.

| OPEN CLASS | MPH | POINTS |
|--------------|------|--------|
| 1. Moffat | 79.4 | 1000 |
| 2. Scott | 76.4 | 962 |
| 3. Neubert | 74.8 | 942 |
| 4. Burton | 74.7 | 941 |
| 5. Grosse | 74.4 | 936 |
| 5. Mercier | 74.4 | 936 |
| 7. Delafield | 72.2 | 909 |
| 8. Braes | 71.8 | 904 |
| 9. Ax | 71.3 | 897 |
| 10. Zoli | 70.7 | 890 |

| STD. CLASS | | |
|----------------|------|------|
| 1. Reichmann | 73.7 | 1000 |
| 2. Waibel | 68.9 | 935 |
| 3. Perotti | 68.0 | 923 |
| 4. Mix | 67.6 | 917 |
| 5. van Bree | 67.1 | 910 |
| 6. Urbancic | 67.0 | 909 |
| 6. Mouat-Biggs | 67.0 | 909 |
| 8. Allemann | 66.3 | 900 |
| 9. Smith | 66.0 | 896 |
| 10. Zegels | 65.5 | 889 |

FIFTH CONTEST DAY

George Moffat was awakened by the freight train's interminable clatter echoing outside across the Texas countryside. In the first moments of consciousness his half-opened eyes sensed the filtered grayness in the room. The fifth day was dawning.

Third place! He had reached third place!

He rolled over on his back to tentatively stretch his long frame and study the old-fashioned ceiling light fixture. He felt much better thanks to Suzanne who had hurried

him off the field, bundled him in bed, called a doctor, and administered his medicine. Come to think of it, yesterday's 1000 points had been pretty effective medicine itself. If he could get another dose of the same today, recuperation was a certainty.

But there was still Hans-Werner Grosse. Moffat recalled the bright blue eyes, the rugged features that would delight an Austrian wood carver, the professorial manner, the intensity. . . . Grosse had flown across northwestern Europe to establish a new world Goal Distance record just before he came to Texas. He was flying the same AS-W 12 at the Championships. Its 18-meter span had been extended only a few inches, but Grosse was at the top—he was Number One.

Moffat turned over, tucked the sheet around his shoulders, and closed his eyes against the growing light. How, he wondered would Hans-Werner do on this, the fifth day? . . .

#

Still avoiding overdevelopment and thunderheads that sprouted in the moist air to the east, the Task Committee announced an out-and-return speed task in the western area. The turnpoint for the Open Class was at Ardoin, 125 miles northwest, while the Standard Class would have to fly 81 miles north to Pecos before it could make the identifying photo and begin the return.

Like an edgy sprinter jumping the gun, Moffat had trouble at the start gate,

"I was called back for being high in the start gate twice, but it turned out about right in retrospect. Things were easy up to Mount Livermore, but then there was a sixty-mile clear area with no apparent lift. I went into it at about 85 to 90 miles per hour to have plenty of glide angle and arrived on the far side, maybe 3000 feet above the terrain. Finally, I began to run into some dry thermals which weren't very good, but gave indication that if you waited long enough you might get a good one. After gliding sixty miles I got one about twenty miles short of Ardoin, and from there on to the turnpoint it was mostly dry thermals of pretty good strength, about

12th World Soaring Championships, Marfa, Texas

| FINAL STANDING OPEN CLASS | | | JUNE 22 AREA DISTANCE | | | JUNE 23 163-MI. GOAL AND RETURN | | | JUNE 24 221-MI. TRIANGLE | | | JUNE 25 221-MI. TRIANGLE | | |
|------------------------------|----------------------------------|-------|--------------------------|----------------|----------|------------------------------------|----------------|---------------|-----------------------------|----------------|---------------|-----------------------------|----------------|---------------|
| PILOT; COUNTRY; SAILPLANE | | | DISTANCE MILES | DAILY SCORE | | SPEED MPH | DAILY SCORE | CUM. SCORE | SPEED MPH | DAILY SCORE | CUM. SCORE | SPEED MPH | DAILY SCORE | CUM. SCORE |
| 1. | Moffat; U.S.A.; Nimbus | 178.5 | 566 (21) | 43.7 | 890 (8) | 1456 (10) | 66.1 | 1000 (1) | 2456 (5) | 79.4 | 1000 (1) | 3456 (3) | | |
| 2. | Grosse; W. Germany; AS-W 12 | 290.0 | 919 (5) | 38.5 | 783 (15) | 1702 (4) | 60.1 | 909 (6) | 2611 (1) | 74.4 | 936 (5) | 3547 (1) | | |
| 3. | Mercier; France; AS-W 12 | 251.5 | 797 (8) | 44.9 | 913 (7) | 1710 (3) | 49.0 | 741 (13) | 2451 (6) | 70.0 | 836 (16) | 3387 (4) | | |
| 4. | Burton; Britain; Kestrel 19 | 193.0 | 612 (15) | 47.4 | 964 (4) | 1576 (6) | 62.2 | 941 (4) | 2517 (3) | 74.7 | 941 (4) | 3458 (2) | | |
| 5. | Makula; Poland; Kobra 17 | 315.5 | 1000 (1) | 48.2 | 982 (2) | 1982 (1) | 219.0* | 555 (18) | 2537 (2) | 65.6 | 825 (26) | 3362 (6) | | |
| 6. | Neubert; W. Germany; Kestrel 22 | 300.5 | 954 (3) | 3.5* | 14 (36) | 968 (29) | 65.8 | 995 (2) | 1963 (16) | 74.8 | 942 (3) | 2905 (14) | | |
| 7. | Deiafield; Britain; AS-W 12 | 198.5 | 630 (11) | 46.6 | 948 (6) | 1578 (5) | 58.6 | 887 (8) | 2465 (4) | 72.2 | 909 (7) | 3374 (5) | | |
| 8. | Labar; France; AS-W 12 | 291.5 | 924 (4) | 48.2 | 982 (2) | 1906 (2) | 175.0* | 444 (29) | 2350 (7) | 67.1 | 845 (21) | 3195 (7) | | |
| 9. | Scott; U.S.A.; AS-W 12 | 188.0 | 596 (17) | 46.7 | 951 (5) | 1547 (8) | 10.5* | 27 (30) | 1574 (24) | 76.4 | 962 (2) | 2536 (23) | | |
| 10. | Wittanen; Finland; Phoebus C | 179.5 | 569 (20) | 49.1 | 1000 (1) | 1569 (7) | 42.3 | 640 (16) | 2209 (10) | 68.7 | 865 (16) | 3074 (10) | | |
| 11. | Hossinger; Argentina; Cirrus | 306.5 | 972 (2) | 135.0* | 496 (26) | 1468 (9) | 53.2 | 805 (12) | 2273 (9) | 67.0 | 843 (22) | 3116 (9) | | |
| 12. | Zoli; Italy; Kestrel | 269.0 | 853 (6) | 104.0* | 382 (32) | 1235 (15) | 61.2 | 926 (5) | 2161 (11) | 70.7 | 890 (10) | 3051 (11) | | |
| 13. | Pettersson; Sweden; Dia. 18 | 188.5 | 598 (16) | 41.4 | 843 (13) | 1441 (11) | 57.5 | 870 (10) | 2311 (8) | 67.6 | 851 (19) | 3162 (8) | | |
| 14. | Ehrat; Switzerland; AN-66 | 242.5 | 768 (10) | 148.0* | 544 (18) | 1312 (14) | 55.6 | 841 (11) | 2153 (12) | 62.8 | 790 (29) | 2943 (13) | | |
| 15. | Ax; Sweden; Phoebus C | 196.5 | 624 (12) | 94.5* | 347 (33) | 971 (28) | 58.4 | 883 (9) | 1854 (18) | 71.3 | 897 (9) | 2751 (18) | | |
| 16. | Jinks; Australia; Diamant 18 | 182.0 | 576 (19) | 143.5* | 527 (20) | 1103 (23) | 65.8 | 995 (2) | 2098 (13) | 68.6 | 864 (17) | 2962 (12) | | |
| 17. | Rizzi; Argentina; Cirrus | 249.0 | 790 (9) | 121.0* | 444 (28) | 1234 (16) | 45.8 | 693 (14) | 1927 (17) | 66.3 | 835 (24) | 2762 (17) | | |
| 18. | Schubert; Austria; Kestrel | 84.0 | 266 (33) | 42.5 | 865 (10) | 131 (20) | 10.5* | 27 (30) | 7158 (30) | 69.9 | 880 (13) | 2038 (28) | | |
| 19. | de Dorlodot; Belgium; AS-W 12 | 176.0 | 559 (22) | 137.5 | 505 (23) | 1064 (25) | 59.5 | 901 (7) | 1965 (15) | 63.8 | 803 (28) | 2768 (16) | | |
| 20. | van Steinfoorn; Holland; Dia. 18 | 100.0 | 318 (30) | 144.0* | 529 (19) | 847 (30) | 213.0* | 540 (21) | 1387 (26) | 60.7 | 764 (32) | 2151 (26) | | |
| 21. | Woodl; Austria; D-36 V-2 | 173.0 | 549 ** | DNC | 0 (37) | 549 (35) | 208.5* | 528 (23) | 1077 (32) | 66.4 | 836 (23) | 1913 (32) | | |
| 22. | Vergani; Italy; Kestrel | 182.0 | 577 (18) | 142.5* | 522 (21) | 1099 (24) | 42.6 | 644 (15) | 1743 (21) | 68.9 | 867 (14) | 2610 (20) | | |
| 23. | Braes; Denmark; Libelle | 176.0 | 559 (22) | 149.0* | 546 (17) | 1105 (22) | 209.0* | 529 (22) | 1634 (23) | 71.8 | 904 (8) | 2538 (22) | | |
| 24. | Munch; Brazil; HP-13M | 253.0 | 803 (7) | 115.5* | 424 (29) | 1227 (17) | 193.0* | 489 (25) | 1716 (22) | 66.0 | 830 (25) | 2546 (21) | | |
| 25. | Georgeson; N. Zealand; Cirrus | 195.5 | 620 (13) | 136.0* | 500 (24) | 1120 (21) | 10.5* | 27 (30) | 1147 (31) | 56.7 | 714 (35) | 1861 (33) | | |
| 26. | Innes; Guernsey; Libelle | 109.0 | 346 (29) | 41.6 | 846 (12) | 1192 (19) | 40.6 | 614 (17) | 1806 (20) | 55.7 | 701 (37) | 2507 (24) | | |
| 27. | Evans; N. Zealand; Cirrus | 195.5 | 620 (13) | 156.0* | 573 (16) | 1193 (18) | DNC | 0 (37) | 1193 (29) | 64.8 | 816 (27) | 2009 (29) | | |
| 28. | Webb; Canada; Kestrel | 157.5 | 500 (26) | 41.8 | 850 (11) | 1358 (13) | 191.0* | 484 (26) | 1842 (19) | 68.3 | 860 (18) | 2702 (19) | | |
| 29. | Perez; Chile; Cirrus | 175.5 | 557 (24) | 43.3 | 880 (9) | 1437 (12) | 219.0* | 55 (18) | 1992 (14) | 67.3 | 847 (20) | 2839 (15) | | |
| 30. | Firth; Canada; HP-11A | 83.0 | 263 (35) | 115.5* | 424 (29) | 687 (34) | 214.5* | 544 (20) | 1231 (28) | 57.9 | 728 (34) | 1959 (30) | | |
| 31. | Boisset; Chile; Cirrus | 77.5 | 246 (38) | 135.5* | 497 (25) | 743 (33) | 10.5* | 27 (30) | 770 (36) | 58.3 | 734 (33) | 1504 (35) | | |
| 32. | Defosse; Belgium; BS-1 | 93.0 | 296 (31) | DNC | 0 (37) | 296 (38) | 10.5* | 27 (30) | 323 (38) | 68.9 | 867 (14) | 1190 (37) | | |
| 33. | Jackson; S. Africa; BJ-4A | 78.5 | 249 (37) | 39.7 | 809 (14) | 1058 (26) | 0 | 0 (37) | 1058 (33) | 70.0 | 881 (12) | 1939 (31) | | |
| 34. | Rowe; Australia; Cirrus | 122.0 | 387 (28) | 108.5* | 399 (31) | 786 (31) | 183.5* | 465 (28) | 1251 (27) | 70.3 | 885 (11) | 2136 (27) | | |
| 35. | Corydon; Denmark; Phoebus C | 126.0 | 399 (27) | 17.5* | 64 (35) | 463 (36) | 10.5* | 27 (30) | 490 (37) | 55.8 | 703 (36) | 1193 (36) | | |
| 36. | Maeki; Finland; Phoebus C | 164.0 | 520 (25) | 129.0* | 473 (27) | 993 (27) | 206.5* | 524 (24) | 1517 (25) | 62.2 | 783 (30) | 2300 (25) | | |
| 37. | Bar; Israel; Sisu 1A | 79.5 | 252 (36) | 138.0* | 506 (22) | 758 (32) | 7.5* | 19 (36) | 777 (35) | 60.9 | 767 (31) | 1544 (34) | | |
| 38. | Fujikura; Japan; Diamant 16.5 | 83.5 | 265 (34) | 27.0* | 99 (34) | 364 (37) | 186.0* | 471 (27) | 835 (34) | DNC | 0 (38) | 835 (38) | | |
| 39. | Beatty; S. Africa; BJ-4B | 89.0 | 283 (32) | DNC | 0 (37) | 283 (39) | DNC | 0 (37) | 283 (39) | DNC | 0 (38) | 283 (39) | | |

