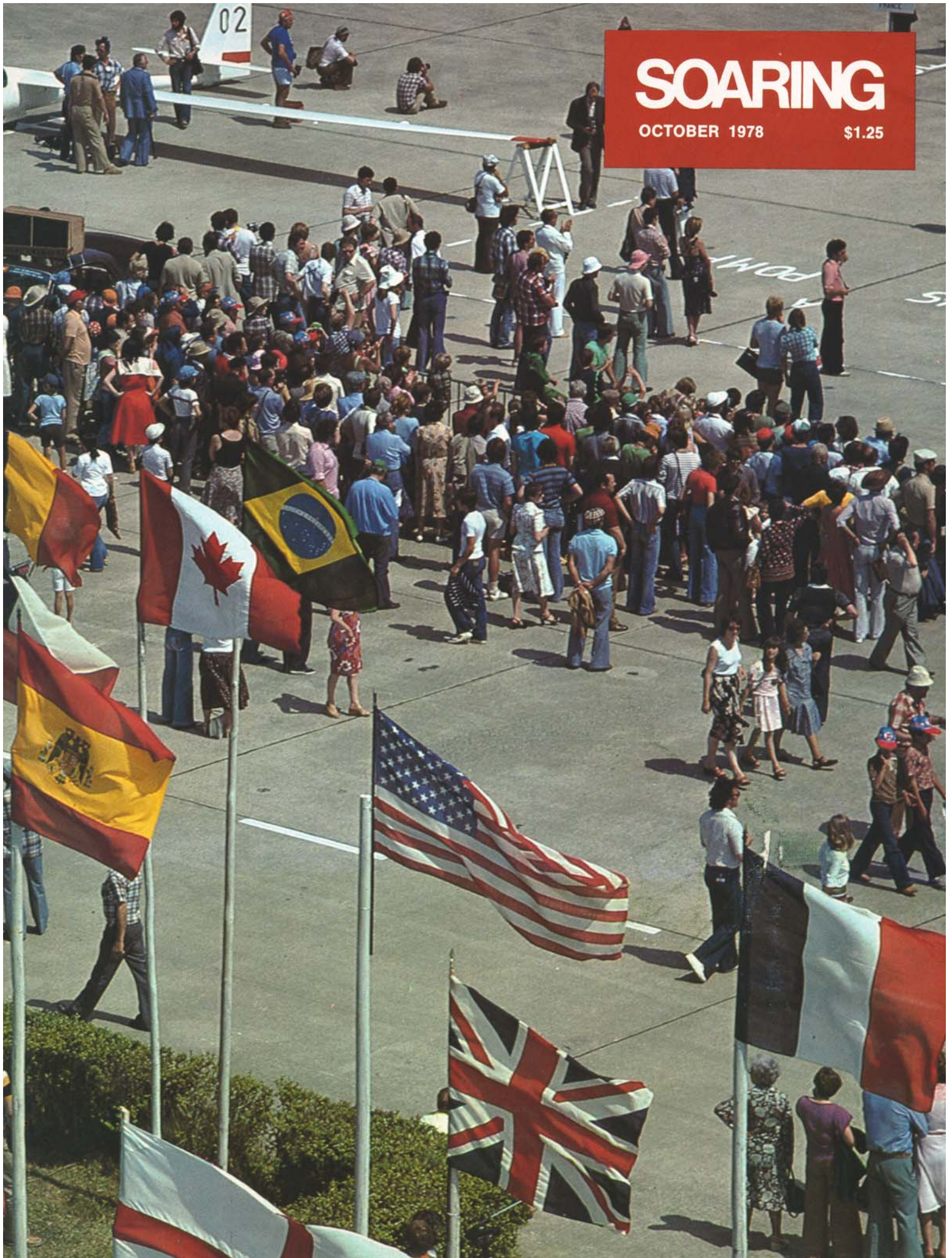


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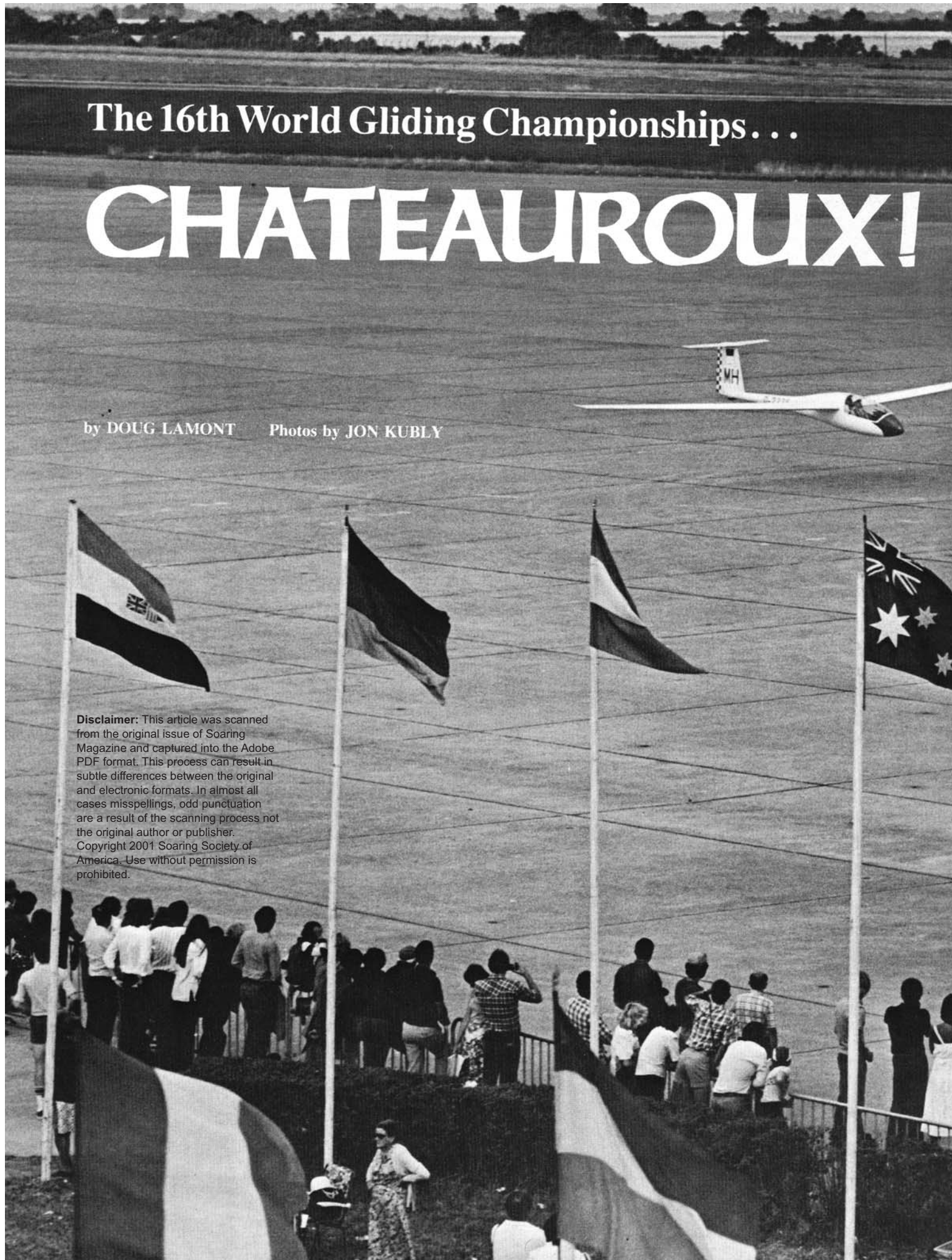


The 16th World Gliding Championships...

CHATEAUROUX!

by DOUG LAMONT Photos by JON KUBLY

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At first glance, the gently rolling terrain around Chateauroux Aerodrome seems not unlike the U.S. Midwest — open countryside with grain fields rippling in the wind beneath drifting cumulus. But the tree clumps of occasional *bois* are French, of course, and the random village with its inevitable church spire and neighboring chateau or castle remind the visitor that the winds of history have also blown across the land. In 1559, for instance, tournaments were *le sport*. Even for kings. Not far away at Chenonceaux, Henri II jousted in single combat with the captain of his mercenary Scottish Guard and got himself killed. The captain evidently went scot free. (A sporting matter, don't you know.)

Fortunately, competition wasn't that heavy during the 16th World Gliding Championships, but the 79 contestants were very serious and played for keeps. Many had been practicing for two years during the period following the previous world meet at

Räyskälä, Finland. And this summer another soldier came to France to defend his title — World Open Class Champion, George Lee, who left a Scottish RAF base in Fife to fly once again for England. Two lion-hearted Richards from the U.S. — Dick Johnson and Dick Butler — were among 23 others bent on unseating Lee.

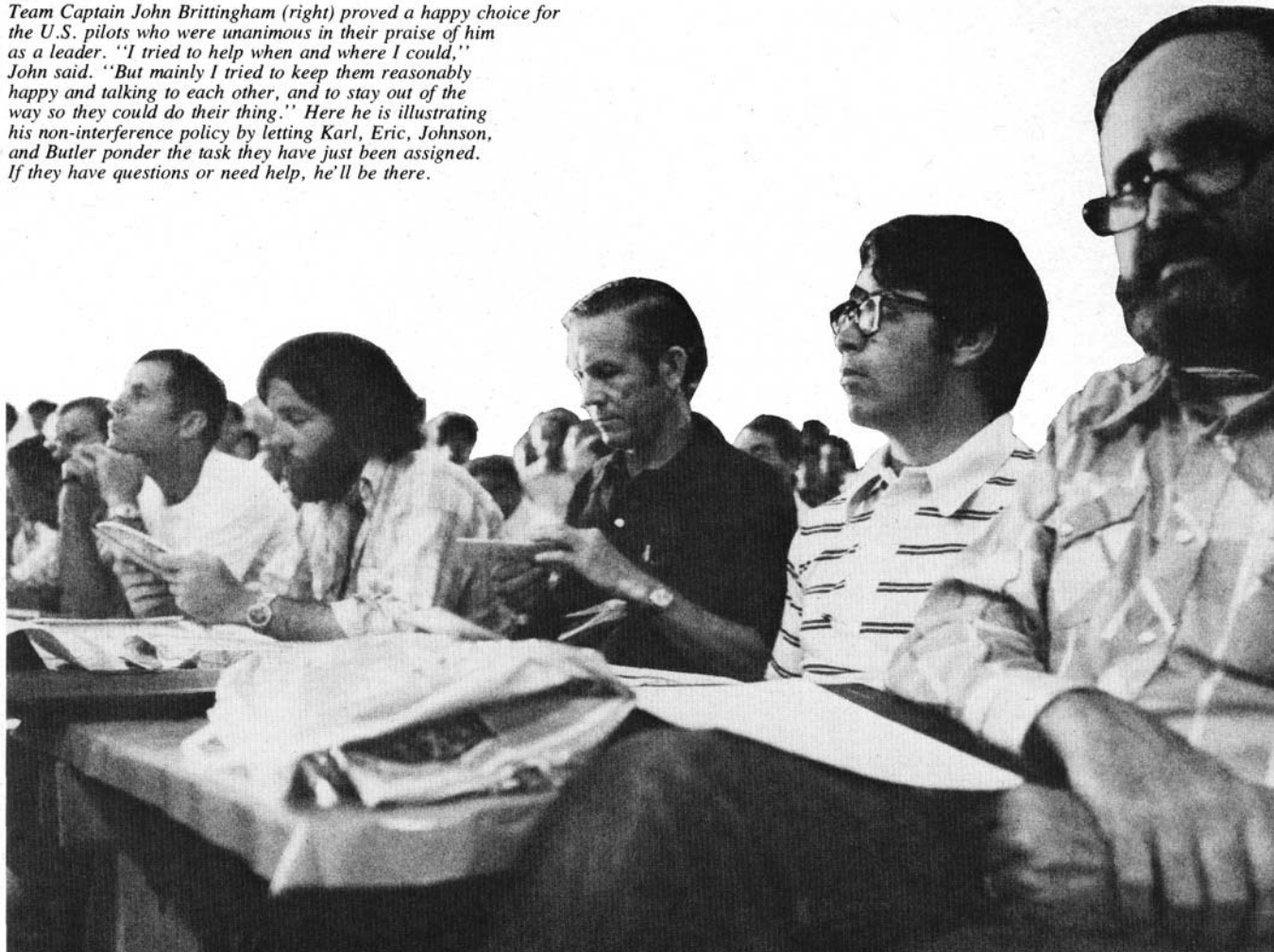
The exciting new 15-Meter Class attracted the largest number of competitors — 32 aspirants from 23 countries — and rivalry to go down in history as victor in the first world 15-Meter competition was intense. Australia's Ingo Renner, reigning world Standard Class champion, had abdicated his crown to ride an LS-3A in the 15-Meter lists. But the cynosure of all eyes was Helmut Reichmann from West Germany. The 37-year old teacher, winner of the world Standard Class titles at Marfa in 1970 and Waikerie in 1974, had arrived astride a formidable new mount with a fiery red spade emblazoned on its tail — an es-

cutcheon destined to be well-noted by the contest's end. Helmut's SB-11, brainchild and handwork of the celebrated *Akaflieg Braunschweig*, is valued at \$250,000 and is built from light carbon fiber. It boasts a ballasted variable-geometry wing that enabled him to effortlessly increase its area at the flick of a lever and to thus enjoy the widest wing-loading options of any sailplane at Chateauroux. Nevertheless, Karl Striedieck, U.S. 15-Meter standard bearer, professed unshaken faith in his AS-W 20 after flying against the SB-11 during practice week. He also noted that there were other craft (such as Ingo Renner's LS-3A) that had been substantially lightened through the use of new fibers. "Carbon, Kevlar, graphite, magnesium, or whatever," he declared, "I'm not afraid of any of them."

In the Standard Class field, U.S. hopes rode on Eric Herb Mozer and his AS-W 19. At 23, he shared with Netherlander, Baer



Team Captain John Brittingham (right) proved a happy choice for the U.S. pilots who were unanimous in their praise of him as a leader. "I tried to help when and where I could," John said. "But mainly I tried to keep them reasonably happy and talking to each other, and to stay out of the way so they could do their thing." Here he is illustrating his non-interference policy by letting Karl, Eric, Johnson, and Butler ponder the task they have just been assigned. If they have questions or need help, he'll be there.



Selen, the distinction of being one of the two youngest pilots at the meet. Unlike the other two classes, the Standard pilots included no present or past world champions. There were, however, some seasoned veterans who knew the territory (like Recule and Mercier of France) and others who would be team flying (like Rizzi and Riera of Argentina). Eric had no illusions about the struggle to come.

At the end of the first day, Eric was thoroughly delighted to find himself listed at the top of the Standard Class column on the daily placings board. It had started somewhat uncertainly:

"I followed Michel Mercier and was one of the last to go through the start gate," Mozer recalled. "The first leg of the 272km course ran directly north toward Paris. The first turnpoint was a place named Lamotte-Beuvron. In the beginning we were flying over open grain fields, and though the day was clear and sunny, lift was weak — only 100 to 200 fpm — because an

inversion had clamped on a lid at 3000 feet. --

Initially he lost sight of his rivals ahead, but he resisted the temptation to drop his water ballast and carefully felt his way north.

"Instead of plowing their stubble in the ground like U.S. farmers do, the French burn it off. During the practice period, I discovered these darkened areas were good heat sinks, so I picked my way among them, staying as close to the course as I could. It was Sunday; I didn't expect there would be any farmers working, but halfway out on the first leg I was surprised when I looked down ahead and saw fires being set around the periphery of an area dotted with stubble piles. I dropped the nose to pick up speed and arrived just in time for the flames to give a real boost that punched me through the inversion. At the top of the smoke column I began a long glide toward the turnpoint. By the time I was sinking through the top of the inversion I had caught up with the main group."

However, as he continued, he found him-

self overflying a dead area of lakes and small forests. Knowing that his teammates (flying longer tasks farther west) would be obliged to later cross the same general area, Eric radioed a warning to alert them.

"I had to come in very low to make the turnpoint photo," he said. "There was a gaggle of six a short distance beyond. I pulled the valve on my ballast and hoped it would jettison in a hurry. It was going to be close. . ."

In the 15-Meter and Open Classes both Helmut Reichmann and Bernard Fitchett, who were also to be the day's winners in their respective classes, had difficulties.

"At one point," said Reichmann, "I was pushing to catch up with a gaggle. They were moving fast and left before I arrived. When I got to where they had been, the lift had died. I dropped to 280 meters above the ground before I was able to continue. From that vantage point I observed that pilots who had been taking the risk of leading out were ending up very low. I became very cautious and stayed with the gaggles."

Fitchett, who has been characterized as an aggressive go-for-broke stylist, also sank to within 900 feet of the ground when the Open Class crossed the lake area on its second leg.

"It was a tense moment for me. It was small comfort to find Francois Henry down with me, too. I was down because I was leading out from the gaggle. It was a problem recatching them after that. In fact, it wasn't until I was 25 miles out from the finish line that I finally overtook and passed them."

Like Reichmann, Dick Johnson emphasized the importance of staying with, rather than leading out from, the gaggles in such weak conditions: "It wasn't a day to *win* the contest," he would say after the race, "it was a day *not to lose* it. For those who finish, the spread in speed-point differences is small, but there is a big gap for pilots who land out. The points are considerable and will hurt. --

Back on the second leg, Eric Mozer picked his way along the Loire River valley and considered his plight: "I knew I had lost any advantage I gained during my glide from the fire on the first leg. I could see about 20 of my class approaching a forest about five miles ahead. It was slow going. When they came to the trees, I saw they had all elected to continue straight on course over the woods. I recalled that during the practice period trees didn't produce usable lift until later in the day. I noticed some plowed hillock off course. They were in the sun and oriented in such a way that I thought the wind might help break thermals loose, so I took a chance and glided over to them. It worked! I got two good ones, and by the time we reached the last turnpoint, I was with them. All I had to do to win then was to stay with them, since I had started after all of them."

There was a nagging worry about Mercier who had also gone through the start gate before Eric — but not by much.

"At the beginning of the race, I had caught up with Mercier on the way to the turnpoint at Lamotte. But I couldn't get ahead of him and stay ahead; all day we kept see-sawing with first one of us leading and then the other. So when we went into the second turn at Cosne-sur-Loire, I knew the last leg would tell the story. Fortunately, the weather became good about 30 miles out from the finish. By 20 miles out I didn't have to worry any more about staying with the gaggles or Mercier. I flashed by him with a big smile. From that point they were all chasing me — and that's a feeling I enjoy!"

TASKING

Long tasks began to fall into disfavor in the U.S. when ever-lengthening flights on distance days resulted in exhausting retrieves and over-fatigued pilots and crews. As a result, distance tasks have practically disappeared from the scene, and races generally don't require more than three to four hours to complete. Europeans look askance at short tasks as being less discriminating in the selection of a champion. By flying in the weaker parts of the day as well as during the period of maximum thermal activity, they say, a wider spectrum of soaring skill is demanded. A side benefit is said to be a lesser dependency on ballast and a reduction of associated problems.

In a post-meet interview, U.S. team members gave their view on this question (as well as other matters).

Dick Johnson: "The tasks at Chateauroux have been ambitious by U.S. standards, but not too different from when we used to have free distance tasks and flew all day every day. These tasks seemed halfway between the prescribed area distance task and a speed task. I guess it's their philosophy to keep pilots in the air six hours a day. I can't see any problem with that except that we Americans are lazy and would like to fly only two or three."

Dick Butler: "We're more geared to racing in the U.S. Had we all known the tasks were going to be as long as they were, we might have flown a different ship and prepared differently."

Eric Mozer: "The long tasks reduced some of the options in decision making. There was a certain part of the day allotted and you had to get out on the course within five minutes of that time. In the U.S. you evaluate the weather to decide whether to go early or late."

Karl Striedieck: "I probably carried water ballast too long. At home I carry it for an hour during the weak early part of the flight because it pays off the rest of the time. Here I know I could have won a few more points if I hadn't taken any at all, or at least dumped it sooner. But long tasks do have something in their favor: it's as close as you can get to a race-horse start where everyone has to go within a half hour of each other. I think in this respect it is a little fairer."

When it comes to spectacle, pomp, and panoply, it is doubtful many sporting events could match the first two days of Chateauroux. It may be that the *Federation Francaise du Vol a Voile* (France's SSA) and *L'Aeroclub d'Issoudun* (sponsor of the championships) somehow finally propitiated the weather gods' seeming animus towards world gliding championships. At any rate, a passing high pressure ridge dallied fortuitously above France long enough for a dry tongue of northeast conti-



Eric Herb Mozer — Standard Class



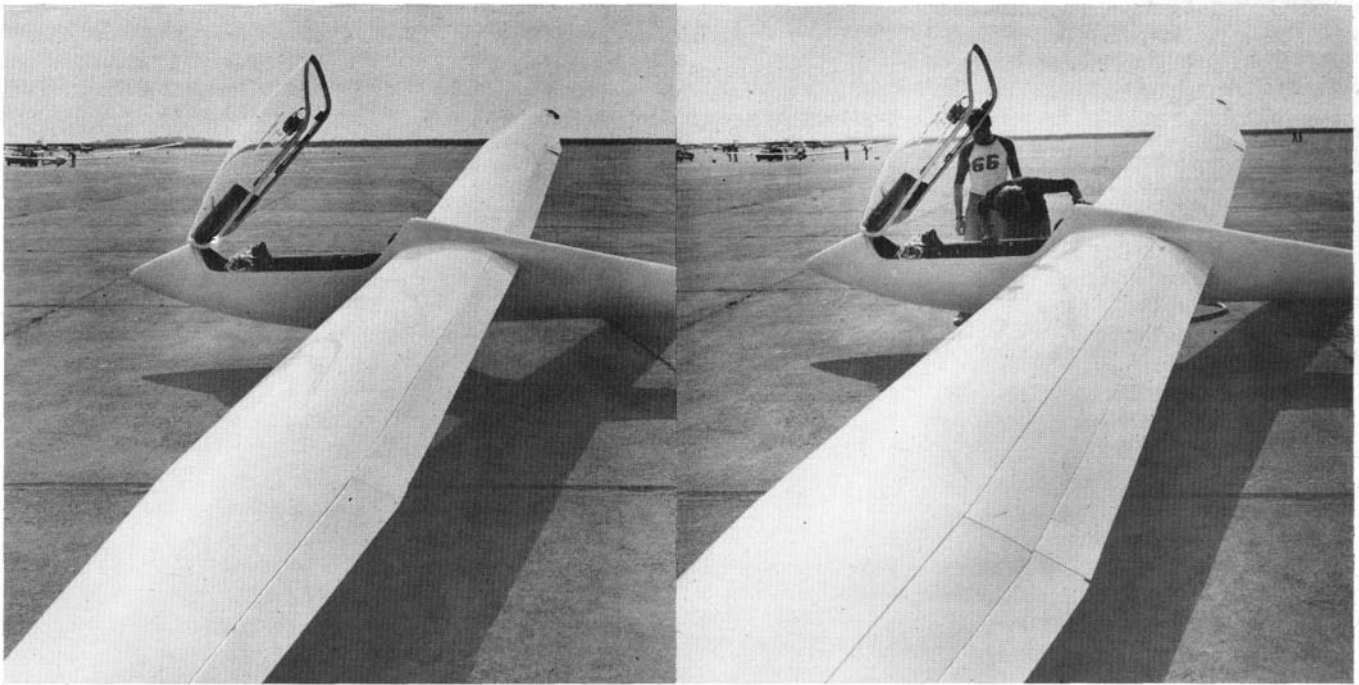
Dick Butler — Open Class



Karl Striedieck — 15-Meter Class



Dick Johnson — Open Class



"The SB-11 is the best sailplane at Chateauroux," said its pilot, Helmut Reichmann, who flew the SB-11 to victory in the 15-Meter Class. It is valued at \$250,000 and is the creation of a group of students — an Akaflieg — in West Germany's Braunschweig University. The one-off project is made of expensive carbon fiber

and combines an AS-W 20 fuselage and Janus empennage for the fuselage. Focus of effort was on the wing, and the successful solution of a variable chord represents a major achievement. Reichmann says full-span chord extension and retraction requires no more effort than normal flap operation.

mental air to lap up pools of moist cloud lying in the contest area. The result was a clear, brilliant blue Saturday with a spanking wind that unfurled and snapped the flags of 23 nations like heraldic banners in a medieval tournament. It was an ideal day for the opening ceremony.

Crowds of spectators watched as bands played, majorettes marched, and each team moved to its designated place in a huge semicircle where they faced the dignitaries assembled on a large raised platform. Three glistening sailplanes — one from each class — also faced the dais as if at attention.

Periodically, nine jets of the *Patrouille de France* flew low passes past the assemblage, eschewing raw speed and power in favor of smooth Gallic elegance. An unforgettable moment occurred at the apex of a head-on, sunburst pullup, when, for a fleeting instant their red-white-and-blue smoke trails seemed to freeze and frame a graceful *tricolore fleur-de-lis*.

Spine tingling. The Olympics can do no better.

It was no surprise, then, when thousands returned Sunday to witness the meet's first races. France was celebrating Bastille Day weekend, and the festive summer feeling in the air was like a U.S. 4th of July. There was some concern. After all, soaring is reputedly not a spectator sport. Would the walk-in, non-soaring public become bored and drift away?