| STANDARD CLASS | | | AREA DISTANCE | | | 155-MI. GOAL AND RETURN | | | 221-MI. TRIANGLE | | | 221-MI. TRIANGLE | | |
|---------------------------|----------------------------------|-------|-------------------|----------------|----------|-------------------------|----------------|---------------|------------------|----------------|---------------|------------------|----------------|---------------|
| PILOT; COUNTRY; SAILPLANE | | | DISTANCE MILES | DAILY SCORE | | SPEED MPH | DAILY SCORE | CUM. SCORE | SPEED MPH | DAILY SCORE | CUM. SCORE | SPEED MPH | DAILY SCORE | CUM. SCORE |
| 1. | Reichmann; W. Germany; LS-1 | 251.0 | 823 (6) | 64.8 | 1000 (1) | 1823 (2) | 58.3 | 969 (5) | 2792 (1) | 73.7 | 1000 (1) | 3792 (1) | | |
| 2. | Wroblewski; Poland; Kobra 15 | 305.0 | 1000 (1) | 56.7 | 875 (14) | 1875 (1) | 53.1 | 882 (22) | 2757 (2) | 61.0 | 828 (30) | 3585 (2) | | |
| 3. | Kepka; Poland; Kobra 15 | 304.5 | 998 (2) | 51.6 | 795 (20) | 1793 (3) | 53.0 | 881 (23) | 2674 (4) | 60.9 | 826 (31) | 3500 (4) | | |
| 4. | Mix; Canada; S/Cirrus | 187.5 | 615 (15) | 63.3 | 976 (2) | 1591 (8) | 55.1 | 915 (10) | 2506 (6) | 67.6 | 917 (4) | 3423 (5) | | |
| 5. | Cameron; N. Zealand; S/Libelle | 255.0 | 836 (5) | 60.3 | 931 (5) | 1767 (4) | 55.8 | 927 (7) | 2694 (3) | 64.1 | 870 (14) | 3564 (3) | | |
| 6. | Walbel; W. Germany; AS-W 15 | 210.5 | 689 (7) | 48.9 | 755 (29) | 1444 (18) | 60.2 | 1000 (1) | 2444 (9) | 68.9 | 935 (2) | 3379 (7) | | |
| 7. | Smith; U.S.A.; LS-1 | 126.0 | 413 (32) | 51.8 | 799 (19) | 1212 (31) | 58.8 | 977 (3) | 2189 (21) | 66.0 | 896 (9) | 3085 (19) | | |
| 8. | Johannessen; Norway; S/Cirrus | 278.5 | 913 (3) | 49.1 | 758 (27) | 1671 (5) | 54.7 | 909 (14) | 2580 (5) | 60.6 | 882 (32) | 3402 (6) | | |
| 9. | Petroczy; Hungary; SH-1 | 206.5 | 676 (8) | 59.8 | 923 (6) | 1599 (7) | 54.4 | 904 (16) | 2503 (7) | 61.7 | 837 (25) | 3340 (8) | | |
| 10. | Reparon; Holland; AS-W 15 | 164.0 | 538 (26) | 50.0 | 771 (26) | 1309 (25) | 55.6 | 924 (8) | 2233 (19) | 61.9 | 840 (22) | 3073 (20) | | |
| 11. | Clifford; S. Africa; AS-W 15 | 174.0 | 570 (23) | 62.2 | 960 (4) | 1530 (10) | 54.4 | 903 (17) | 2433 (10) | 62.8 | 852 (16) | 3285 (9) | | |
| 12. | Nietlisbach; Swiss; S/Libelle | 164.0 | 538 (26) | 53.9 | 831 (18) | 1369 (23) | 58.5 | 972 (4) | 2341 (15) | 62.0 | 841 (21) | 3182 (15) | | |
| 13. | Zegels; Belgium; S/Libelle | 127.0 | 415 (30) | 50.2 | 774 (24) | 1189 (32) | 54.2 | 900 (18) | 2089 (27) | 65.5 | 889 (10) | 2978 (25) | | |
| 14. | Tury; Hungary; Phoebus B | 182.5 | 598 (21) | 58.4 | 901 (7) | 1499 (13) | 54.5 | 906 (15) | 2405 (12) | 61.8 | 839 (24) | 3244 (11) | | |
| 15. | van Bree; Holland; AS-W 15 | 124.0 | 406 (33) | 54.3 | 837 (15) | 1243 (28) | 54.9 | 913 (12) | 2156 (23) | 67.1 | 910 (5) | 3066 (22) | | |
| 16. | Urbancic; Argentina; S/Libelle | 187.5 | 615 (15) | 50.8 | 783 (22) | 1398 (20) | 54.9 | 913 (12) | 2311 (17) | 67.0 | 909 (6) | 3220 (12) | | |
| 17. | Gough; Britain; S/Cirrus | 170.5 | 559 (25) | 58.3 | 900 (8) | 1459 (17) | 53.2 | 884 (21) | 2343 (14) | 61.1 | 829 (29) | 3172 (16) | | |
| 18. | Fahrafellner; Austria; LS-1C | 191.5 | 628 (12) | 54.0 | 834 (17) | 1462 (16) | 52.9 | 878 (24) | 2340 (16) | 64.2 | 871 (13) | 3211 (13) | | |
| 19. | Lyon; Chile; Phoebus A | 192.5 | 630 (11) | 58.0 | 896 (9) | 1526 (11) | 54.2 | 900 (18) | 2426 (11) | 61.7 | 837 (25) | 3263 (10) | | |
| 20. | Gombert; France; WA-26 | 187.5 | 615 (15) | 50.7 | 782 (23) | 1397 (21) | 42.1 | 699 (30) | 2096 (25) | 61.4 | 833 (27) | 2929 (26) | | |
| 21. | Allemann; U.S.A.; S/Libelle | 97.0 | 318 (35) | 44.2 | 682 (36) | 1000 (37) | 50.9 | 846 (27) | 1846 (32) | 66.3 | 900 (8) | 2746 (31) | | |
| 22. | Schubert; Brazil; Urupema | 164.0 | 538 (26) | 57.3 | 884 (12) | 1422 (19) | 52.8 | 878 (24) | 2300 (18) | 62.7 | 851 (17) | 3151 (17) | | |
| 23. | Lindhardt; Denmark; S/Cirrus | 171.5 | 562 (24) | 47.8 | 738 (33) | 1300 (26) | 55.2 | 917 (9) | 2217 (20) | 63.1 | 856 (15) | 3073 (20) | | |
| 24. | Greaves; Britain; S/Libelle | 264.0 | 865 (4) | 50.2 | 774 (24) | 1639 (6) | 199.0* | 361 (33) | 2000 (29) | 59.2 | 804 (35) | 2804 (28) | | |
| 25. | Bloch; Switzerland; AS-W 15 | 115.5 | 379 (34) | 48.0 | 741 (31) | 1120 (35) | 53.7 | 892 (20) | 2012 (28) | 50.7 | 687 (39) | 2699 (32) | | |
| 26. | Piludu; Italy; S/Libelle | 181.5 | 595 (22) | 62.4 | 962 (3) | 1557 (9) | 50.0 | 830 (28) | 2387 (13) | 59.7 | 810 (34) | 3197 (14) | | |
| 27. | Schraffl; Austria; LS-1C | 94.0 | 308 (37) | 48.0 | 741 (31) | 1049 (36) | 52.5 | 873 (25) | 1922 (30) | 61.4 | 833 (27) | 2755 (29) | | |
| 28. | Mattern; France; LS-1C | 187.5 | 615 (15) | 45.9 | 708 (34) | 963 (38) | 180.0* | 331 (35) | 1654 (34) | 62.7 | 850 (18) | 2504 (34) | | |
| 29. | Selstrup; Denmark; AS-W 15 | 77.5 | 255 (39) | 45.9 | 708 (34) | 963 (38) | 55.0 | 914 (11) | 1877 (31) | 64.4 | 874 (12) | 2751 (30) | | |
| 30. | Junqueira; Brazil; Urupema | 195.0 | 638 (9) | 38.1 | 588 (38) | 1226 (30) | 52.2 | 867 (26) | 2093 (26) | 60.5 | 820 (33) | 2913 (27) | | |
| 31. | Hansson; Sweden; S/Libelle | 184.0 | 604 (20) | 57.5 | 888 (11) | 1492 (14) | 187.0* | 339 (34) | 1831 (33) | 57.2 | 776 (37) | 2607 (33) | | |
| 32. | Reid; N. Zealand; AS-W 15 | 126.5 | 414 (31) | 48.7 | 751 (30) | 1165 (33) | 57.4 | 954 (6) | 2119 (24) | 64.5 | 875 (11) | 2994 (24) | | |
| 33. | Rodling; Sweden; S/Libelle | 145.0 | 475 (29) | 51.5 | 794 (21) | 1269 (27) | 205.5* | 374 (32) | 1643 (35) | 62.5 | 848 (19) | 2491 (35) | | |
| 34. | Martin; Australia; Phoebus A | 187.5 | 614 (19) | 49.1 | 758 (27) | 1372 (22) | 47.4 | 788 (29) | 2160 (22) | 61.9 | 840 (22) | 3000 (23) | | |
| 35. | Mouat-Biggs; S. Africa; S/Cirrus | 96.0 | 316 (36) | 110.9* | 286 (39) | 602 (39) | 216.0* | 392 (31) | 994 (39) | 67.0 | 909 (6) | 1903 (39) | | |
| 36. | Perotti; Italy; S/Libelle | 188.0 | 616 (14) | 58.0 | 896 (9) | 1512 (12) | DNC | 0 (39) | 1512 (36) | 68.0 | 923 (3) | 2435 (35 (| | |