The worries were groundless. Thanks to a veritable squadron of tow pilots and 20 tugs supplied by government-sponsored soaring clubs and manufacturers, launchings were carried out smartly with parade-ground precision that placed 79 sailplanes above the field in less than 30 minutes. Groundlings were fascinated as they watched the flash of wings glinting in gaggles. Some would point as a contestant peeled off to make his run through the start gate while officials atop the control tower recorded departure times. Activity and bustle continued after the contestants had moved out on the courses: RC models towed RC sailplanes; rides and demonstrations were given by non-competition gliders; a large inflated pavilion contained displays, refreshment booths, movies, and souvenirs; hunger and thirst could be assuaged at a variety of snack bars, short-order stands, and mobile vendors; a full-scale restaurant serving breakfast, lunch, and supper was available to the public as well as hundreds of campers who stayed on the field throughout the meet. (For these latter, the organizers had painstakingly prepared an area with graded roads, electricity, water, rest rooms, and showers.)

Clear warm skies pleased bikini watchers and wearers alike, but interest inevitably returned to a large map on which the three triangular race courses of the day had been superimposed. These had been color-keyed in blue for Open, red for 15-Meter, and

yellow for Standard. As the race progressed, three appropriately-colored model sailplanes were moved around to indicate the approximate positions of the leading pilots in each class. In midafternoon of the first day a model was advanced to the final leg and the crowd began drifting toward the runway fence — imperceptibly at first and then with a sudden surge. The grapevine signaled that the first finisher had begun his final glide. All eyes turned northward.

"There's one!"

"Three more!"

"No. Five . . . six . . . EIGHT!"

Instead of single finishers, waves of sailplanes began appearing low — unbelievably low — above the northern horizon. At the limit of vision, the fine white lines of oncoming wings refracted and shimmered in the heat. There was no perception of speed until they skimmed across the runway's threshold a half mile distant. Some were faster than others and came trailing a fine spume of ballast. Frequently, cheers erupted as a pilot hissed by and was recognized by a partisan group in the crowd.

There was one close call during the nose-to-tail and tip-to-tip finishes: Jacques Rantet was whistling along at 200 kph in his *Nimbus II* confident he would place high — maybe even first. He was about 100 meters high and approaching the airfield boundary when the ship unaccountably slowed and pitched slightly downward. From reactions

to his control inputs, he surmised the *Nimbus*' tail had somehow been damaged. He managed to land on the taxiway and climbed out to find his drogue chute had deployed. The finish line was just 1000 meters away — so close, yet so far.

All was not lost for Rantet, however. It was learned that the wingtip of another *Nimbus* had lightly struck the rear of Rantet's fuselage, causing his chute to be ejected. The championship stewards investigated the case and decided Rantet should be granted the same finish time as the pilot who struck him and who had gone on to cross the gate at high speed. A sporting matter, don't you know. As a result, Rantet's name stood in second place after Bernard Fitchett on the Open Class daily placings board.

Elation was high in the U.S. camp — the U.S. team had taken the lead on the first day! By placing 1, 2, 4, and 6, the four pilots had amassed 3925 points to lead the second-place French team who scored 3884. It looked as if the practice period had paid off — perhaps the French wouldn't have a corner on "knowing the territory" after all. True, in the 15-Meter race Reichmann had won — but only by a margin of ten points with Striedieck and the AS-W

20 close on his heels. Maybe the SB-11's advantage wouldn't be too great to be overcome. In Open Class, Champion George Lee seemed less of a threat when he ended up 17th for the day. Butler and Johnson had flown only 1 and 2 mph slower than the winner, Bernard Fitchett. The point spread was narrow; a good day could change things around.

On the second day, Open Class Champion George Lee set out in his AS-W 17 for Chenonceaux determined to unseat Francois Henry. Chenonceaux, it will be recalled, is where the Scottish guardsman had done in the earlier Henri during a medieval tournament. This beautiful chateau, built across the Cher River, was 71 miles northwest of Chateauroux and had been selected as first turnpoint for the Open Class. Unfortunately for George, history didn't repeat itself this time. In fact, he landed out while Francois and four others completed the course. But it was Alf Schubert, a five-time veteran of world comps, who was victor for the day, Francois placing second and George sixth.

Things went well for Alf and his *Nimbus II* on the first leg. But after he snapped his

turnpoint photo and moved northeast toward Lamotte-Beuvron 78 kilometers away, he was obliged to cross the area of lakes and forests that troubled Eric Mozer the preceding day.

"I reached the second turnpoint aware that conditions were weakening, -- he said. "I was carrying 70 liters of water and decided the time had come to jettison. I got rid of the water; it didn't seem to help. I had been working in a convective layer about 1000 meters deep. At this point it became even more shallow — perhaps 500 meters. On the last leg I sank as low as 300 meters.

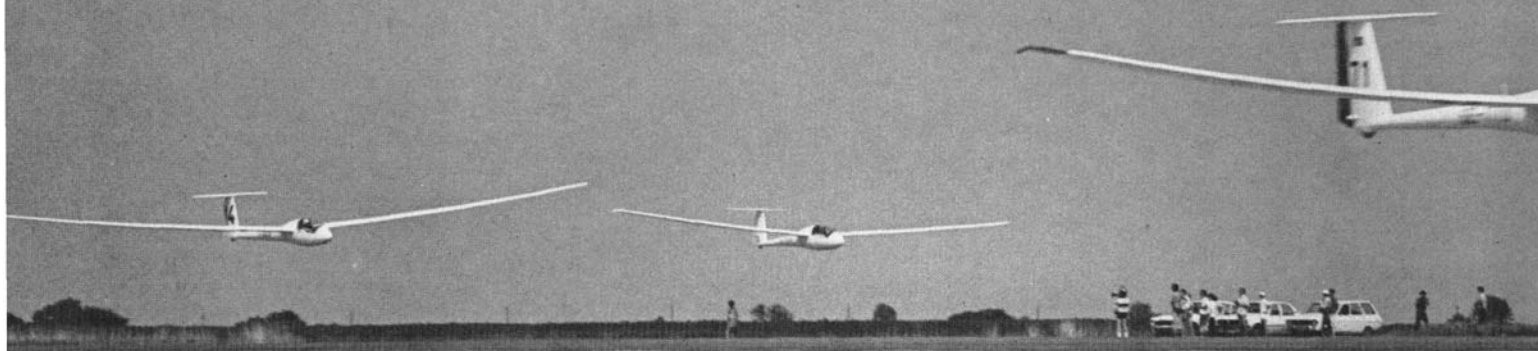
"Finally there was nothing. I started to set up a landing when I saw the Swiss pilot Oswald working something at 200 meters. I was able to glide over to him and together we gradually started climbing out of our hole. After some time Dick Butler came in below us. By then the lift below had ended so he only made a couple of circles and moved on. I lost track of him, but I think he went down nearby. --

Butler had landed 59 kilometers short to place 12th for the day. He was among the 19 other Open Class pilots, including Dick Johnson, who were unable to complete the course and who had to face an unpleasant basic fact of competition life — outlandings

Canada's John Firth is emptying his Cirrus' water ballast as he makes a high-speed run across the finish line. Officials atop the tower in the background mark his transit to compute his elapsed time and speed around the course.



Close finishes: Weak days were dull for pilots who found themselves obliged to do more gaggle flying than they liked. But they were exciting for spectators. When a gaggle got close enough for a final glide, everyone broke and ran at the same time — resulting in bunched finishes like this one.



cost points.. This was known, of course, to Alf Schubert, who carefully nursed his thermal:

"After Dick Butler left, I continued climbing until the thermal topped out. I had enough altitude then to glide south to another gaggle. When I got there, I was surprised to find that they were all circling in gentle down! But no one was leaving — they were all sticking together, for some reason.

"I struck out completely alone on course to the south. Over a small forest I suddenly got narrow two-meter lift. I circled very tight and gained 200 meters before the others saw me. By the time they reached me, the lift below had weakened and was also ending at 1000 meters. I used the altitude to continue until I came to the Cher River which crossed the course east to west. I still had 40 kilometers to go, so I was happy to get a one-meter boost.

"As I climbed, I noticed there were clouds to the southwest. To the east along the river, however, it was sunny. I left the course and was eventually repaid with two-meter lift to 900 meters. --

When he turned south again, he became aware that he was fighting a headwind. The clouds to the southwest signaled the arrival of a new air mass's.

"I saw a farm fire being started in the direction of Chateauroux. The smoke clouds were boiling and the fire was going full tilt when I arrived, but I plunged in. It was so turbulent I found myself doing involuntary aerobatics. The *Nimbus* performed a sort of Immelmann turn on its own and we were tossed out the side of the pillar of smoke. I tried again. This time I succeeded in making two circles and was carried up to 1200 meters!"

There was no point in riding the maelstrom any longer. Alf left the conflagration and glided happily toward the finish line and victory at 200 kph.

Helmut Reichmann also parlayed a stubble fire into a win the second day. Unlike Alf Schubert, the opportunity came early for Helmut.

"I was only a short distance out on the first leg to Villefranche when I picked up a new fire. The lift was very good and carried me through the inversion to 1900 meters — that turned out to be twice the altitude I was able to get the rest of the day!"

It also enabled Helmut to finish the 48-km first leg without turning and to glide 20 kilometers farther along the second where he came in under a gaggle of the first starters.

The 202-km triangle for the 15-Meter Class lay considerably to the east of the courses prescribed for the other two classes. Evidently conditions were better there because more than two-thirds of the pilots completed compared to half for Standard and less than a quarter for Open.

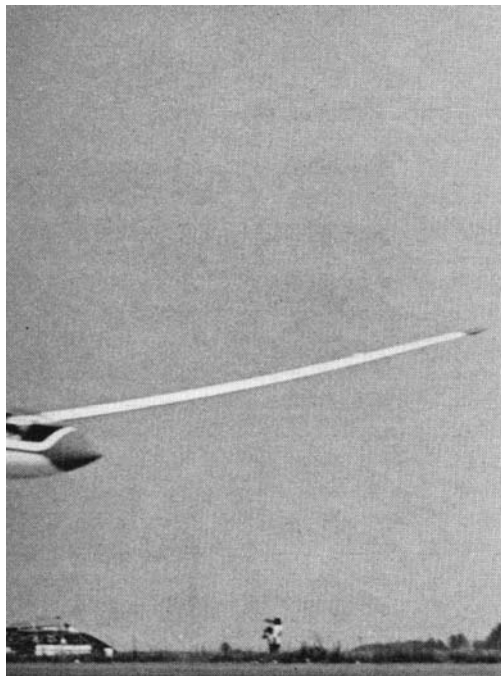
But on the final leg, all classes complained of a developing headwind. "I became aware of it when I realized I was getting lower and lower and falling below my calculated glide slope, -- Reichmann recalled. "Then I got a good thermal and set my speed ring accordingly. --

John Firth, flying a *Cirrus 75* for Canada in the Standard Class pinpointed the change: "The new air mass became noticeable just after crossing the Cher River. The thermals were not strong enough to combat the headwinds, so I was lucky enough to get two fires producing between three to four knots of lift. I was glad to get back! I owe it all to

those farmers and their burning fields!"

Norway's Haavard Maelum, who was fastest around the Standard Class 178-km triangle, had **no** help from farmers' fires: "The headwinds were very strong, -- he said, "and getting home seemed doubtful. That was discouraging for me, because things had been going well. On the first leg I averaged 80 kph, and had been able to climb to 1500 meters and turn Contres at 1000. The second leg was weak, but I pushed on, overflying pilots who were having trouble. As a result, I turned Salbris at 300 meters. However, there was lift at the turnpoint; I started home at 800 meters and ran into those headwinds halfway. This put me down to 400 meters until I succeeded in reaching some clouds and climbing to 1200 meters. Even then I worried about the headwinds all the way to the finish."

One hundred fifty miles west of Chateauroux, waves that have been rolling for thousands of miles across the cold waters of the North Atlantic finally crash to a halt on the shores of France. But the oncoming tides of moist marine weather spawned over the same ocean vastness are unimpeded by sandy beaches or rocky headlands, and the prevailing west-to-east flow can only be stalled or slowed by the atmosphere itself. This can happen when a great aerial river serpentines, eddies, and closes back on itself to form a whirlpool, a gargantuan mound of slowly rotating homogenous air the meteorologists call an "anticyclone." In summer, this normally forms above central Europe and effectively blocks any significant flow of marine air into the Chateauroux region.



Though not quite as naughty, the weather imps displayed the same perversity they had shown during previous world championships at Marfa, Vrsac, Waikerie, and Rayskda. Instead of following the “normal” pattern and allowing a high-pressure cell to hang around while contest-area air heated up to fill the skies with thermals and summer cumulus, they periodically sent in waves off the Atlantic (the isobaric “waves” of high-pressure ridges). The result was four rough pulsations during the contest that alternated relatively clear sunny days with heavy cloud and even rain.

The clouds to the southwest that Reichmann and others had noted at the close of the second day were the forerunners of a heavy inflow of marine air that marked the beginning of a new weather period. Heavy clouds, including thunderheads and rainfall characterized the next 24 hours; the following day was declared a no-contest day.

The next morning, there was an uneasy rustling at the pilots’ meeting when the Competition Director announced tasks of 422, 311, and 279 kilometers for the three classes. Before walking into the briefing hall at 9:30 a.m., many had noted the cumulus thickening below a higher cloud layer, evidence that the weather pattern was continuing, and despite the met man’s assurances that “a task will be possible,” some felt his charts belied his statement. A number of pilots openly commented that optimistic tasks on the basis of optimistic forecasts were resulting in “overcalled” triangles. Protesters were somewhat mollified when it was learned shorter tasks of 343, 311, and 279 kilometers had been set up on a standby basis in case the weather didn’t open up by launch time. It didn’t: Takeoffs were delayed until 200 p.m.; the

word had been circulated along the start grid that the shorter courses were to be flown.

The first legs of all classes were in the westerly quadrant, and were followed by turns to the north. Most pilots succeeded in reaching the first turnpoint, but a high cloud layer exacted its toll on the second leg. Back at the field the novelty of the recorded moo of a cow to signify an outlanding (*aux vaches*) soon wore off. An increasing exodus of crew cars and trailers from the field made it clear that there would be few finishers . . .

George Lee had turned Chinon, crossed the Loire River, and was heading for Epuisay, the second turnpoint. “Epuisay is almost halfway to Paris,” George said. “It was under a high cloud band that was blanketing the route back to Chateauroux. I did the only thing possible — glided in, made my picture, and then, instead of turning onto the third leg, I back-tracked 180 and got to the sun again.”

Because of the Standard Class’ earlier start, Eric Mozer reached the second turn at Moisy with good speed; the lower cumulus clouds had lined up in short streets that enabled him to dolphin. But on the third leg, the high cloud band killed lift and began dropping first one pilot and then another.

“I spotted a couple of fires in the shade and lined them up, intending to use them like stepping stones. When I came to the first one, there was no lift. I searched for a while, but couldn’t find anything, decided the core was too small to locate, and moved on. When I got to the next one, I looked down and got right over the flames, crisscrossed, flew around, looked down again and again to check the fire, and finally realized there wasn’t going to be any lift. --

Eric went down about a mile behind 1st-place Goran Andersson who had flown 255 of the course’s 279 kilometers. Karl Striedieck placed 11th in the 15-Meter Class, landing out after completing 236 kilometers. Daan Pare took first by flying 302 kilometers of the 311-km triangle, but Reichmann’s 273-km distance gave him third.

Back at the field spectators drifted away from the runway fence as the time slipped by. It seemed clear that there would be no finishers and that the task had indeed been overcalled. The public address system fell silent and discontinued announcing the latest outlanding. Thus, George Lee’s arrival at 6:15 p.m. in the early dusk was witnessed by only a few spectators. It was a quiet finish, with the AS-W 17 crossing the line at the stately pace of a max L/D glide. How had he managed so remarkable a flight?



Baer Selen.



George Lee.



Helmut Reichmann.

"A farmer's fire did it. I stayed out from under the cloud shelf as long as possible before I turned toward Chateauroux. I didn't think I was going to make it, but the fire carried me to 2000 feet before lift gave out. I was doubtful that I had enough altitude even then to reach the field, but I started home anyway because there was no alternative."

Jacques Rantet arrived at the same fire a little later, and too late. He landed 12 km short in his Nimbus II.

Lee was the only pilot to complete the course. His remarkable feat reaffirmed his stature as champion and boosted him into overall 1st of the Open Class, a position he would hold for every remaining race, save one.

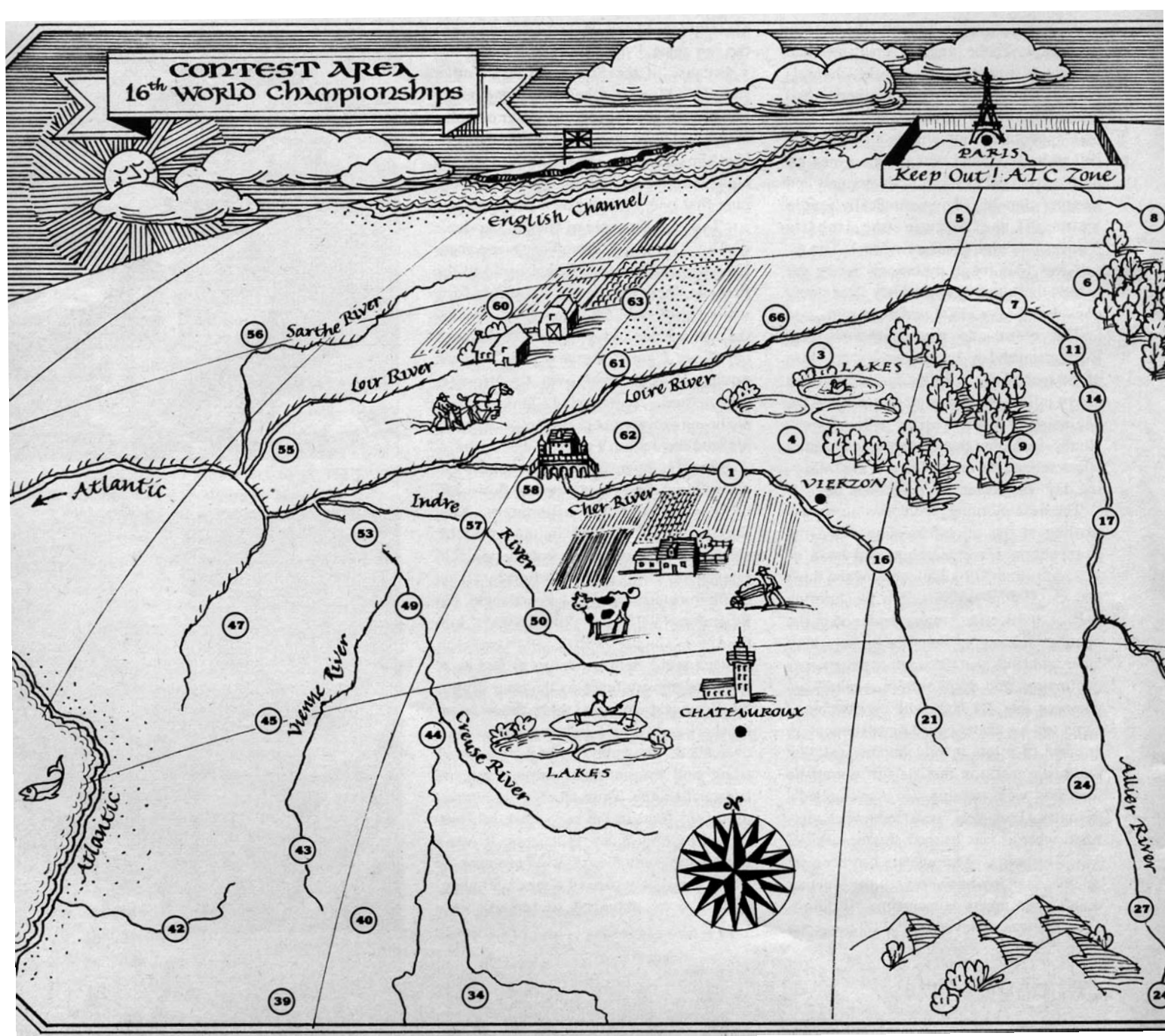
Thanks to an aerial riptide (a high pres-

sure ridge retrogressing toward the Atlantic), skies were still spongy and droplets were falling from the eaves when a somewhat grumpy audience assembled inside the briefing hall next morning. All — except George Lee and his crew — had been subjected to the dubious pleasures of retrieves the previous afternoon and evening. There were murmurings about overextended tasks, but Pierre de la Martiniere seemed unaffected (earlier, Le Directeur de la Cornpetition had been given a baton and the mock title "Emperor of Berry," Chateauroux being in Berry province). The Director reminded his listeners that they were flying in a world competition. Championships, he observed, determine champions. He reminded the pilots that George

Lee, a champion, had completed the course. Alors, c'est possible.

Nevertheless, it was noticed that no tasks had been posted, and by 2:00 p.m. it was clear that even emperors can be outranked by weather gods. The launches were canceled.

"Soaring weather at last!" As he dolphined along at high speed between Mirebeau and Les Maisons Blanches (the second leg of the 4th contest day 333-km Open Class course), Bert Zegels was talking to his Jantar 2A as much as to himself. His start had been inauspicious: after trying unsuccessfully for stubble fire lift, he had been obliged to return five kilometers to Chateauroux to go through the



gate again. It may have been a blessing: He made the first leg in good time. When he turned Mirebeau, he saw Dick Butler in his 604 also turning. "He was going like hell, -- Bert said. It was evidently the kind of weather Butler liked; too.

For the first time, pilots were sent into the southwestern contest area. It was a happy choice. Outlandings were few; individual racing replaced gaggle flying. The second leg was especially fast. Goran Ax, who would win the 287-km 15-Meter race, flew half the 74 kilometers to Poitiers without turning.

"The course lay over forests," he said, "and it was a little hard to navigate, but visibility was fine and I had no real problem. I didn't get very high — between 700 and

800 meters — but the cu's were good and there were no strato layers in the area. On the third leg I didn't see any gliders and thought I had everything to myself until I called one minute out to the finish line — then Reichmann came on the air and did the same. His transmission was strong and I discovered he was just a few hundred feet ahead of me. -- Elapsed time tells the story, however, and both Ax (96.53 kph) and Karl Striedieck (95.60) had trumped Reichmann's red spade (95.08 kph).

In the Standard Class, Baer Selen's name suddenly appeared at the top of both the daily placings and the cumulative list. The modest young Hollander had flown his AS-W 19 at 79.22 kph around the 260-km triangle to edge Michel Recule by .01 kph.

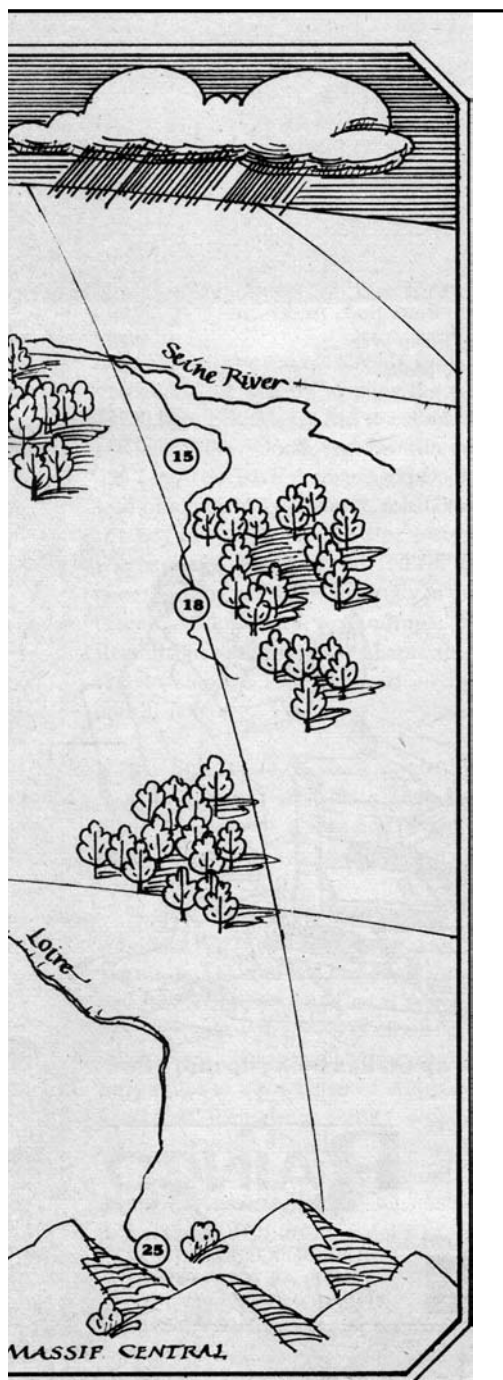
He was not to be dislodged from top spot in the cumulative standings for the rest of the meet.