*Figures in parentheses indicate daily and cumulative standings. An asterisk indicates distance (miles) flown instead of speed (mph), as a result of the pilot having failed to complete the

**Landing information not available at time of pilot scoring.

Table of Scores (Charles L. Nearing, Scorer)

| JUNE 26 243-MI. GOAL AND RETURN | | | JUNE 27 AREA DISTANCE | | | JULY 1 163-MI. GOAL AND RETURN | | | JULY 2 327.5-MI. TRIANGLE | | | JULY 3 279.5-MI. TRIANGLE | | |
|------------------------------------|----------------|---------------|--------------------------|----------------|---------------|-----------------------------------|----------------|---------------|------------------------------|----------------|---------------|------------------------------|----------------|---------------|
| SPEED MPH | DAILY SCORE | CUM. SCORE | DISTANCE MILES | DAILY SCORE | CUM. SCORE | SPEED MPH | DAILY SCORE | CUM. SCORE | SPEED MPH | DAILY SCORE | CUM. SCORE | SPEED MPH | DAILY SCORE | CUM. SCORE |
| 63.7 | 1000 (1) | 4456 (1) | 483.0 | 966 (5) | 5422 (1) | 57.2 | 901 (8) | 6323 (1) | 64.9 | 1000 (1) | 7323 (1) | 67.0 | 1000 (1) | 8323 |
| 55.9 | 877 (5) | 4424 (2) | 419.0 | 838 (22) | 5262 (2) | 59.3 | 934 (5) | 6196 (2) | 58.3 | 899 (5) | 7095 (2) | 63.0 | 941 (6) | 8036 |
| 54.1 | 849 (8) | 4236 (4) | 424.0 | 848 (21) | 5084 (5) | 59.7 | 940 (4) | 6024 (3) | 64.9 | 999 (2) | 7023 (3) | 52.8 | 788 (23) | 7811 |
| 54.2 | 850 (7) | 4308 (3) | 384.5 | 769 (27) | 5077 (6) | 57.6 | 907 (7) | 5984 (4) | 51.9 | 800 (15) | 6784 (4) | 64.5 | 962 (3) | 7746 |
| 53.8 | 844 (9) | 4206 (5) | 473.0 | 947 (7) | 5153 (3) | 52.7 | 830 (24) | 5983 (5) | 51.9 | 800 (15) | 6783 (5) | 60.6 | 904 (7) | 7687 |
| 56.5 | 887 (4) | 3792 (12) | 500.0 | 1000 (1) | 4792 (9) | 63.5 | 1000 (1) | 5792 (8) | 60.3 | 928 (4) | 6720 (7) | 64.5 | 962 (3) | 7687 |
| 53.0 | 831 (12) | 4205 (6) | 441.0 | 882 (17) | 5087 (4) | 56.4 | 889 (10) | 5976 (6) | 51.9 | 800 (15) | 6776 (6) | 60.1 | 896 (8) | 7672 |
| 51.1 | 802 (21) | 3997 (7) | 443.0 | 886 (15) | 4883 (7) | 59.2 | 932 (6) | 5815 (7) | 57.3 | 848 (10) | 6663 (8) | 63.8 | 953 (5) | 7616 |
| 60.1 | 942 (2) | 3478 (19) | 482.5 | 965 (6) | 4443 (17) | 59.8 | 943 (3) | 5386 (13) | 64.4 | 992 (3) | 6378 (12) | 65.2 | 974 (2) | 7352 |
| 54.8 | 859 (6) | 3933 (9) | 446.0 | 892 (13) | 4825 (8) | 52.4 | 825 (25) | 5650 (9) | 54.4 | 838 (12) | 6488 (9) | 56.6 | 844 (15) | 7332 |
| 49.8 | 781 (22) | 3897 (10) | 444.0 | 888 (14) | 4785 (10) | 53.2 | 837 (21) | 5622 (10) | 56.1 | 865 (8) | 6487 (10) | 54.6 | 815 (21) | 7302 |
| 49.8 | 781 (22) | 3832 (11) | 452.0 | 904 (11) | 4736 (12) | 53.0 | 834 (22) | 5570 (12) | 55.6 | 856 (9) | 6426 (11) | 52.4 | 782 (25) | 7208 |
| 52.2 | 818 (16) | 3980 (8) | 398.5 | 797 (25) | 4777 (11) | 53.6 | 844 (20) | 5621 (11) | 47.7 | 735 (22) | 6356 (13) | 50.6 | 755 (30) | 7111 |
| 51.2 | 804 (20) | 3747 (14) | 362.0 | 724 (29) | 4471 (16) | 56.2 | 886 (11) | 5357 (17) | 55.0 | 847 (11) | 6204 (15) | 59.1 | 881 (40) | 7085 |
| 57.0 | 894 (3) | 3645 (16) | 436.0 | 872 (19) | 4517 (14) | 54.4 | 857 (15) | 5374 (15) | 56.5 | 870 (7) | 6244 (14) | 55.4 | 827 (18) | 7071 |
| 51.8 | 812 (18) | 3774 (13) | 376.0 | 752 (28) | 4526 (13) | 54.4 | 857 (15) | 5383 (14) | 51.2 | 788 (18) | 6171 (16) | 58.7 | 877 (11) | 7048 |
| 53.7 | 843 (10) | 3605 (17) | 450.0 | 900 (12) | 4505 (15) | 54.9 | 865 (13) | 5370 (16) | 50.9 | 785 (19) | 6155 (17) | 57.2 | 854 (13) | 7009 |
| 53.5 | 840 (11) | 2878 (26) | 496.0 | 922 (2) | 3870 (25) | 52.1 | 877 (2) | 4847 (21) | 57.6 | 888 (6) | 5735 (18) | 59.7 | 890 (9) | 6625 |
| 49.4 | 774 (24) | 3542 (18) | 441.0 | 882 (17) | 4424 (18) | 54.4 | 857 (15) | 5281 (18) | 259.5* | 317 (33) | 5598 (19) | 55.8 | 833 (16) | 6431 |
| 51.8 | 813 (17) | 2964 (24) | 456.5 | 913 (8) | 3877 (24) | 54.2 | 854 (18) | 4731 (22) | 53.2 | 819 (14) | 5550 (20) | 52.4 | 782 (25) | 6332 |
| 51.5 | 809 (19) | 2722 (28) | 496.0 | 992 (2) | 3714 (27) | 52.7 | 831 (23) | 4545 (27) | 54.3 | 837 (13) | 5382 (23) | 57.1 | 852 (14) | 6234 |
| 52.8 | 828 (13) | 3438 (20) | 442.0 | 884 (16) | 4322 (19) | 56.6 | 892 (9) | 5214 (19) | 156.6* | 191 (36) | 5405 (22) | 54.8 | 818 (20) | 6223 |
| 230.0* | 379 (33) | 2917 (25) | 385.0 | 770 (28) | 3687 (28) | 48.4 | 762 (30) | 4449 (28) | 47.2 | 727 (24) | 5176 (25) | 55.7 | 831 (17) | 6007 |
| 43.5 | 682 (28) | 3228 (22) | 352.5 | 705 (31) | 3933 (22) | 49.4 | 778 (29) | 4711 (23) | 279.0* | 340 (32) | 5051 (26) | 51.2 | 764 (28) | 5815 |
| 44.2 | 693 (26) | 2554 (30) | 453.0 | 906 (10) | 3460 (29) | 52.2 | 822 (26) | 4282 (30) | 47.4 | 730 (23) | 5012 (28) | 52.7 | 787 (24) | 5799 |
| 44.0 | 690 (27) | 3197 (23) | 347.5 | 695 (32) | 3892 (23) | 48.3 | 761 (31) | 4653 (25) | 318.5* | 389 (29) | 5042 (27) | 49.5 | 739 (33) | 5781 |
| 52.8 | 828 (13) | 2837 (27) | 455.0 | 911 (9) | 3748 (26) | 51.3 | 807 (27) | 4555 (26) | 325.3* | 397 (28) | 4952 (29) | 52.2 | 779 (27) | 5731 |
| 39.9 | 626 (31) | 3328 (21) | 496.0 | 992 (2) | 4320 (20) | 148.0* | 362 (37) | 4682 (24) | 48.3 | 743 (20) | 5425 (21) | 209.5* | 300 (36) | 5725 |
| 52.4 | 823 (15) | 3662 (15) | 313.0 | 626 (35) | 4288 (21) | 54.8 | 863 (14) | 5151 (20) | 139.8* | 171 (37) | 5322 (24) | 188.9* | 270 (37) | 5592 |
| 40.9 | 642 (30) | 2601 (29) | 407.0 | 814 (24) | 3415 (30) | 55.7 | 878 (12) | 4293 (29) | 227.5* | 278 (35) | 4571 (30) | 55.2 | 824 (19) | 5395 |
| 42.8 | 671 (29) | 2175 (33) | 358.0 | 716 (30) | 2891 (33) | 44.1 | 695 (33) | 3586 (32) | 44.2 | 680 (26) | 4266 (31) | 51.1 | 762 (29) | 5028 |
| 44.8 | 703 (25) | 1893 (35) | 261.0 | 522 (37) | 2415 (36) | 50.1 | 789 (28) | 3204 (35) | 46.7 | 720 (25) | 3924 (34) | 53.7 | 802 (22) | 4726 |
| 69.0* | 114 (36) | 2053 (34) | 409.0 | 819 (23) | 2872 (34) | 44.8 | 706 (32) | 3578 (33) | 298.0* | 364 (31) | 3942 (33) | 49.2 | 734 (34) | 4676 |
| 25.0* | 41 (38) | 2177 (32) | 432.5 | 865 (20) | 3042 (32) | DNC | 0 (38) | 3042 (37) | 47.8 | 737 (21) | 3779 (36) | 58.2 | 868 (12) | 4647 |
| 37.1 | 582 (32) | 1775 (37) | 296.0 | 592 (36) | 2367 (37) | 54.1 | 852 (19) | 3219 (34) | 44.0 | 678 (27) | 3897 (35) | 50.1 | 748 (32) | 4645 |
| 148.0* | 244 (35) | 2544 (31) | 341.5 | 683 (33) | 3227 (31) | 42.5 | 669 (34) | 3896 (31) | 38.5* | 47 (38) | 3943 (32) | 42.6 | 636 (35) | 4579 |
| 190.0* | 313 (34) | 1857 (36) | 321.0 | 643 (34) | 2500 (35) | 41.8 | 659 (35) | 3159 (36) | 306.5* | 374 (30) | 3533 (37) | 50.5 | 753 (31) | 4286 |
| 56.0* | 92 (37) | 927 (38) | 250.0 | 500 (38) | 1427 (38) | 38.3 | 603 (36) | 2630 (38) | 229.5* | 280 (34) | 2310 (38) | 188.9* | 270 (37) | 2580 |
| DNC | 0 (39) | 283 (39) | DNC | 0 (39) | 283 (39) | DNC | 0 (38) | 283 (39) | DNC | 0 (39) | 283 (39) | DNC | 0 (39) | 283 |
| 163-MI. GOAL AND RETURN | | | AREA DISTANCE | | | 163-MI. GOAL AND RETURN | | | 290-MI. GOAL AND RETURN | | | 238.5-MI. TRIANGLE | | |
| SPEED MPH | DAILY SCORE | CUM. SCORE | DISTANCE MILES | DAILY SCORE | CUM. SCORE | SPEED MPH | DAILY SCORE | CUM. SCORE | SPEED MPH | DAILY SCORE | CUM. SCORE | SPEED MPH | DAILY SCORE | CUM. SCORE |
| 70.8 | 1000 (1) | 4792 (1) | 462.0 | 1000 (1) | 5792 (1) | 54.8 | 931 (5) | 6723 (1) | 60.4 | 1000 (1) | 7723 (1) | 54.0 | 940 (16) | 8663 |
| 68.8 | 972 (4) | 4557 (2) | 398.5 | 863 (7) | 5420 (2) | 56.2 | 955 (2) | 6375 (2) | 51.9 | 859 (26) | 7234 (2) | 57.1 | 994 (3) | 8228 |
| 63.1 | 892 (18) | 4392 (4) | 384.5 | 833 (13) | 5225 (4) | 51.7 | 877 (19) | 6102 (4) | 59.4 | 984 (4) | 7086 (3) | 57.3 | 998 (2) | 8084 |
| 63.6 | 898 (13) | 4321 (5) | 387.0 | 838 (10) | 5159 (5) | 52.0 | 883 (16) | 6042 (5) | 54.6 | 904 (12) | 6946 (5) | 56.7 | 988 (4) | 7934 |
| 66.6 | 941 (7) | 4505 (3) | 385.0 | 834 (12) | 5339 (3) | 51.1 | 867 (22) | 6206 (3) | 47.0 | 779 (33) | 6985 (4) | 53.3 | 927 (20) | 7912 |
| 61.4 | 867 (23) | 4246 (7) | 395.0 | 855 (8) | 5101 (6) | 51.2 | 869 (21) | 5970 (6) | 53.8 | 891 (18) | 6861 (7) | 54.8 | 954 (11) | 7815 |
| 69.5 | 982 (3) | 4067 (16) | 429.5 | 930 (3) | 4997 (9) | 53.0 | 901 (12) | 5898 (9) | 59.8 | 991 (3) | 6889 (6) | 52.8 | 919 (24) | 7808 |
| 63.1 | 892 (18) | 4294 (6) | 331.0 | 716 (31) | 5010 (8) | 55.3 | 939 (3) | 5949 (7) | 49.4 | 891 (29) | 6768 (9) | 57.4 | 1000 (1) | 7768 |
| 59.0 | 834 (28) | 4174 (9) | 368.0 | 796 (19) | 4970 (11) | 53.9 | 915 (10) | 5885 (10) | 54.1 | 895 (16) | 6780 (8) | 54.5 | 949 (13) | 7729 |
| 63.3 | 895 (16) | 3968 (9) | 401.0 | 868 (6) | 4836 (17) | 58.9 | 1000 (1) | 5836 (11) | 55.1 | 912 (9) | 6748 (10) | 54.7 | 952 (12) | 7700 |
| 63.3 | 895 (16) | 4180 (8) | 387.0 | 838 (10) | 5018 (7) | 52.7 | 894 (14) | 5912 (8) | 48.3 | 801 (32) | 6713 (12) | 54.9 | 956 (8) | 7669 |
| 64.8 | 916 (10) | 4098 (12) | 355.0 | 769 (24) | 4867 (15) | 51.7 | 878 (17) | 5745 (15) | 59.9 | 993 (2) | 6738 (11) | 52.8 | 919 (24) | 7657 |
| 65.9 | 932 (9) | 3910 (21) | 432.5 | 936 (2) | 4846 (16) | 54.2 | 920 (8) | 5766 (14) | 55.9 | 926 (7) | 6692 (13) | 53.1 | 925 (23) | 7617 |
| 60.8 | 860 (25) | 4104 (11) | 368.0 | 796 (19) | 4900 (13) | 51.7 | 878 (17) | 5778 (13) | 53.3 | 882 (20) | 6660 (14) | 53.5 | 932 (18) | 7592 |
| 66.3 | 937 (8) | 4003 (18) | 427.0 | 925 (4) | 4928 (12) | 47.1 | 800 (34) | 5728 (16) | 52.9 | 876 (22) | 6604 (16) | 54.9 | 956 (8) | 7560 |
| 60.0 | 848 (27) | 4068 (15) | 313.0 | 677 (36) | 4745 (19) | 51.6 | 876 (20) | 5621 (17) | 54.1 | 896 (15) | 6517 (17) | 53.8 | 936 (17) | 7453 |
| 61.2 | 865 (24) | 4037 (17) | 347.5 | 752 (26) | 4789 (18) | 45.6 | 749 (38) | 5538 (21) | 57.5 | 952 (6) | 6490 (18) | 54.9 | 956 (8) | 7446 |
| 61.5 | 869 (22) | 4080 (14) | 303.0 | 656 (37) | 4736 (20) | 49.2 | 836 (30) | 5572 (18) | 54.6 | 904 (12) | 6476 (19) | 53.2 | 926 (21) | 7402 |
| 59.0 | 834 (28) | 4097 (13) | 404.0 | 875 (5) | 4972 (10) | 49.3 | 838 (28) | 5810 (12) | 50.0 | 828 (27) | 6638 (15) | 42.8 | 745 (38) | 7383 |
| 58.9 | 833 (30) | 3762 (25) | 363.0 | 785 (23) | 4547 (25) | 53.2 | 903 (11) | 5450 (23) | 57.7 | 955 (5) | 6405 (20) | 55.4 | 965 (7) | 7370 |
| 67.4 | 952 (5) | 3698 (27) | 371.5 | 804 (16) | 4502 (26) | 52.9 | 898 (13) | 5400 (24) | 54.8 | 908 (11) | 6308 (23) | 56.7 | 988 (4) | 7296 |
| 50.2 | 709 (38) | 3860 (23) | 383.5 | 830 (14) | 4690 (21) | 47.4 | 805 (33) | 5495 (22) | 54.1 | 885 (16) | 6390 (21) | 48.0 | 836 (37) | 7226 |
| 58.1 | 821 (31) | 3894 (22) | 368.0 | 796 (19) | 4690 (21) | 51.1 | 867 (22) | 5557 (19) | 45.7 | 757 (34) | 6314 (22) | 48.6 | 846 (35) | 7160 |
| 57.5 | 812 (33) | 3616 (30) | 343.0 | 742 (29) | 4358 (29) | 52.1 | 885 (15) | 5243 (27) | 55.1 | 912 (9) | 6155 (24) | 54.4 | 947 (15) | 7102 |
| 64.8 | 915 (11) | 3614 (31) | 335.0 | 725 (30) | 4339 (31) | 55.1 | 936 (4) | 5275 (26) | 53.0 | 877 (21) | 6152 (25) | 52.6 | 916 (27) | 7068 |
| 67.1 | 948 (6) | 4145 (11) | 344.5 | 746 (27) | 4891 (14) | 136.0* | 332 (39) | 5223 (28) | 53.5 | 886 (19) | 6109 (26) | 51.2 | 891 (30) | 7000 |
| 62.2 | 879 (21) | 3634 (29) | 298.5 | 646 (38) | 4280 (32) | 50.5 | 858 (25) | 5138 (33) | 54.3 | 899 (14) | 6037 (28) | 53.2 | 926 (21) | 6963 |
| 60.7 | 857 (26) | 3361 (36) | 394.5 | 854 (9) | 4215 (34) | 54.7 | 929 (6) | 5144 (32) | 52.8 | 875 (23) | 6019 (30) | 53.5 | 931 (19) | 6950 |
| 63.5 | 898 (13) | 3649 (28) | 328.5 | 711 (32) | 4360 (28) | 50.7 | 860 (24) | 5220 (29) | 49.9 | 827 (28) | 6047 (27) | 49.6 | 864 (32) | 6911 |
| 49.2 | 696 (39) | 3609 (32) | 375.5 | 813 (15) | 4422 (27) | 46.9 | 797 (35) | 5219 (30) | 49.1 | 813 (31) | 6032 (29) | 49.5 | 863 (33) | 6895 |
| 57.7 | 816 (32) | 3423 (34) | 367.0 | 795 (22) | 4218 (33) | 50.3 | 854 (26) | 5072 (34) | 52.5 | 869 (25) | 5941 (31) | 52.0 | 906 (29) | 6847 |
| 50.6 | 715 (37) | 3709 (26) | 295.0 | 638 (39) | 4347 (30) | 47.4 | 806 (32) | 5153 (31) | 43.7 | 725 (35) | 5878 (32) | 52.1 | 907 (28) | 6785 |
| 62.9 | 889 (20) | 3380 (35) | 344.0 | 745 (28) | 4125 (36) | 49.2 | 836 (30) | 4961 (36) | 52.8 | 874 (24) | 5835 (33) | 54.4 | 948 (14) | 678 |