Finishing the Open Class race, Zegels was careful to skirt some lakes on the last leg. "They are about 50 kilometers from Chateauroux and I knew about them from flying here last year. I went south of them on the way in. I think Dick Butler may have made his mistake and kept pushing too hard here. -- The Belgian was sanguine about the win. "My low placing on the first day lost the contest for me. I landed out when almost everyone else made it home. -- Karl Striedieck, too, professed skepticism about his chances. "Sure, I beat Reichmann, but not by enough points to matter. It was really pretty much of a tie between him and me. At this point I'm about 200 points behind him; I'd have to gain 30 to 40 points on him every single day. He's going to have to make a mistake for me to beat him. . . . Aw, if the weather is consistent enough, I can still beat him. -- He smiled. ". . . If there are enough days."

Saturday and Sunday, July 22nd and 23rd, marked the midpoint of the championships. Once again the spectator area was crowded with glider people from Europe as well as France; there was even a sprinkling of visitors from the U.S. Happily, the weekend coincided with good weather that provided the most luscious cumulus of the contest, and on Saturday the task setters called the longest triangles of the meet — 570, 524, and 475 kilometers for Open, 15-Meter, and Standard respectively. Essentially, the courses required the pilots to fly two-thirds of the way to the Atlantic coast, then to turn northeast and follow the Loire River Valley toward Paris, the Open and 15-Meter classes continuing to points within 10 miles of the city's control zone, while the Standards turned 30 miles farther south.

All classes were launched by 11:40 a.m. Good speeds and a high rate of completions were expected. However, cloud shadows spread on the third leg during the afternoon and made the going rough. The Open Class sailplanes' superiority under these weakened conditions was dramatically demonstrated by the attrition rate: eleven 15-Meter and five Standard pilots were obliged to outland while only one of the big birds went down.

Bernard Fitchett won the Open Class race at 93.26 kph, but George Lee held on to overall first by recording 92.91 kph, a speed that gave him third for the day. Dick Johnson was on Lee's heels to take 4th and Dick Butler placed 8th. In Standard Class,



AILLANT-15

ARGENT/SAULDRE-9
BAUGÉ-55
BELLAC-34
BELLEGARDE-6
BLOIS-61
BOURBON/LANCY-25
BOURGES-16
CHATILLON/BRIARE-14
CHATILLON/INDRE-50
CHENONCEAUX-58
CHINON-53
CONTRES-62
CORMERY-57
COSNE/LOIRE-17
COULANGE/YONNE-18
DORDIVES-8
DUN/AURON-21
EPUISAY-60
GENCAY-40
GIEN-11
LAMOTTE-BEUVRON-3
LA ROCHE-POSAY-44
LES MAISONS BLANCHES-39
MEUNG-66
MIREBEAU-45
MOISY-63
MORNAY/ALLIER-24
MOULINS-27
PITHIVIERS-5
PORT DE PILES-49
POITIERS-43
SABLÉ/SARTH-56
SAINT MAIXENT-42
SALBRIS-4
SULLY/LOIRE-7
THOUARS-47
VILLEFRANCHE-1
VARENNES/ALLIER-24



OSTIV AT CHATEAUROUX

The man in the accompanying photo is Doug Armstrong. He is an SSAer and a professional meteorologist well-known to soaring enthusiasts in the western U.S. Doug came to France to present a paper and remarkable satellite time lapse film showing the triggering mechanism of the Sierra Wave over the Pacific. He is being assisted by Joachim Kuettner, an atmospheric scientist with the National Center for Atmospheric Research in Boulder, Colorado. He, too, is a Society member.

Both these men were part of the many engineers, scientists, and technical people who came to attend the XVI Congress of OSTIV (Organisation Scientifique et Technique Internationale *du Vol à Voile*). These meetings traditionally are held concurrently with a world championships. The ideas and discussions are couched in the cool language of science and mathematics, but even lay soaring enthusiasts find excitement in such topics as solar-powered sailplanes (a large-scale solar-power model flew at Chateauroux), tracing electrical charges in thermals (the basis for a thermal detector in the cockpit?), studies in variable geometry sailplanes, dynamic soaring, etc. History has shown that by the next championships what was theoretical discussion in OSTIV has become hardware or flight techniques in the "real" soaring world.

Baer Selen tightened his already firm grasp on cumulative first by winning the race at 81.20 kph; Eric Mozer had to content himself with 10th. Goran Ax had run up the day's most decisive victory, having posted a lead of almost 4 kph. The remarkable consistency of Karl Striedieck's performances was beginning to be noticed. Except for his poor third day, he was unfailingly in the top three 15-Meter daily standings. Later Reichmann would say, "We kept expecting him to stumble and go down — but he didn't!"

On Sunday, the sixth contest day, Eric Mozer won his second xace in Standard Class — a 402-km triangle that began with a 149-km segment northeast to Chatillon.

"I had decided not to lead out if the weather wasn't strong," he said. "It wasn't, so I started late and began trying to overtake the others. At first it was mostly blue thermals with a wisp of cloud here and there. I was able to catch some on the first forty miles to a town named Aubigny; beyond that there were mostly woods and lakes. These had been bad to me on earlier tasks, so I deviated east to get over clear ground, even though the rest were sticking to the course. Up to that point I had either

been chasing gaggles or having them chase me."

He suddenly found himself completely alone and out of sight to his competitors.

"That's the way I really enjoy flying. And it was even nicer when cloudstreets began forming directly to Chatillon turnpoint. I zapped in to the town, made my picture, and began following the Loire river southeast toward the second turnpoint. It was a beautiful course."

Midway on the 149-km leg, he came to the confluence of the Loire and a western tributary, the Allier River, with the happy knowledge that he was well ahead of the rest of his class. The Allier led to the last turnpoint at Varennes, which was in the foothills of France's Massif Central.

"Cloudbase had been at 6500 feet in the Loire Valley; higher ground at Varennes moved the base up to 7500 feet and provided 700 fpm thermals. A high cloud shelf coming in from the right had been no problem, but I knew it could mean trouble when I turned Varennes and started for home. I had to make a decision: Should I stay on course, or should I deviate north where the sun was reaching the ground better?--

He opted for the detour. While he was making his end run, a second high band formed toward the finish line. This time he

decided to fly directly under it; he was rewarded with a thermal when he reached sunny fields on the other side. It looked as if he would be able to get enough altitude to start his final glide to Chateauroux, thirty miles away. However, a headwind was complicating matters; he decided he should figure on 25:1 to make it.

"My detour north put me on the final leg of the 15-Metercourse and I met Karl at this time. There were scraggly cu's ahead. Karl pushed out while I took a few more insurance turns. I started after him when he was about two miles farther on. After a bit, I tied into a 600-fpm thermal. I could see that Karl hadn't caught anything and picked up the mike intending to tell him about my thermal. However, he was already committed and so far ahead that I decided it was useless. He finished, but I guess it was a close one. --

Karl succeeded in crossing the finish line to place third for the day, topping Reichmann who took fifth. Helmut's teammate, Ernst-Gernot Peter was also proving a competitor to be reckoned with. He egged his AS-W 20 around the 446-km triangle at 96.65 kph, fastest of the twenty-two 15-Meter pilots to complete the course.

Reichmann's Open Class teammates, Erwin Mueller and Bruno Gantenbrink, fur-

ther advanced their country's fortunes by placing 1st and 2nd among the big-bird pilots. Erwin just about cracked 100kph by recording 99.65 kph on the long 505-km triangle.

"We wanted to start together," said Erwin, "but I couldn't get enough altitude for a start until half the class had gone through. However, the weather was beautiful out on course; we went many miles at high speed without turning. In fact, by the time we reached the first turnpoint at Dordives, we had overtaken two-thirds of the class. We saw Johnson there and Butler later on." They passed Butler on the way home, relegating him to 5th place and Johnson to 14th. Their margin over George Lee was narrower, the champion retaining his overall lead by taking third for the day.

On the seventh contest day, Helmut Reichmann placed ninth in the 430-km race assigned to the 15-Meter Class while Karl Striedieck took third after Kees Musters (1st place) and Ernst Peter (2nd place). Some in the U.S. camp professed to be encouraged. Karl had beaten Helmut in three of seven races . . . maybe the U.S. could still have a champion. "Ninth isn't exactly a disaster,," answered the realists, "and it's the point spread that counts." True, 159 points was a bit much to overcome, but if Helmut just happened to stumble a couple of times more, and if Karl maintained his consistency. . . .

In the British team, Bernard Fitchett illustrated the point. By the meet's end he would have won three races and placed second on another, but in between he sashayed into the middle or nether regions of the placings board. On the seventh day, however, he was in good form for the 469-km race.

"I started ten minutes after the Frenchmen (i.e., Henry and Rantet), but they came back for restarts, so I went on. I had the streets all to myself and flew a fair way without losing altitude. Lift was around 3 to 4 knots. Oh, I threw in a few turns in the strong stuff, but mostly I weaved along trying to stay high. Coming up on the Cher River, I deviated a little to pick up a fire near Bourges. It wasn't any better than the clouds. Fires can be helpful, particularly on final glides, but can be bad if you count on them and find yourself caught short when the bubble has gone through and you're left hanging."

Daily placings board: Spectators were able to learn of a pilot's placing for the day within a few minutes of his landing, thanks to the efficient timing operation at Chateauroux. The course maps may be seen to the right.

He knew the AS-W 17 had covered the 169 kilometers to Aillant turnpoint at a good speed.

"On the second leg between Aillant and Bourbon-Lancy I didn't try to stay exactly on course. (I've done more weaving in this contest than I usually do, and it helped on speed days.) The cloudstreets I was flying were really just wisps. I could spot sink holes almost instinctively by the clouds around them. I increased my speed prior to reaching them. The cloudbase rose on the way south. Near the second turn, I got the 'best lift of the day — 6 knots with bursts to 8 knots; it carried me to 6000 feet. --

He was able to overtake Malcolm Jinks, turn Bourbon-Lancy high, and spot a gaggle ahead.

"I made a good try and caught them about half way home. I identified Gantenbrink, Mueller, Dick Butler, and Alvaro de Orleans-Borbon. They were above me and left as I came in. They didn't seem to have been in the core, possibly because they were gaggle flying and in shallow bank. Their discarded thermal produced 4 to 6 knots for me, enabling me to come in above them on the next thermal. I was very pleased."

To stay with the clouds, the group veered north except for George Lee who had caught up with them, and who opted to stay straight on course.

"At first there were little bits of cu, but 30 miles out from Chateauroux we reached the good stuff. I was flying a little behind and saw everyone pass under a cloud and then start down toward the finish. They had ob-

viously missed the lift, so I veered left a bit to pass under the upwind edge. I felt a surge and pulled up in 6-knot lift. It took me to 5100 feet. I thought, "I've got them!" --

And he did, indeed.

Within minutes after he had landed, his name was at the top of the blue placings column of the Open Class. He had averaged 97.30 kph for the race. Johnson had placed 19th. Butler would probably have had pleasure from taking fifth, had not his 604's gear buckled on landing. The damage was repairable overnight, however, and he was able to fly the next day.

During the seventh Standard Class race, a 395-km triangle, a young Swedish pilot, Ake Pettersson, began an end-of-the-meet rally that would make him a class winner in three races.

"I don't like gaggle flying," he said. "It obliges a pilot to focus on matters not of his choosing — which gliders are climbing, which aren't, etc. And gaggles can't go faster than the slowest pilot. So when I found myself alone after a good first leg to Sully-sur-Loire, I was able to concentrate. --

The unaccustomed freedom enabled him to solve a problem: Cloudstreets which had been helpful in the early part of the day disappeared on the second leg. In addition, the sink was heavy between thermals and progress was slow. He noticed that thermals were stronger and closer when he got low over the river. Maybe getting high and staying high wasn't the answer to every situation. Sure enough, he made better speed by



ending his climbs earlier and pushing on to the last turn at Moulin.

Once he began the final leg, he noticed cu's beginning to form again.

"They were north of the track home, but I decided to try for them. It turned out to be a long way, farther than I thought. But when I reached them, it was worth it and I made a straightforward run to the finish line. --

Eric Mozer's speed was 8.32 kph slower than Ake's recorded 81.25 kph, but it gave him 10th place in the race.

Ake Pettersson received the winner's traditional bottle of champagne during the pilots' meeting next morning. The applause added to the driving inner momentum that had come with victory. He was eager to get in the air and fly the 407-km triangle detailed for the Standard Class in the yellow task sheets. As the meeting ended, a crewman approached.