700 to 800 feet per minute.”

From Grosse’s viewpoint, the idea of flying a beautiful, expensive sailplane at low altitudes over the kind of terrain found in west Texas was rather appalling. A pilot couldn’t prove he was best with a broken airplane. But the weather had been bad on those first days, and from higher altitudes one’s outlook could change,

“It went quite good-interesting—far more safe than



Hans-Werner Grosse and the AS-W 12

the last time we flew over the same country. But today we were staying high and the last time we came over it we were very low. I might even say it was dangerous to fly then. It was not so today. I started late and made a detour to the east. I thought it paid off. Then I came together with the crowd. I didn’t keep with them in the beginning, but went to the north and got pretty high one time. And then I saw a flat-looking cloud which might have been a wave cloud—a lenticular....

Grosse didn’t know it, but he was about to step down from first place.

“I thought it should work, but when I got there the part I was flying didn’t work. I decided to run alongside it, under it. This didn’t pay at all. Of course all the others, who were keeping high behind me, looked and were sure it wasn’t worth trying and went the other way. Only by chance I saw them fly out in the valley and get real good lift. I had no choice but to hurry up behind them, I was then pretty

low, only I lost contact with them for about half or three-quarters of an hour.”

The course line to Ardoin evidently lay roughly parallel to two different air masses. Standard Class pilots flying farther east would report plenty of convective clouds while the Open Class contestants faced long periods of clear air.

Britain’s John Delafield, in an AS-W 12, noted the weather situation as he flew with his teammate, George Burton. At that time Burton’s standing in the long-winged Kestrel rested at second between Grosse and Moffat. Delafield recounted,

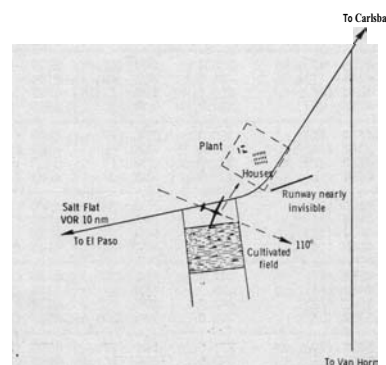
“There was a very strong wind and a marked wind shear aloft at the start of the course. This was giving quite marked mountain waves which were making the thermals very difficult low down, and you had to be content, I found, with about four or five knots and not until you got up to cloudbase around 12,000 feet did lift really become organized. George Burton and I were pair-flying, and we flew all the way to Mount Livermore before we eventually got organized. We got past Livermore, then cloud hopped. We took a cloud to 14,000 feet at cloudbase, then we glided out and right over the road that runs past Van Horn. We were down to about 9000 feet as opposed to 14,000 feet, which was the highest we’d been before we got the first convection. We were looking for wave. We found traces you could fly level in for a mile or two, and then we got another in the mountains south of the Ardoin turnpoint. The thermals there were quite hard to work and quite narrow, with shifting centers, but there was ten knots to be had. We got high—up to 15,000 feet there in thermals, just below the lenticulars....

For Wally Scott the trip out had its problems,

“It was real good to start with locally, but once we got beyond the mountains there was a lot of sink. There was one cu I figured I’d work to cloudbase at 12,500 feet and use to cross the dead area up ahead, but the cloud dis-

sipated by the time I got to it. Consequently I had to head out at a lower altitude than I would have liked. I did get low—down to about 1500 feet above the ground. This is southwest of the Kent area and it’s a notorious sink hole. Anyway, I was just trying to stretch across it but couldn’t do it because I went in low. Then I had to detour to the west about ten miles which probably cost me ten or fifteen minutes in over-all time, because the only cloud within reach was in that direction. On the way a little dry thermal saved me from the low point. From there on the area north of Van Horn seemed to be covered—completely overcast with a lenticular type looking cloud. I was already west of course so I penetrated toward the leading edge of the lenticular. I was out over no-man’s-land, but there was one ranch down there that would have been handy if I had not been able to find lift. However, once I got to the leading edge, I found lift on the order of 400 to 800 feet per minute. I went on in and made the turn.”

Ardoin itself was in a salt flat area with no outstanding reference



points for orientation during the critical period. From a pocket George Moffat took the small card provided all contestants. He studied the diagram of the field and the tiny silhouetted glider indicating the position from which the verifying photo would have to be made. And he must be right the first time. A minute or two required for a second turn could drop a contestant several places for that day. No mistakes, now.

He was high. To avoid going any farther than necessary, he racked

the Nimbus on its tip while he sighted the fixed cameras down the bow of the leading edge. As he snapped the shutters he looked back in the cockpit to double check the card. He isn't sure what happened in the next seconds,

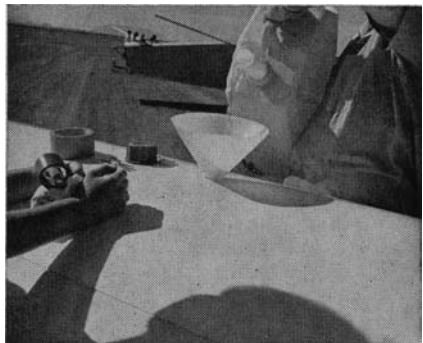
"I was slipping, skidding, and putting the ship in pretty wild attitudes trying to get a bead on the turnpoint. The next thing I knew the nose was down and the earth was spinning around it. The ship had never been spun. Holighaus, the designer of the Nimbus, told me not to spin it. Between the inertia of the wing span, the short lever arm to the tail, and far-back location of center of gravity, he thought there might be problems. When the ship didn't respond to normal corrections I realized he might be right."

Moffat had begun his photo pass about 5500 feet above the ground. By the end of the first turn the Nimbus had lost 500 feet and showed no signs of responding to the controls. The earth was a color wheel, blurring terra-cotta reds, bone whites, and streaks of green in great arcs before the canopy. Around the second turn Moffat recalled a feeling of irritation,

"I thought, 'What a way to lose a meet!' The altimeter was unwinding and I knew I should be thinking about leaving. Then for some reason I recalled spin recovery had been made in the D-36. Its wings were even more flexible than the Nimbus'. I shoved the stick back and forth abruptly several times and watched the wings flex. . . ."

The altimeter was approaching 4000 feet and the Nimbus was beginning the fourth turn when the rudder bit. The crisis was over.

"Penetrating oil." Adding water ballast.
Dutton



Moffat's-eye view of Texas terrain as seen from the cockpit of the Nimbus. A turnpoint photo made during the contest. Note the wing flexing and vertical bank.

Free from the duress of emergency, Moffat considered his close crape. Asymmetrical balance! Earlier in the flight he had attempted to jettison the water ballast stored in the wings. The discharge valve had malfunctioned on one side, leaving more than one hundred pounds outboard of the normal center of gravity. In straight flight this uneven distribution was unnoticed, but in the spin the true c.g. moved to the flight path of the rudder closer to the spin axis reducing the effectiveness of the rudder even further.

He recalled that at spin entry he had negative flaps for maximum cruise; but he was uncertain what influence that had had.

On the way back, Grosse and Delafield reported a useable wave about 30 miles out from the turnpoint. Winds aloft were generally blowing across the course from the northeast. The wave was standing on the windward side of the Sierra Diablos—possibly a secondary from the Delaware Mountains upstream. Delafield's hopes rose. Here might be a golden opportunity,

"I met the big Kestrel again, and we both climbed to 15,000 feet. We were hoping for about four or five-knot wave lift up to altitude and then straight to Marfa, but it was only one knot—not worth stay-

ing with. This didn't work, and that was it, then—a very hard day."

The wave disappointed Grosse, too,

"About 30 miles south of the turnpoint there was a big wave. Neubert got into it, and he finished pretty high [fourth for the day.—Ed.] He had been a bit behind me, due to instrument trouble, I think. The wave enabled him to overtake me. I had lost my chance to regain what I had lost earlier, and overtake the others. I felt it unwise to go too far without some indication of lift. Perhaps there are more courageous pilots."

At Valentine, Scott and Moffat joined in a loose sort of team flying about seven to ten miles apart. Here, with Burton and Delafield, they viewed the squall lines and cloud build-up that lay between them and the finish gate with a certain apprehension. The memory of Makula's experience a few days earlier was still fresh.

"We had to cross in rain to get through," Moffat said, "and of course we were very conservative about this. We came in at a glide angle of about 20/1, which brought us in 1500 feet too high for the gate. I had to use the Nimbus' chute to get down."



Helmut Reichmann, Silver pilot extraordinary
Dutton

In Standard Class, the amazing Helmut Reichmann took a still firmer grip on his lead with another victory to add to the string of firsts he had accumulated from the second day on. Try as he would, A. J. Smith could not dislodge the sensational German Silver pilot. He had even made a second run around the 163-mile circuit and raised his speed to 69.5 miles per hour—enough to give him third place for the day, but still 1.3 miles per hour slower than Reichmann, Allemann, who placed fifth, had considered a restart,

“Cloudstreets were forming back on the course, but as I came in I had to drive through quite a bit of rain. That’s the reason I didn’t think it would be very good having a second try. I started immediately after the line opened to get an established time. I didn’t intend to start on course. An hour later I came back for my real start which was close to 200 p.m. Still, it turned out to be half an hour to forty-five minutes too soon. I started because it looked like it was getting pretty dark in the local area and beginning to rain a bit.

“On the way out I had to work something like 400 to 500 feet per minute thermals several times, looping about sixteen miles off course—to the east—under clouds that ended ten miles short of the turn-point. I glided into the turn and out. It was a straight line back, using essentially two thermals to get back up and then a third for enough altitude to make a straight glide home from Balmorhea at 100 miles per hour.”

An exciting and critical day had ended. Moffat had recouped his

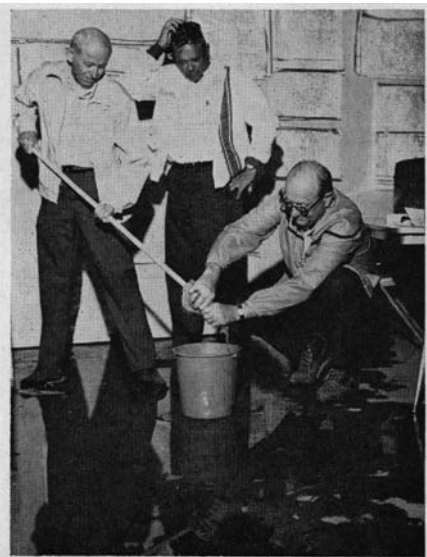
losses at the beginning of the meet. The U.S. team had placed first, second, third, fifth for the day—a record to be proud of. The same idiosyncracies of the scoring system that thwarted Smith, worked for Moffat. Neubert and the 22-meter Kestrel—Moffat’s biggest threat—were struggling to close a point spread too great to overcome—unless Moffat were to blunder. On the other hand, it was becoming increasingly clear that Smith’s chances were diminished in spite of his tremendous drive, unless Reichmann and the Poles were to somehow err—improbable possibilities.

| OPEN CLASS | MPH | POINTS |
|-------------|------|--------|
| 1. Moffat | 63.7 | 1000 |
| 2. Scott | 60.1 | 942 |
| 3. Ax | 57.0 | 894 |
| 4. Neubert | 56.5 | 887 |
| 5. Grosse | 55.9 | 877 |
| 6. Wiitanen | 54.8 | 859 |
| 7. Burton | 54.2 | 850 |
| 8. Mercier | 54.1 | 849 |
| 9. Makula | 53.8 | 844 |
| 10. Rizzi | 53.7 | 843 |

STD. CLASS

| | | |
|-----------------|------|------|
| 1. Reichmann | 70.8 | 1000 |
| 2. Perotti | 70.5 | 996 |
| 3. Smith | 69.5 | 982 |
| 4. Wroblewski | 68.8 | 972 |
| 5. Allemann | 67.4 | 952 |
| 6. Piludu | 67.1 | 948 |
| 7. Cameron | 66.6 | 941 |
| 8. vanBree | 66.3 | 937 |
| 9. Zegels | 65.9 | 932 |
| 10. Nietlispach | 64.8 | 916 |

A rest day scheduled for Sunday, June 28th, was also intended to mark the midpoint of the meet, leaving five more competition days



Buttoning A.J. in the LS-1

to balance off the six of the first week. But on Monday, June 29th, the drying tendency the met men kept talking about, finally got too wet to have reasonable soaring. It was thought things would be better on the morrow, but June 30th dawned wetter still, finding the three meteorologists doing penance to Jupiter Pluvius by swabbing the water off their office floor. It was thought very possibly there would be no flying for several more days.

Understandably, A. J. Smith chafed. Reichmann had run up another first place on the sixth day, and time was running out. Smith felt the show should go on, even if cloudbases were low. On Monday he explained his views,

“I am certain that a task is possible. It could be a downwind goalrace, 100 to 150 miles, or something like that. I think this is a perfectly legitimate and desirable task for a championship—for a world championship. I feel one of the problems now is that we don’t see any in-between tasks here in Marfa. We see only 500-kilometer triangles or distance within a prescribed area, and I think that we have forgotten that in many world championships in the past, we’ve had some exciting and productive races that were very short and in one direction to a goal. I think we should have them, and, of course, I would really like to have a task today. The more tasks we have, I think, the more opportunity to move up the list.”

Also understandable was Moffat’s opposite view,

“Now there will be tremendous pressure put on the organizers to call any kind of

task. If they call a distance task with the clouds nearly on the ground, they might as well throw down a bunch of dice."

It is interesting that Moffat's earlier comment was echoed later by Pirat Gehriger, Chairman of the International Jury representing the FAI,

"When the weather goes bad there is always a big risk the organizers will call a 'lottery task.' This might scramble the whole standings without there being any real result."

SIXTH CONTEST DAY

A 7th Inning Stretch

If you've been reading Joe Lincoln's account up to this point, maybe you'd like to take a seventh inning stretch or do a little armchair soaring. Using a pencil, Gil Parcell's map, and *Soaring's* adaptation of the SSA Championshipsbulletins, you might enjoy tracing the routes taken by various pilots on the sixth contest day—a Prescribed-Area Distance task.

For instance, the 2,5,4,8 after the name of Goren Ax, the Swedish Open Class pilot, means he went first to Sierra Blanca (2), then northeast to Carlsbad (5), then southwest to Ardoin (4), and finally east to Wink (8).

Having already appraised the weather situation (see below) you say, "East to Wink! Why did he fly against a headwind when he could have picked up points and miles by flying toward Marfa (1) with only a crosswind?"

All right. Do it your way. Pick your own turnpoints, then check the top ten list at the end of the day and see how close your decisions matched theirs.

No cheating now. Mark your turns *before* you look at the winners'.

The Weather Forecast for Armchair Pilots:

- Thunderstorms will be most numerous in the southern half of the contest area.
- Isolated thunderstorms are likely over the mountains in the western and northern sections of the contest area.
- Blowoff from thunderstorms will be to the west.

- East winds of 15-20 knots will set off weak waves downstream of mountains.
- A moisture gradient continues to increase dew points 5 degrees per 100 miles from west to east.
- Scattered cu's are forecast throughout the contest area.

| OPEN CLASS | MILES | POINTS |
|-------------------|-------|--------|
| 1. Neubert | 500.0 | 1000 |
| 2. Webb | 496.0 | 992 |
| 2. Schubert | 496.0 | 992 |
| 2. Woedl | 496.0 | 992 |
| 5. Moffat | 483.0 | 966 |
| 6. Scott | 482.5 | 965 |
| 7. Makula | 473.0 | 947 |
| 8. van Steinfoorn | 456.5 | 913 |
| 9. Evans | 455.0 | 911 |
| 10. Georgeson | 453.0 | 906 |

| STD. CLASS | MILES | POINTS |
|---------------|-------|--------|
| 1. Reichmann | 462.0 | 1000 |
| 2. Zegels | 432.5 | 936 |
| 3. Smith | 429.5 | 930 |
| 4. van Bree | 427.0 | 925 |
| 5. Lyon | 404.0 | 875 |
| 6. Reparon | 401.0 | 868 |
| 7. Wroblewski | 398.5 | 863 |
| 8. Waibel | 395.0 | 855 |
| 9. Mattern | 394.5 | 854 |
| 10. Mix | 387.0 | 838 |
| 10. Clifford | 387.0 | 838 |
| 16. Allemann | 371.5 | 804 |

SEVENTH CONTEST DAY

On the seventh day it seemed best to declare an out-and-return speed task to Pecos for both classes. It was generally agreed the course provided more off-field landing sites than any other. Neubert, the Open Class winner, recounted the flight,

"We were all worried about the weak thermals that had been predicted; also the low cloudbase. I waited until after two o'clock to go through the start gate, and almost everyone was gone, yet I still felt it was too early to leave. In the beginning I had to be a little bit careful and stay to the east side of the course toward the mountains. After Lake Balmorhea things got a little better; bases got higher, about 1200 or 1300 meters, and I got lift up to 900 feet per minute. North of Balmorhea there were still high cirrus clouds. There I had to decide whether to fly to the right or the left to get out of the cirrus shadow and into the sunlight.

I elected to go straight through and it turned out all right. I found good lift on a straight course, even under the cirrus.

"I got fairly low over Pecos, down to about 300 meters relative to Marfa. After the turnpoint, I came straight back again, and it turned out that I got 800 feet per minute lift on the way home, so I think that was the right decision.

"Probably I had made one mistake up near Lake Balmorhea. I should have gone up to cloudbase, but I went straight ahead because it looked fairly good. I almost had to go down. I was below the mountain tops in the valley south of Balmorhea, just south of the first hills. After I got up again, I met up with Moffat and we finished together."

Suzanne Moffat's critique of her husband's flight provided a revealing insight on her grasp of tactic and strategy,

"George didn't put in water ballast; the weather was supposed to be very weak. That turned out to be a big mistake. He should have carried a half-load of water. He started early because he assumed that with all the moisture from the last couple of days it would convect very early. But it didn't over-convect, and it wasn't weak.

"As a result of starting too early and having to pussyfoot around a bit, he just didn't get fast enough time. I guess the others all caught him about at the turnpoint, and then he came back with the rest of them, but they already had ten or fifteen minutes on him from starting later in stronger weather.

"His flight was just kind of slow and safe. He figured he had to finish no matter what. He doesn't have to win big, he just has to win, because he's flying from the top, of course. It's not the same as he would fly from 100 or 200 points behind, when he had to catch up. From the top you fly safely, which is what he was doing. He just flew a little too safely."

In spite of Neubert's 1000-point days and the threat of his long-wing Kestrel, Moffat was leading

him by 1031 points, a more-than-comfortable margin. However, the tenacious second-place Grosse was dogging his heels just 127 points behind. Suzanne was right—he was flying a little too safely. Compared to his ninth place that day, Wally had won a third and pulled himself up to thirteenth in the cumulative standings. Moffat couldn't be complacent.