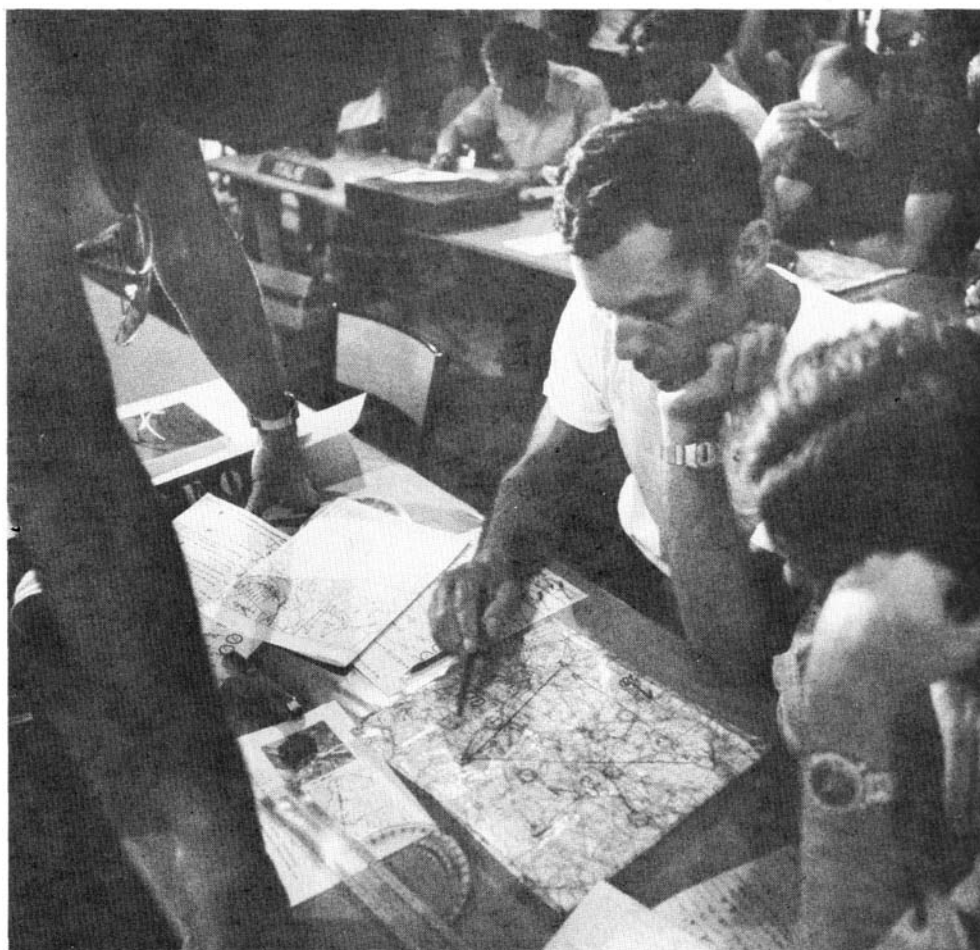
"Ake," said the crewman, "I've got some bad news. -- Ake learned his AS-W 19 would carry no ballast: A bag had ruptured during filling, and a replacement bag also failed. Although fruitless efforts to make repairs caused him to take a late launch, he went through the gate in about the middle of his class.

"I knew Goran Anderson, my teammate in the *Jantar Standard*, started ten minutes later than I, so it was discouraging when he caught up with me 80 kilometers out. And it wasn't encouraging when Hans Nietlispach overtook me in the *Hornet*. Even worse, the weather deteriorated when we crossed the Loire on the way to the Bauge turnpoint. Thermals were broken up and hard to center; coming in under a glider didn't help find the thermal because the lift was different at different altitudes. --

Ake was able to see the bright side, too.

"I was thankful the course was downwind. And things got better after the turn at Bauge. There was considerable cloudstreeting with lift of 2 to 3 meters per second. I was puzzled by the difference until I realized that a higher layer of thin cirrus was shading areas in the fields. These shadows were so light as to be indiscernible. In fact, I had to look up to see where the cirrus were to find the shadow. The same difference in climb was noticeable in the areas without cu's. The fields shaded by thin cirrus appeared about as bright as those that were not. By picking my way to avoid shaded areas, I could get dry thermals a meter per second stronger. --

Ake was evidently skillful enough to overcome whatever advantage his ballasted competitors had, because after making the



The briefing is over. Karl Striedieck studies his air chart, turnpoint photos, takeoff instructions, and weather map as meteorologist Doug Armstrong and teammate Eric Mozer look on.

last turn at Gencay, he picked up some new cloudstreets and rode them to Chateauroux to average 82.63 kph. Interestingly, Eric Mozer, also flying an AS-W 19, kept his ballast throughout the entire flight and placed second with a speed less than a half kph slower!

In the 15-Meter Class, Karl Striedieck had taken first and beaten Helmut Reichmann. He averaged 85.64 kph around the 458-km triangle, but his margin over Helmut gave him only five points.

With only four days left, would he now switch from a steady-as-you-go to a go-for-broke strategy?

"Nope. I don't think you can go faster by driving your bird into the ground. Not in the long run. In clouds it's better to stay high and steer around in them. I've found I can beat people this way — I seem to be able to 'read' clouds as well as anyone. On blue days the conservative — and fastest — way is to let other guys go out and find the thermals.

"The problem today was that the south-

west sector of the contest area was all blue, and that was about 40 percent of the course. Since the Standard and 15-Meters both had the same turn — Bauge — I waited for the Standards to start and then hung around 10 minutes longer before I went through. I managed to pass everyone before the clouds ran out on the second leg. Then I had to go out ahead all by myself. People started catching up with me, but I still was able to turn Les Maisons Blanches first — and glided into a sinkhole. I saw Renner pass me. Then I managed to get to some new clouds and once again was able to overtake people. I came in two minutes after the first finisher — which wasn't too bad considering how poor the third leg was."

High cirrus and a 503-km course brought more than half the Open Class to earth along the second leg. But Malcolm Jinks (*Nimbus II*) completed the course averaging 84.72 kph to place first among 11 finishers.

"I left the last turnpoint just in time," Malcolm recalled, "I was barely able to stay ahead of the oncoming cirrus shadow and



Outlanding. Crew loads Dick Johnson's Jantar in its trailer. Stubble in foreground is what farmers collect to make the fires some pilots used for "pyrothermals."

catching the last lift as it was dying. I finally ran ahead enough to pick up a few wispy cu's and leapfrog to stronger stuff that enabled me to glide near redline for the last 10 miles to the finish. --

Postscript to day eight: It was Dick Johnson who produced the closest 2nd-place finish of the day. Helmut Reichmann had come within 5 points of Karl Striedieck; Eric Mozer was within 4 points of Ake Petersson; but Dick trailed Malcolm by only 3 points — less than two-tenths mph.

(The competition had its third no-contest day on the 26th of July when a major frontal system moved across France. Intermittent drizzle and rain continued into the night.)

For the ninth day's races, triangles of 536, 488, and 457 kilometers were laid out around the task setters' most-favored headings: west to northwest toward the Loire River Valley, then northeast to turnpoints south of Paris, and south back to Chateauroux.

When launches began around noon, cloudbases were only 700 meters, making starts uncomfortable. Furthermore, it was reported that cloud bases had not risen later as forecast and that cumulus were replaced by weak blue thermals. All this was due to a wind shear — also not forecast — that evidently operated between 1-2 km.

The end result was that the "races" became plodding distance tasks around fixed courses. After six to eight hours of difficult flying, the entire field made outlandings in the general vicinity of the second turnpoints. Francois Henry had covered 491 kilometers in his *Nimbus II* for the best distance of the day. All Open Class pilots except one exceeded 400 kilometers. Only three contestants in the other classes were able to achieve better-than-400km distances: Baer Selen flew his AS-W 19 402 kilometers to win first in Standard Class, while Peter Ernst and Karl Striedieck managed 411 and 402 kilometers, respectively, in the 15-Meter Class. Significantly, Reichmann's 389 kilometers earned him only 14th for the day and enabled Karl to

DRAT THE GNATS

Bugs may have been an important factor in the outcome of the championships. The airborne insect population above the contest area varied due to weather conditions, stubble fires, harvesting disruption, etc. On bad days the tiny creatures impacted on leading edges in such numbers as to substantially lower sailplane performance by disrupting the critical boundary layers of airflow next to laminar airfoils. Here are opinions and observations of some contestants:

"Dick Butler's 604 is the highest-performing sailplane at this meet — but he's getting wiped out. His performance is little better or not as good as my AS-W 20 when he's buggy. The same is true with a *Nimbus*. At the beginning of the day when they're still clean, they go right up through you in thermals. But after a couple of hours they can't do it any more . . ."

"I have to allow for a 20 to 30 percent glide-slope degradation on my *Nimbus* on buggy days . . ."

Flapped gliders may be sensitive. During the practice period, my teammate flew his AS-W 20, and I the AS-W 19. After five hours the wings were thoroughly bugged. We drained off the water and compared notes on circling and dolphining. In that state the '20 didn't seem any better than the '19. We also flew with a *Nimbus* pilot who was as much surprised as we to learn that 15-meter gliders are equal to the *Nimbus* in that condition . . ."

Some airfoils are more tolerant of insect pollution.

"Dick Johnson's tests have been informative and helpful, but he simulates a buggy condition by putting the same number of bugs (pieces of tape) at the same places on the leading edge no matter what sailplane he's testing. In real life they don't impact at the same part of different airfoils or in the same numbers . . ."

"The maximum pressure point is farther back on profiles used in the AS-W series, so the wing is less affected than those where the concentration is nearer to the leading edge . . ."

Dick Johnson has been attempting to measure the erosion of sailplane performance due to bugs and has published his findings in his "Flight Test Evaluation" series in *Soaring*. His experiences at Chateauroux indicated the problem may be more acute than his tests had led him to believe. "We only use 20 'bugs' per meter in our flight evaluation tests. But here I have counted as many as 300 impacts per meter at the end of a task. I'm convinced that Open Class gliders drop to near Ka-6 performance under such conditions. It's like flying an old pre-war *Weihe*. With so much drag, ballast can't help penetration, and normally good climb is decreased noticeably. I understand Zacher and Lemke are developing airfoils that are less critical with bugs or raindrops, but there's nothing that's a good compromise now."

reduce the 15-Meter Class leader's advantage by 35 points. George Lee flew 474 kilometers to place sixth in the Open Class. However, this was 19 kilometers farther than Gantenbrink and widened from 45 to 87 the narrow point gap that had separated Lee from the most serious contender for his crown.

In Open Class, Johnson and Butler covered 474 and 446 kilometers to place 9th and 12th, respectively; in Standard, Eric Mozer covered 359 kilometers, giving him 14th in his class.

Many of the landings were in difficult areas near forests and the Loire River, resulting in a rash of minor accidents, mostly damage to landing gears. But Renato Zanitzer broke the tail, fuselage, and one wing of his Standard Jantar when he landed in a farmyard after covering 114 kilometers. He was uninjured, but had to drop out as did Ian Hood. Hood wiped out the gear of his DG-100 during a landing one kilometer from Zanitzer. He was unable to find a replacement in time to continue.

As if to make amends, both the weather and task setters abandoned their seeming intransigence to provide racing conditions and short courses (332, 304, 273 kms) for the tenth contest day. The result — 100 percent completions and speeds exceeding 100 kph! Thirty-two pilots in the Open and 15-Meter classes were able to top the elusive 100-kph mark.

The distinction of being fastest pilot in the 16th World Gliding Championships went to Bernard Fitchett who achieved 115.06 kph around the 332-km Open Class course.

"My speed turned out to be faster than I had thought possible," he said. "I judged 100 kph might be possible and that it might take 3:30 hours to get around. I made it in 2:53 hours, in fact, and got back when the lift was very good. So I could have begun later than my 1:46 p.m. starting time, but I was concerned it would go blue later around the finish; I didn't want to get caught. --

When Fitchett saw Francois Henry (who was in third place overall) go through the gate, he decided it was a good time to leave.

"I dived through with Bert Zegels behind me. We raced north along the 113-km course to the turnpoint at Sully-sur-Loire, taking 4 to 5-meter lift under short

cloudstreets that were not too clearly marked. I was able to pull slightly in front of Henry. I didn't see Bert after the turn which proved to be rather weak. Fortunately, I was able to come high enough to continue southwest until I reached good clouds. I climbed up to them from 2000 feet, my lowest point above the ground for the race. --

Fitchett was delighted that the new clouds were organized in streets that let him dolphin in 4-5 knot lift directly toward the Mornay-Allier turnpoint 118 kilometers south.

"I was flying over beautiful and varied countryside; it was fun just enjoying it as scenery instead of searching it for lift. At one point I saw Francois Henry ahead of me. He had caught up, but he was 500 feet lower. Ian Finlayson was also below me in his AS-W 17 most of the time."