In Standard Class Reichmann's winning streak had finally been broken by the Netherlands Dick Reparón. The West German had dropped to fifth for the day, but with a lead of 348 points he could well afford to be unruffled. A. J. Smith's rally tapered off with a twelfth place. In cumulative standings he had broken into the top ten at ninth place. But it appeared he would soon have to relinquish his two-year crown as Standard Class World Champion.

| OPEN CLASS | MPH | POINTS |
|---------------|------|--------|
| 1. Neubert | 63.5 | 1000 |
| 2. Schubert | 62.1 | 977 |
| 3. Scott | 59.8 | 943 |
| 4. Mercier | 59.7 | 940 |
| 5. Grosse | 59.3 | 934 |
| 6. Labar | 59.2 | 932 |
| 7. Burton | 57.6 | 907 |
| 8. Moffat | 57.2 | 901 |
| 9. Vergani | 56.6 | 892 |
| 10. Delafield | 56.4 | 889 |

| STD. CLASS | MPH | POINTS |
|----------------|------|--------|
| 1. Reparón | 58.9 | 1000 |
| 2. Wroblewski | 56.2 | 955 |
| 3. Johannessen | 55.3 | 939 |
| 4. Bloch | 55.0 | 936 |
| 5. Reichmann | 54.8 | 931 |
| 6. Mattern | 54.7 | 929 |
| 7. Stouffs | 54.4 | 924 |
| 8. Zegels | 54.2 | 920 |
| 8. Mouat-Biggs | 54.2 | 920 |
| 10. Petroczy | 53.9 | 915 |
| 13. Allemann | 52.9 | 898 |

EIGHTH DAY CONTEST

For the first time, the Task Committee sent the contestants out on the eastern half of the contest area. Both classes had speed runs—an out-and-return to Odessa for Standard Class, and a triangle with Sierra Blanca and Fort Stockton turnpoints for Open Class. The forecast had been optimistic, and when the pilots walked out on the grid after the morning meeting, the skies seemed cooperative. Before long the first cu's appeared, evenly spaced and giving the character-

istic look so familiar in photographs. However, while the weather's appearance had improved, Moffat discovered it was still not going to match conditions he had experienced in past contests.

"When the task was set we were all very enthusiastic because it looked as though the weather was growing up a lot. It appeared we would have good four and perhaps five-meter thermals and finally get a little of that 'Texas weather' we had all been waiting for. But in point of fact, soon after takeoff at about 12:15 p.m. we realized the day was developing a good deal slower than we thought. By 1:00 p.m.,



when Wally and I planned to start, the cloudbase was not nearly as high as we expected. Lift wasn't as good and the clouds had a kind of ragged look which promised very little good for the rest of the day.

"We waited around another twenty minutes. Wally started a little ahead of me. I remained still longer hoping for improvement, but then decided it was time to get going.

"There was no problem to speak of out to Sierra Blanca, the first turnpoint. I had underestimated the wind and made pretty good time—about seventy-five miles per hour. At the turn, I came in together with Neubert. Perhaps I had a minute or two advantage on him going into the turn.

"The second leg to Fort

Stockton was a very long leg, probably about 130 to 140 miles into a 15-knot wind. The biggest problem was a very large hole—a blue area extending about fifteen miles south during the first 100 miles. Almost every pilot that I saw chose to swing south of the course. I had reports from my crew that those who tried the blue hole were having great trouble, so Wally and I both went south. By this time I caught up with him and we stayed pretty much together the second leg, seeing each other perhaps once every half-hour or so and exchanging information.

"When we got beyond Mt. Livermore, which is 8300 feet high, and where we expected to hit the very best thermals, we found the contrary. The thermals were bad indeed. We had great trouble finding anything worthwhile. Of course, flying upwind we wanted nothing less than three meters, if we could find it. I learned later that Wally had great trouble getting past Livermore. I have since learned from other pilots they had trouble too, Neubert from Germany particularly.

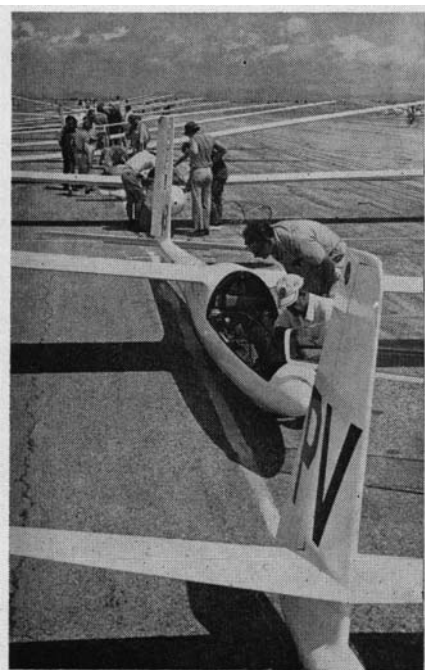
Beyond the Barilla Mountains on the way to Ft. Stockton the high ground of the central contest area dropped away but the cloudbase remained at 11,000 feet above sea level—a bonus that provided extra working altitude. Moffat and Scott put the windfall to use with a glide of 30-40 miles across another cloudless hole that lay before their turnpoint. Moffat was encouraged when he noted Neubert coming in to Ft. Stockton after he had already been five minutes out on the return leg. For a time the Nimbus gradually outdistanced the AS-W 12, but long glides slowly ate into altitude until at times it was within 2500 feet of the ground.

"Finally, there was about a thirty-five mile hole into the finish line, and I felt that it was too chancy to take it in a straight line, so I deviated north to Fort Davis. Wally decided to take the straight line and got pretty low, but finally found a big thermal near Alpine and got up and beat me in by two or three minutes.

I couldn't find anything really worthwhile and had to go quite a long distance out of my way to finally get a thermal at Fort Davis. It quit lifting with just a little less altitude than I really needed.

"I had to come in at thirty-to-one against the wind, but as usually happens in such cases, I nursed my glide angle and gradually it improved with a little help from zero sink. In time I ended up with about twenty-five-to-one. I pushed the nose over and, needless to say, ran into a long street of lift all the way so that I had trouble losing the last 500. feet at the finish gate."

Moffat's aggressive final glide earned him another 1000 points, and nosed out the day's nearest challenger, France's Michel Mercier, by one-tenth miles per hour. In addition, Grosse had slipped to a fifth spot for the day, so that Moffat's margin of lead was comfortably lengthened. Equally exciting for U.S. rooters was the consistent performance of Wally Scott whose third place for the day inched him toward the inner sanctum of the top ten. Tomorrow would tell the tale.



Glass Alley—the Open Class grid.

In the Standard Class race to Odessa and back another win by Helmut Reichmann laid to rest any lingering doubts as to the youthful German's mastery of competi-

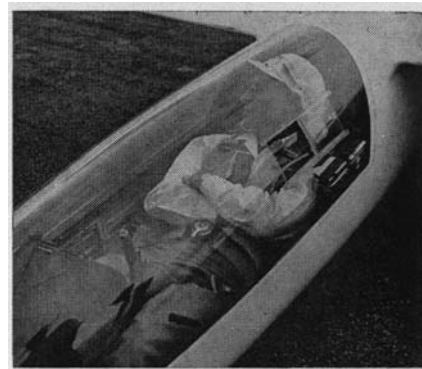
tive soaring. Five 1000-point days could not be explained away as a lucky fluke. By chance, A. J. Smith had ample opportunity to observe at close range the style and technique of the man who was about to usurp his crown. Both men were flying LS-1's.

"Most interesting for me was the opportunity to fly with Reichmann on the entire first leg and about a third of the return leg. We found that we worked very well together. It was obvious that he was carrying a higher wing loading than I, and he could pull away from me, but sometimes I could outclimb him very slightly, so we could stay together.

"Then one third of the way back we had a basic decision to make. We faced a big blue hole, and I elected to deviate far to the right. I flew perhaps twenty miles off course to get under some good clouds at Balmorhea and then turned to the left and came down to the finish line. Actually that portion of the flight went fairly well. I didn't have any really bad moments. Reichmann chose to stay essentially on course. He found the thermals weaker, but he beat me back by two minutes. We found the results were essentially the same.

"He's got quite a bit of time in the machine, and it was obvious that he knows how to handle it well. You could see the way he was working the thermals and the attitudes he had the aircraft in that he really knew how to handle the ship. Even though he was carrying about forty pounds more than I in ballast, he could still do an excellent job climbing and when we were cruising, he could get away from me slowly."

As defending World Standard Class Champion, Smith could hardly be termed an underdog, yet his tough never-say-die struggle to lift himself out of the pit, evoked admiration and empathy. In its way, his climb from thirty-second to sixth in the cumulative standings was as brilliant as the sustained performance of Reichmann and Moffat. But the coin of victory has two sides; it's nicer when the flip comes out heads.



Patience under glass—awaiting tow.

| OPEN CLASS | MPH | POINTS |
|------------------|------|--------|
| 1. Moffat | 64.9 | 1000 |
| 2. Mercier | 64.9 | 999 |
| 3. Scott | 64.4 | 992 |
| 4. Neubert | 60.3 | 928 |
| 5. Grosse | 58.3 | 899 |
| 6. Schubert | 57.6 | 888 |
| 7. Ax | 56.5 | 870 |
| 8. Hossinger | 56.1 | 865 |
| 9. Zoli | 55.6 | 856 |
| 10. Labar | 57.3 | 848 |
| (35-pt. penalty) | | |

| STD. CLASS | MPH | POINTS |
|----------------|------|--------|
| 1. Reichmann | 60.4 | 1000 |
| 2. Nietlispach | 59.9 | 993 |
| 3. Smith | 59.8 | 991 |
| 4. Kepka | 59.4 | 984 |
| 5. Gombert | 57.7 | 955 |
| 6. Gough | 57.5 | 952 |
| 7. Zegels | 55.9 | 926 |
| 8. Mouat-Biggs | 55.4 | 918 |
| 9. Reparon | 55.1 | 912 |
| 9. Greaves | 55.1 | 912 |
| 11. Allemann | 54.8 | 908 |

NINTH CONTEST DAY

The speed tasks of the final day served only to confirm what had become obvious: George Moffat, U.S.A., and Helmut Reichmann, West Germany, were World Champions.

The day belongs to them. Their stories were taped immediately following their flights. Here is Reichmann:

"For me it was a difficult day because of nervous problems. I knew I was first, and I knew I had to keep my position. In the morning I saw very good weather. I didn't think there would be any difficulties, but at Van Horn, the first turnpoint, it was blue. It was rather difficult, and I kept as high as I could. So the second part—between Van Horn and Pecos—was very hard.



From here it's a long way to here.

"I was never low. I took care not to get low because the time was not very important. I only had to go around. That is why the time is not important.

"It was quite blue, but after the second turnpoint it became good again, and we all were quickly back from Pecos, the second turnpoint. There were some clouds, and every cloud had good thermals beneath it—about four meters of climb normally.

"I am very glad. I never thought before that I would play any big part in such championships. I was very surprised."

[Reichmann's conservatism dropped him to sixteenth for the day. Nevertheless, his final cumulative score showed he had won 8663 points out of a possible 9000. —Ed.]

And now, George Moffat:

"The flight was pretty straight forward. Wally and I talked about it and decided to start fairly early. We felt that it would be as good as it was going to get by, say, 1:00 p.m. Wally started five or ten minutes before I did, and there were no real problems on the outbound leg to Sierra Blanca until Lobo. Cloudbases were about 10,000 feet. Lift was quite good—about 600 feet per minute, if you looked for it—and we made long glides, using as few thermals as possible.

"The only real problem came when we got near Lobo, about thirty miles short of the turnpoint, because there was a very large blue hole into the turn and for the first ten miles of the second leg to Ardoin. Wally elected to go south over the mountains, but I thought I'd probably do better going straight on in. For one thing, it would be important to find the thermal distribution in the blue, because we were going to

have to use it on the second leg anyway. So I went in—I'm always kind of nervous coming into the blue like that—but by the time I got down to 3000 feet or so I got a real nice little thermal about ten miles short of the turnpoint, got up to 10,000 feet, went into the turn, and met Wally there. He had called me to tell me he had a good thermal. We took our picture and flew together from there for most of the second leg.

"The second leg had been very strong. I don't think we worked anything that was under 800 feet per minute. In the strong weather—where I could use the high speed of the Nimbus—I could pull away from Wally, and by Ardoin I had gained 2000 feet on him. Coming home we expected to get the same kind of good thermals, but it didn't work that way. The thermals in the valley were quite poor. It was obvious you could get lift all over the place, but you just couldn't get lift the way you wanted it. Of course the trick in competition flying is to use only the best thermals, so we kept plugging along. Sometimes I was forced to thermal a little bit in 400 to 500-foot stuff just to make another 1000 feet so I could go on to the next cloud.

"Finally I got a good one—got up to 11,000 feet. I glided toward Van Horn, got another little chopped-up thermal and then made the long crossing of another hole we had seen from Van Horn. A. J. Smith told us conditions were rather poor—Van Horn was the first turnpoint for Standard Class—so we both got rather high and drifted across the bad spot until we were down to about 3500 feet at Lobo where everything looked grand with real juicy-looking clouds.

"We thought we would go

up like gang-busters, but nothing doing. Instead, all we could find was chopped-up wind-sheared lift. I had a hard time getting away again, never in danger of going down at all, but just not finding the big one you needed. I had to take fairly poor stuff—about 400 to 500 feet per minute—in order to go on and try the next cloud. I got a pretty good one five miles east of Lobo and got up to cloudbase and began to move pretty well.

"Wally was about five minutes behind. He was taking a line about seven miles north. We were comparing notes over the radio. Didn't seem to be much in it. His was good—mine was good. I could see him in the distance. He was a little lower than I was. Basically there were two cloudstreets—sort of vague cloudstreets—one about seven miles south of the other. They didn't really work much like streets; then around Valentine, where for some reason it always gets good, I got another one right up to 12,000 feet and started home. I never really circled again.

"I was about forty miles out at that point. I wasn't really planning a final glide, but I kept bumping into good clouds—1000 feet per minute and consequently, I could pull up. At 1000 feet per minute at 120 miles per hour, when you pull up you gain about 1000 feet, so I'd lose about 1000 feet between clouds and gain about 1000 feet back. Of course my glide ratio began to get better and better, so I pushed the speed up to redline about twenty-five miles out. Lift was still very good, consequently even at redline I was unable to get down to proper altitude to cross the finish line. I had to use the parachute finally to get rid of the last 500 feet. Then the parachute didn't re-

lease so I just barely made the runway."

Unlike Reichmann, Moffat's final day earned him another 1000 points. His final cumulative score: 8323 out of a possible 9000. Your reporter asked the new World Champion for his reactions. Was it like reaching the top of Mt. Everest?

"I wouldn't put it quite that way. I have found before when I have won important things, it takes time for reaction to take place. Maybe tomorrow there will be more than today. I think it takes time to shift gears from the concentration on the specific—which is what racing is all about—to think about the over-all picture—which is what championships are all about.

"Whenever I land, it always takes me time to unwind from

the preoccupations of a particular flight. When you're flying in competition, you're always keeping a running track on how you're doing. If you waste a second, you start cursing yourself, and if you gain a second you feel a little better about it. But you've got to think that way or you don't end up winning things."

What now? Have you thought about what might be a future goal now that you're on top?

"Oh yes, I have thought about that pretty seriously as a matter of fact. The next one is the Standard Class, which I think probably this time, and certainly by next time, will be the sportier of the two to win. You see the superb job that Reichmann did—a fantastic piece of flying. He put to-

gether nine really good days and, of course, whenever you see somebody do that, you want to see how you'd do against him. I think by 1972 the Open Class will have relatively little competition and the Standard Class will have everything. I bought a Standard Class ship this spring and plan to concentrate on this ship and my flying. I feel I might be flying at eighty percent of my capability now. I don't think any of us were flying really well. I think we're going to get a lot more."

| OPEN CLASS | | MPH | POINTS |
|------------|-----------|------|--------|
| 1. | Moffat | 67.0 | 1000 |
| 2. | Scott | 65.2 | 974 |
| 3. | Burton | 64.5 | 962 |
| 3. | Neubert | 64.5 | 962 |
| 5. | Labar | 63.8 | 953 |
| 6. | Grosse | 63.0 | 941 |
| 7. | Makula | 60.6 | 904 |
| 8. | Delafieid | 60.1 | 896 |
| 9. | Schubert | 59.7 | 890 |
| 10. | Ehrat | 59.1 | 881 |

STD. CLASS

| | | | |
|-----|-------------|------|------|
| 1. | Johannessen | 57.4 | 1000 |
| 2. | Kepka | 57.3 | 998 |
| 3. | Wroblewski | 57.1 | 994 |
| 4. | Mix | 56.7 | 988 |
| 4. | Allemann | 56.7 | 988 |
| 6. | Mouat-Biggs | 55.6 | 969 |
| 7. | Gomberg | 55.4 | 965 |
| 8. | Clifford | 54.9 | 956 |
| 8. | van Bree | 54.9 | 956 |
| 8. | Gough | 54.9 | 956 |
| 24. | Smith | 52.8 | 919 |



How sweet it is!



The sun shone on George Moffat. During the closing ceremonies he and Suzanne had enjoyed its morning warmth on their backs as they stood facing the improvised speakers' stand listening to the dignitaries. At first he had been uneasy at the casual manner of the proceedings. He was certain that unfavorable comparisons were being made with the pomp and color of Leszno where the Poles had staged the 1968 Championships. Now protocol demanded Bill Ivans, Director of the Championships, preside at the microphone for SSA, and his quiet low-key presence seemed out of place for the demands of the moment. Yet by some

magic, Ivans' sense of occasion stilled the polyglot crowd until an impressive hush settled over all.

Suddenly everything fell in place. The real setting was not the decrepit weather-worn military hangar behind, but the immense backdrop of blue sky and open land stretching ahead to the distant horizon. Moffat's eyes were drawn to the soundless flight of a hawk and sailplane weaving in and out of the shadows below the day's first cumulus—a perfect symbol.

And something else.

Surrounding him were the best soaring men in the world. In the crowded silence there came an ineffable sense of community that

bound those of all nations who were drawn to powerless flight in the sky.

A small tingle began at the base of the World Champion's spine, growing as it climbed until it finally exploded through his skull.

Soaring a manic-depressive sport? No way. * * *

Two weeks after winning the World Open Class Soaring title, Moffat, who was already reigning U.S. Open Class Champion by virtue of last summer's victory, entered the U.S. Standard Class Championships at Elmira. Could he make it three for three? By George, he did—and with seven 1000-point days out of a possible eight!

Help Fund The Future of United States Soaring Teams...

As you have just read our soaring teams have a long and proud history of international participation. Over the last several years the opportunity to compete internationally has grown as more classes become sanctioned by the FAI. More teams and eligible pilots puts the title of World Champion within the reach of entirely new segments of the soaring community including Club, World and Junior pilots. The chart above shows when each FAI class participated in their first World Gliding Championship. Notice the recent growth in classes and events.

| FAI Classes Eligible for Competing in World Soaring Championships | | |
|---|------|--------------|
| Class | Year | Championship |
| Open | 1937 | Germany |
| Two Place* | 1952 | Spain |
| Standard | 1958 | Poland |
| 15-Meter | 1978 | France |
| World | 1997 | Turkey |
| Junior | 1999 | Holland |
| 18-Meter | 2001 | Spain |
| Club | 2001 | Australia |
| Feminine | 2001 | Lithuania |
| * Eliminated 1958 | | |

A long term strategy?

Since both types of contributions are tax deductible, a long-term contribution strategy to minimize tax burden and maximize support might incorporate comfortable direct contribution every two years and

larger, trust contributions with less frequency. How much to contribute is determined by each of our individual circumstances. Every dollar counts.



An urgent need...



More teams, eligible pilots and international events have stretched team funding well past the breaking point putting our teams ability to compete internationally at risk.

Contributions make it happen...

While many competing teams receive government assistance our teams rely on a mix of direct contributions and perpetual trust income to compete internationally.

Direct contributions are immediately available to the team at their full value. Participating in the SSA sweepstakes, buying a raffle ticket at a contest or sending a check to the SSA for team funding are all examples of direct contributions so critical to fielding our soaring teams. Perpetual trust income has become increasingly important to fielding our teams internationally. This type of contribution is perpetual as the funds are invested with the income used to sponsor teams perpetually. Robertson Trust contributions provide a critical, stable, long-term, source of team funding.



Now is the time...

Not all competition happens in the air. Often it is what happens on the ground months before World Soaring Championships that makes the difference.

Adequate team funding is where it all starts. Our international competitors are doing what it takes to compete and win and so should we. If our soaring teams are going to compete internationally they need our support. While most of us can't be in the cockpit we can still do our part to make sure our pilots have the opportunity to compete and win.

Please make a direct contribution to the U.S. Soaring Teams or a perpetual contribution to the Robertson Trust today!



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