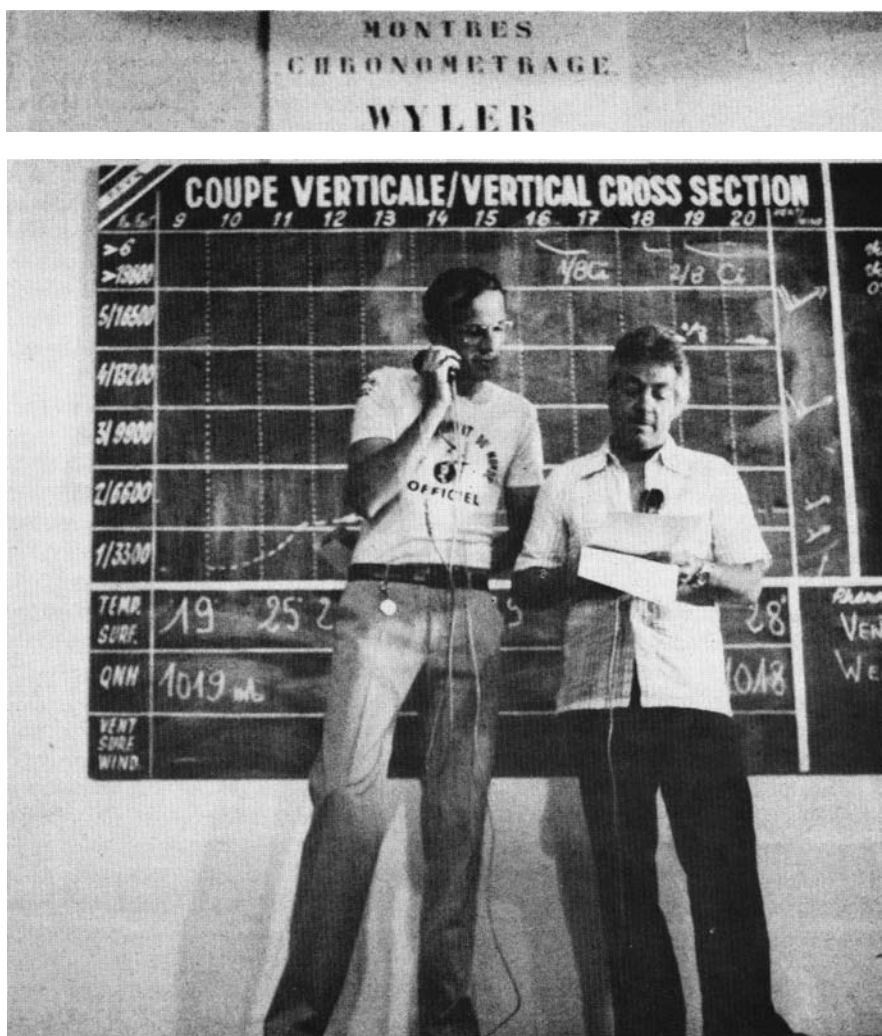
It wasn't long before Fitchett was photographing the second turnpoint. Good as the second leg had been, the trip home proved even better. Lift was at its peak.

"I think I hardly turned on the last leg. Steve White, my 15-meter teammate was already on his way to Chateauroux because of his shorter course. He reported he was heading for a stubble fire ten miles west. At the time, I was dolphiing and picking up

6-knot lift just flying straight. I wondered whether I should deviate to reach the fire. When Steve arrived at the smoke column, he said he was getting 10 knots, so I bent my track to the right a little and flew to the fire. When I got there he was gone and it was pretty much dead. I thought, 'I've made a mistake,' and pushed on, hoping to find some more strong lift. About 30 miles out, I picked up a 6-knot thermal and began climbing. By that time I had caught up with the rest of the 15-Meter Class and lots of the Open Class, too. At 5000 feet we split and started toward the finish line. I had climbed higher than I needed, because there was clear-air lift all the way. I didn't even need to dolphin. All I had to do was push the stick, and down we went."

George Lee placed second while Bruno Gantenbrink dropped to ninth. To all effects and purposes this put Lee on the throne as World Open Class Champion for another two years, since a gap of 154 points now separated him from his challenger. Dick Butler and Dick Johnson placed 7th and 14th, respectively.

In the Standard Class, Ake Pettersson flew his AS-W 19 around the 273-km triangle .04 km faster than Eric Mozer flew his AS-W 19. Ake averaged 94.41 kph and



The pilots' briefing was held each morning at 9:30 in French. Presiding was Pierre de la Martiniere (right). Translations were made on the spot by Max Bishop who also translated the excellent weather forecasts. Pilots were generally in agreement in their praise of this aspect of the championships.

took first place, while Eric had to again content himself with a close, but very close, second.

The finishes were bunched as on the first contest day; excitement ran high. After the first flurry of arrivals, spectators crowded in front of the big daily placings board. Interest centered on the red 15-Meter column. Ingo Renner was at the top, having fown the 304-km course at 107.09 kph. Right below were Ernst Peter (105.44 kph) and Karl Striedieck (105.32 kph). But where was Helmut Reichmann? It was not for some minutes until the SB-11 pilot's name was posted — in 14th place. What did *that* do to the cumulative standings? Out came pencils, notebooks, and calculators. Striedieck had climbed to within 36 points of Reichmann. The game was not over yet!

On the last day, the “moment” of truth for U.S. Team rooters lasted six minutes. As feared, the SB-11 flashed its red-spaded tail across the finish line before Karl could get back in his AS-W 20. There were cheers as Reichmann whistled by, but contest-wise watchers knew that first back doesn't necessarily mean first place. Helmut had gone through the gate well before Karl. The starting times of both were known. What would it take for Karl to win the race?

Out came pencils, paper, and pocket computers. The answer: Even if Reichmann crossed the finish line first, Karl could still win the day — and the 15-Meter championships — if he could get home within six minutes of Helmut!

In the morning, there had been tension for the task setters, too. A moribund front which appeared to be breaking up the previous day was gradually coming to life again. It had rolled onshore from the Bay of Biscay and then come to a hesitating halt just west of Chateauroux. It was thick and menacing with alto cumulus, cirrus, and occasional thunderstorms. That left no choice but to send all contestants to eastern turnpoints and hope that the indecisive front would not make up its mind to move. One imagines *le Directeur's* met man suggesting that it would be prudent to have very short ceremonial tasks (which would have ended any chance for Karl to make his move). Such a script would call for an emphatic *mais non!* from the Emperor of Berry. At a world championships? Never! And, indeed, tasks of 329, 292, and 268 kilometers were set with first turnpoints on the Allier River roughly 50 miles east. The Open and Standard could then move north along the river to pick up their second turnpoints while the



Dick Butler and team passing a chateau en route to Chateauroux.

Standard Class flew west to Dun-Auron on the Berry River for its final turn.

It worked.

Speeds, while not as high as the previous record day, were fast; seven Open Class pilots topped 100 kph. And completions were good — only two of the seventy-three pilots who began the race had to make off-field landings.

Although Bruno Gantenbrink was fastest (105.14 kph) in Open Class, George Lee did the expected by coming in fast enough (104.39 kph) and high enough (3rd place) to keep the title of World Open Class Champion. Johnson and Butler placed 15th and 18th which gave them 6th and 12th, respectively, in final cumulative standings. In Standard Class, Eric Mozer kept the pressure on to take third for the day and a well-earned 8th place in final cumulative standings.



Eric Mozer's markings on his AS-W 19 left little doubt as to which team he was flying for.

After Reichmann went through the finish gate, rumor and speculation stepped up during the six-minute countdown: Karl was on the third leg. Karl was *not* on the third leg. The entire German (or U.S.) team were spotting thermals for Helmut (or Karl). The weather had turned weak (or strong) on the last leg. That was good (or bad) for the SB-11, etc., etc.

The seconds dragged into minutes. . . .

Other finishers began coming in. As each appeared, eyes strained to identify it.

“It's a 15-Meter. . . .”

“It's got a tee tail — it's gotta be Karl. . . .”

“Naw. Can't yuh see the red nose? Karl's is all white. . . .”

Inexorably, the six-minute interval ran out. But when Karl did cross the line — two minutes later — there were cheers. His day-to-day struggle to pull himself up by his bootstraps had been a virtuoso performance of soaring skill and cool competitive courage. And *that* was something that can't be beat.

The following day, when the excitement and tumult of the finishes were over, attention began turning to Baer Selen. He had been unintentionally upstaged while the spotlight focused on the exciting struggle between Helmut and Karl during the final days. Helmut Reichmann said it first: “There is no question that Selen won the championships by the largest point spread of any of us. In comparison to past world meets, his lead was enormous. . . .”

Lee, Reichmann, and Striedieck are familiar names in the world soaring press,

but Baer Selen is little known. From a Dutch aviation writer it was learned that the new 23-year old champion is a student at Delft, the principal technical university of Holland. His father, a vegetable farmer in a small town, was a soaring pilot himself. He raised his son in an *ambience planeur* and saw to it that he grew up in the Venlo Soaring Club, reputedly one of Holland's best.

Selen has no sailplane of his own. He was asked how he prepared for the championships.

"I fly the club ships," he explained. "The AS-W 19 I used at Chateauroux is a club ship. I take my turn flying at the field and am allowed the use of the ship for one hour like any other member. If someone doesn't turn up, then I might get a two-hour turn during the day, but that's all.

"I probably get to make three cross-country flights on weekends during the year. Beyond that, my other opportunities come when our club makes a trip to another site — usually once a year — or when I get to compete in the Dutch nationals."

Now that he's become World Standard Class Champion what would he like to do next?

"I hope I get invited some time to the Smirnoff Derby, -- he says. "That must be a wonderful contest. --

As the closing rituals were performed, the flags snapped and fluttered once again. But this time the skies were gray and threatening. The somnolent front was awakening across western France. Flanked by the runners-up, the three winners stood on raised platforms before the semicircle of teams and received their just homage — George Lee, World Open Class Champion; Helmut Reichmann, World 15-Meter Champion; and Baer Selen, World Standard Class Champion.

The ceremonies had ended, but pilots, crews, officials, and other gliding people gathered in the briefing hall. There they laughed, swapped stories, enjoyed refreshments, sipped French wines, and exchanged souvenirs. The bittersweet melancholy of parting with friends was tempered with the anticipation of meeting at the next championships. (Would they be in Reno, U.S.A?) Soon all were gone. Except for a few stragglers and a handful of field personnel, the huge ex-military facility was deserted. Now the rain could come — and it did.



Even during the week, the championships drew a steady stream of spectators to Chateauroux field. Some stayed in the shade, but most waited at the airport fence for the finishers or to watch other activities such as RC sailplanes and local demonstration flights.

Impressive single-file launch line. Open Class: fourteen Nimbus II, seven AS-W 17, two Jantar 2, and one GlasJlugel604. The 15-Meter Class: nine AS-W 20, eight Mini Nimbus, four Mosquito, three PIK-20D, and one SB-11. Standard Class: ten Standard Cirrus, six AS-W 19, 2 Standard Jantar, two LS-If, one Hornet, and one DG-100.



16th WORLD GLIDING CHAMPIONSHIPS, CHATEAUROUX, FRANCE

JULY 15-30, 1978

FINAL STANDINGS OPEN CLASS

| | Pilot | Country | Sailplane | Day | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | Score |
|----|--------------|---------------|-----------|-----|----|----|----|----|----|----|----|-----|-----|-----|-------|-------|
| 1 | LEE | Great Britain | AS-W 17 | 17 | 6 | 1 | 15 | 3 | 3 | 8 | 5 | 6 | 2 | 3 | 10163 | |
| 2 | GANTENBRINK | W. Germany | Nimbus | 10 | 4 | 3 | 7 | 12 | 2 | 4 | 7 | 10 | 9 | 1 | 10018 | |
| 3 | HENRY | France | Nimbus | 13 | 2 | 11 | 4 | 9 | 12 | 13 | 4 | 1 | 4 | 10 | 9919 | |
| 4 | FITCHETT | Great Britain | AS-W 17 | 1 | 9 | 4 | 8 | 1 | 6 | 1 | 2 | 2 | 1 | 6 | 9623 | |
| 5 | MUELLER | W. Germany | AS-W 17 | 9 | 8 | 17 | 9 | 10 | 1 | 3 | 6 | 11 | 6 | 12 | 9534 | |
| 6 | JOHNSON | U.S.A. | Jantar | 6 | 22 | 8 | 5 | 4 | 14 | 19 | 2 | 9 | 14 | 15 | 9340 | |
| 7 | FINLAYSON | New Zealand | AS-W 17 | 5 | 24 | 7 | 11 | 7 | 13 | 7 | 10 | 16 | 5 | 13 | 9256 | |
| 8 | RANTET | France | Nimbus | 2 | 14 | 2 | 3 | 13 | 7 | 11 | 23 | 18 | 20 | 5 | 9238 | |
| 9 | JINKS | Australia | Nimbus | 12 | 11 | 6 | 21 | 11 | 9 | 12 | 1 | 5 | 11 | 9 | 8947 | |
| 10 | ZEGELS | Belgium | Jantar | 22 | 5 | 16 | 1 | 21 | 11 | 10 | 11 | 3 | 19 | 16 | 8802 | |
| 11 | TABART | Australia | AS-W 17 | 11 | 13 | 23 | 10 | 19 | 8 | 14 | 8 | 15 | 21 | 17 | 8786 | |
| 12 | BUTLER | U.S.A. | 604 | 4 | 12 | 5 | 20 | 8 | 5 | 5 | 18 | 12 | 7 | 18 | 8704 | |
| 13 | DeORLEANS | Spain | AS-W 17 | 24 | 17 | 14 | 6 | 2 | 4 | 2 | 12 | 17 | 3 | 4 | 8612 | |
| 14 | EVANS | New Zealand | Nimbus | 8 | 19 | 12 | 12 | 14 | 10 | 15 | 19 | 21 | 18 | 19 | 8493 | |
| 15 | SCHUBERT | Austria | Nimbus | 20 | 1 | 22 | 24 | 17 | 15 | 16 | 17 | 7 | 12 | 7 | 8412 | |
| 16 | URBANCIC | Argentina | Nimbus | 19 | 15 | 15 | 14 | 22 | 16 | 20 | 9 | 13 | 22 | 20 | 8377 | |
| 17 | HANSEN | Denmark | Nimbus | 7 | 7 | 10 | 17 | 18 | 18 | 21 | 13 | 19 | 8 | 21 | 8371 | |
| 18 | GAVAZZI | Italy | Nimbus | 15 | 21 | 9 | 2 | 23 | 20 | 9 | 20 | 14 | 16 | 14 | 8369 | |
| 19 | DeDORLODOT | Belgium | AS-W 17 | 14 | 23 | 18 | 16 | 6 | 22 | 6 | 21 | 4 | 17 | 8 | 8230 | |
| 20 | OSWALD | Switzerland | Nimbus | 16 | 16 | 19 | 18 | 20 | 19 | 23 | 15 | 8 | 10 | 11 | 8221 | |
| 21 | SERRA | Italy | Nimbus | 21 | 20 | 13 | 22 | 5 | 21 | 18 | 3 | 20 | 13 | 2 | 8149 | |
| 22 | FAHRAPELLNER | Austria | Nimbus | 18 | 10 | 24 | 13 | 24 | 17 | 22 | 16 | 23 | 15 | 22 | 6524 | |
| 23 | MOUAT-BIGGS | South Africa | Nimbus | 23 | 18 | 21 | 23 | 16 | 23 | 17 | 14 | 22 | DNC | DNC | 4558 | |
| 24 | GOUDRIAAN | South Africa | AS-W 17 | 3 | 3 | 20 | 19 | 15 | 24 | 24 | 24 | DNC | DNC | RNC | 4165 | |

15-METER CLASS

| | | | | | | | | | | | | | | | |
|----|-------------------|---------------|-------------|----|----|----|----|-----|----|----|----|----|----|----|-------|
| 1 | REICHMANN | W. Germany | SB-11 | 1 | 1 | 3 | 3 | 4 | 5 | 9 | 2 | 14 | 14 | 2 | 10544 |
| 2 | STRIEDIECK | U.S.A. | AS-W 20 | 2 | 3 | 1 | 2 | 5 | 3 | 3 | 1 | 2 | 3 | 5 | 10500 |
| 3 | AX | Sweden | AS-W 20 | 11 | 18 | 13 | 1 | 1 | 3 | 8 | 9 | 3 | 12 | 9 | 10142 |
| 4 | WIDMER | Brazil | AS-W 20 | 6 | 13 | 12 | 11 | 12 | 2 | 12 | 11 | 6 | 13 | 3 | 10119 |
| 5 | MUSTERS | Holland | LS-3 | 3 | 20 | 7 | 4 | 10 | 9 | 1 | 12 | 19 | 5 | 10 | 10082 |
| 6 | PETER | W. Germany | AS-W 20 | 26 | 4 | 2 | 9 | 2 | 1 | 2 | 3 | 1 | 2 | 17 | 10026 |
| 7 | BLUEKENS | Belgium | AS-W 20 | 14 | 2 | 19 | 26 | 7 | 4 | 11 | 7 | 7 | 17 | 4 | 9934 |
| 8 | GORDON | New Zealand | LS-3 | 14 | 6 | 4 | 14 | 15 | 20 | 4 | 21 | 12 | 23 | 15 | 9658 |
| 9 | TEUNISSE | Holland | Mini-Nimbus | 16 | 8 | 9 | 5 | 19 | 11 | 23 | 17 | 25 | 22 | 8 | 9654 |
| 10 | PARE | Holland | Mini-Nimbus | 7 | 23 | 1 | 6 | 8 | 13 | 21 | 4 | 9 | 9 | 22 | 9589 |
| 11 | WHITE | Great Britain | AS-W 20 | 12 | 15 | 15 | 23 | 20 | 14 | 18 | 20 | 4 | 11 | 7 | 9582 |
| 12 | KARLSSON | Sweden | Mini-Nimbus | 9 | 22 | 8 | 8 | 3 | 12 | 5 | 15 | 17 | 7 | 21 | 9577 |
| 13 | HAEMMERLE | Austria | Mini-Nimbus | 8 | 12 | 14 | 13 | 21 | 17 | 19 | 5 | 10 | 8 | 11 | 9516 |
| 14 | RENNER | Australia | LS-3 | 13 | 26 | 21 | 15 | 6 | 8 | 15 | 8 | 11 | 1 | 20 | 9285 |
| 15 | ROENNESTAD | Norway | LS-3 | 29 | 9 | 10 | 16 | 14 | 7 | 6 | 19 | 5 | 4 | 1 | 9257 |
| 16 | SCHULTHEISS | Switzerland | Mini-Nimbus | 5 | 11 | 5 | 17 | 13 | 10 | 16 | 32 | 8 | 10 | 12 | 9105 |
| 17 | SORENSEN | Denmark | Mosquito | 21 | 16 | 20 | 12 | 11 | 18 | 20 | 23 | 13 | 20 | 14 | 9070 |
| 18 | BUCHANAN | Australia | LS-3 | 19 | 27 | 25 | 10 | 9 | 15 | 17 | 6 | 20 | 6 | 6 | 8884 |
| 19 | STOUFFS | Belgium | LS-3 | 22 | 19 | 6 | 19 | 18 | 26 | 7 | 14 | 26 | 21 | 16 | 8705 |
| 20 | WEBB | Canada | Mosquito | 18 | 7 | 16 | 22 | 23 | 19 | 14 | 22 | 23 | 16 | 13 | 8673 |
| 21 | WERNEBURG | Canada | Mini-Nimbus | 10 | 14 | 17 | 25 | 29 | 16 | 25 | 10 | 16 | 19 | 26 | 8618 |
| 22 | CLIFFORD | South Africa | LS-3 | 25 | 10 | 24 | 7 | 16 | 22 | 10 | 16 | 30 | 26 | 25 | 8285 |
| 23 | INNES | Guernsey | Mosquito | 17 | 17 | 22 | 24 | 22 | 25 | 26 | 18 | 15 | 30 | 18 | 7998 |
| 24 | BAUMGARTNER | Switzerland | LS-3 | 27 | 5 | 18 | 21 | 25 | 23 | 22 | 28 | 18 | 24 | 19 | 7262 |
| 25 | FOWLER | New Zealand | AS-W 20 | 23 | 32 | 28 | 20 | 17 | 21 | 24 | 13 | 32 | 10 | 28 | 7117 |
| 26 | BULUKIN | Norway | PIK-20B | 31 | 21 | 23 | 18 | 24 | 27 | 13 | 24 | 24 | 15 | 23 | 6857 |
| 27 | BRYSON | Ireland | PIK-20D | 30 | 25 | 26 | 28 | 28 | 29 | 28 | 26 | 27 | 29 | 27 | 5548 |
| 28 | SEISTRUP | Denmark | PIK-20D | 28 | 30 | 27 | 27 | 27 | 31 | 30 | 25 | 21 | 28 | 24 | 5517 |
| 29 | VON SCHAKFFHAUSEN | Brazil | LS-3 | 15 | 28 | 30 | 29 | 26 | 28 | 31 | 30 | 22 | 27 | 30 | 4800 |
| 30 | RADIC | Chile | Mini-Nimbus | 20 | 24 | 31 | 32 | 31 | 24 | 29 | 27 | 28 | 25 | 32 | 4321 |
| 31 | URBINA | Chile | Mosquito | 24 | 29 | 32 | 30 | 30 | 30 | 28 | 29 | 29 | 31 | 29 | 4160 |
| 32 | NAGORE | Spain | Mini-Nimbus | 32 | 31 | 29 | 31 | DNC | 32 | 32 | 31 | 31 | 32 | 31 | 2189 |

STANDARD CLASS

| | | | | | | | | | | | | | | | |
|----|-------------|---------------|-----------|----|----|-----|-----|----|-----|-----|-----|-----|-----|-----|-------|
| 1 | SELEN | Holland | AS-W 19 | 13 | 2 | 15 | 1 | 1 | 4 | 3 | 5 | 1 | 8 | 2 | 10681 |
| 2 | BRIGLIADORI | Italy | Cirrus | 10 | 8 | 13 | 11 | 3 | 3 | 15 | 4 | 2 | 10 | 4 | 10321 |
| 3 | RECULE | France | Cirrus 78 | 8 | 10 | 11 | 2 | 2 | 2 | 7 | 6 | 7 | 6 | 17 | 10185 |
| 4 | RIERA | Argentina | Cirrus | 3 | 5 | 4 | 8 | 15 | 7 | 9 | 12 | 5 | 14 | 14 | 10001 |
| 5 | MAELUM | Norway | LS-1f | 5 | 1 | 8 | 14 | 11 | 15 | 5 | 7 | 18 | 5 | 16 | 9884 |
| 6 | CARPENTER | Canada | Cirrus | 16 | 6 | 20 | 5 | 12 | 12 | 2 | 8 | 6 | 3 | 10 | 9869 |
| 7 | NIETLISPACH | Switzerland | Hornet | 12 | 9 | 12 | 17 | 8 | 10 | 13 | 3 | 16 | 11 | 7 | 9812 |
| 8 | MOZER | U.S.A. | AS-w 19 | 1 | 19 | 6 | 7 | 1 | 0 | 1 | 1 | 2 | 14 | 2 | 9790 |
| 9 | MERCIER | France | Cirrus 78 | 2 | 12 | 7 | 6 | 4 | 11 | 11 | 17 | 17 | 17 | 12 | 9474 |
| 10 | RIZZI | Argentina | Cirrus | 20 | 4 | 3 | 10 | 14 | 6 | 8 | 11 | 4 | 13 | 13 | 9329 |
| 11 | FIRTH | Canada | Cirrus | 15 | 11 | 10 | 16 | 18 | 14 | 4 | 15 | 10 | 4 | 6 | 9311 |
| 12 | COSTA | Brazil | LS-1f | 4 | 7 | 14 | 15 | 13 | 13 | 14 | 18 | 13 | 9 | 15 | 9149 |
| 13 | PETTERSSON | Sweden | AS-W 19 | 7 | 21 | 9 | 1 | 5 | 9 | 1 | 1 | 8 | 1 | 8 | 9094 |
| 14 | ANDERSSON | Sweden | Jantar | 9 | 17 | 1 | 2 | 0 | 7 | 8 | 9 | 3 | 12 | 18 | 8739 |
| 15 | STOEGNER | Austria | AS-W 19 | 11 | 15 | 18 | 9 | 16 | 5 | 19 | 10 | 20 | 18 | 5 | 8716 |
| 16 | LUND | Denmark | Cirrus | 17 | 3 | 2 | 18 | 6 | 19 | 17 | 16 | 12 | 15 | 1 | 8692 |
| 17 | BRADLEY | South Africa | Cirrus | 19 | 14 | 16 | 4 | 9 | 17 | 12 | 13 | 9 | 16 | 19 | 8326 |
| 18 | JUNQUEIRA | Brazil | AS-W 19 | 18 | 16 | 17 | 13 | 17 | 20 | 16 | 14 | 11 | 7 | 11 | 8270 |
| 19 | PEROTTI | Italy | Cirrus | 6 | 22 | 5 | 12 | 23 | 18 | 18 | 22 | 15 | 19 | 9 | 6606 |
| 20 | DELAFIELD | Great Britain | AS-W 19 | 14 | 13 | 19 | 3 | 19 | DNC | DNC | DNC | DNC | DNC | DNC | 3607 |
| 21 | MARTINEZ | Spain | Libelle | 23 | 18 | DNC | DNC | 21 | 22 | 22 | 20 | 19 | 20 | 20 | 2073 |
| 22 | HOOD | Ireland | DG-100 | 22 | 23 | 23 | 22 | 22 | 21 | 20 | 21 | 22 | DNC | DNC | 1279 |
| 23 | ZANITZER | Luxembourg | Jantar | 21 | 20 | 22 | 21 | 20 | 16 | DNC | 19 | 21 | DNC | DNC | 1029 |

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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