

# SNOAR NEWS

November /  
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1985



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# SNOAR NEWS

November/December, 1985  
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## TABLE OF CONTENTS:

PAGE 3 From Your Sometimes Sober Editors: The Unprintable Quote  
PAGE 4 Bulgaria '86 : The Sixth World Spacemodeling Championships  
PAGE 27 Quotable Quotes: Distilled wisdom from the US Team  
PAGE 29 Recollections of Bulgaria: Chris tries to forget all the fun  
PAGE 30 NCR Holiday Specials: Try stuffing your stocking with these!  
PAGE 31 BULLSHEET: Changes in Aerotech motors, NAR notes, and more!

## COVER STORY:

Phil Barnes successfully defended his E RC RG gold medal in Bulgaria to become the first American champion to repeat. On the back cover: Phil congratulates Jim Wilkerson on his bronze in the same event.

## CREDITS:

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Bowers, Randy Redd, Gary Price, Donnie and Marie, and Gigabytes of others.  
Notice that Gary F. did not send in his \$20 here, so, in reply to his letter,  
we've exiled him to the Jerry Irvine Memorial Post Office Box. Send the \$20  
next time, Gary!

SNOAR NEWS is published right around 8 times a year by SNOAR, an  
autonomous collective with an "executive officer of the week", who refers  
all decisions at bi-weekly meetings where they must be ratified by at least  
a 2/3 margin, NAR section #337. The actual number of issues this calendar  
year was NINE, a new record. We're also broke! This is \*Volume 11,  
Number 9\*. (You wouldn't have guessed that, would you?) SNOAR, SNOAR  
NEWS, and IMPACT copyright © 1985 by the SNOAR Subscription price is still  
\$7.50 in HARD CURRENCY or comparably valued marginally legal items. Make  
your checks payable to Matt Steele. Thus endeth the lesson. Amen.

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Hello there, comrades!

I know you're all wondering why this issue is late. One reason is the sheer amount of work that went into this issue. It's our double sized "Internats" issue, and that meant a lot of work and effort. Hope you like it, as well as the new graphics look.

The other reason is, well, let me quote J. Pat. Miller. "What the mighty NAR could not do, racketball and a little aging process has done...quieted the pen of the SNOAR NEWS editor! Yeah, I had major surgery on my knee in early November, and won't be able to walk until after the first of the year, if all goes well. This has made it hard to do things, such as type, drive, shower, go to the printer's, etc. Hopefully, this will be the only issue that will be delayed.

Just keeping you informed department, or "when we're right, we're right": Jerry Irvine is circulating a letter that, among other things, attempts to justify his "pay now, get later (maybe)" policy. It looks like a last ditch effort for Jerry to stay afloat. He still has not paid the NAR for the legal judgement against him. So it goes...

Chris, Terry and I are very glad to be back from Bulgaria. It was an interesting trip to say the least. All of you can help out by never mentioning the word "tomatoes" again in our presence. We hope you like our exclusive coverage.

Happy Holidays from all of us here at SNOAR NEWS!

Matt & Mac

## THE UNPRINTABLE QUOTABLE QUOTE !!!

Well, folks, there finally has come a time! Yessirreee, there's a quote that's too hot to print in these hallowed pages of SNOAR NEWS. I know, I know, you'd thought that you'd never see the day that it would happen, but Heil HAS frozen over. It has to do with the fantastic Leopard Lady in Bulgaria the night of the awards banquet. If you REALLY want to hear it, buy me a beer sometime and pull me off into a corner..... and maybe then you'll hear the Great SNOAR NEWS Unprintable Quotable Quote. But it'll cost you a beer! A good beer, too, not one of those "less filling, great taste" beers!

# Bulgaria '86

## The Sixth World Championships

by the Special SNOAR Overseas Correspondents:  
Matt Steele, Chris Pearson, and Terry "Swan" Lee

The scene is Jambol, Bulgaria on a clear, but breezy day. It is the third round of S&E, Radio Controlled Rocket Glider, and Phil Barnes is the only competitor with maxes in the first two rounds. All eyes are on Phil; Jordan Pavlov of Bulgaria, who is in second place by a few seconds, is watching closely as Phil preps his "Dark Star V" and places it on the pad. Flyers from four other countries are also watching; no one is willing to fly until they see how Phil does. The sky is cloudy, with no thermals to provide the lift necessary for a seven minute max time. The US team scans the sky... and waits...and waits. The seconds click away, and the tension builds. Five, ten, fifteen, and then twenty incredible minutes pass in this classic showdown. At last, the sun breaks through the clouds. Phil watches the sky, searching for signs of that elusive thermal that will bring him the gold. After a minute or two, Phil raises his hand. 3...2...1...Start! Phil's "Dark Star V" lifts off gracefully on it's smokeless E6 and soars into the sky on a perfect boost. Almost simultaneously, the sky fills with the smoke of five other countries' RC RG's following Phil's lead, but it doesn't matter; Phil has found the lift he needs to max. At the end of an agonizingly long seven minutes, the timer signals a max, and the entire US team goes wild! The "Dark Star" goes into it's customary high speed death dive and victory loop before Phil catches it. Once again, Phil Barnes is the best flyer on the field. His is a two time World Champion.

That event, happening on the first day of the Sixth World Championships in Jambol, Bulgaria, set the tone for the US team for the rest of the meet.

### Part 1: Getting to Jambol

Of course, half the fun of a World Championships is getting there. Or so it would seem. It wouldn't be a major trip without little things going wrong at the start. In this case, it seemed that everyone was able to meet at JFK airport with the exception of Team Manager Jerry Gregorek! It turned out that Jerry was quite tied up getting our engines on the plane. As it was, we got everyone on board and off the ground without incident. Considering the rash of airline crashes, this was welcome. After an eight hour flight, we landed in Frankfurt for a three hour layover. A good number of the team members used this time to savor the fine German food and beer that the airport offered. From Frankfurt we flew to Belgrade, Yugoslavia, spending another four hours in the air. Upon landing in Belgrade, we were whisked through customs and to our hotel, the "Metropol".

The remainder of that day was spent sleeping, looking about town, getting used to the food, handing out team shirts and jackets, sewing

patches on jackets, looking over other peoples' models, making last minute preparations for the meet, and, in the case of the scale team, getting a model ready to enter. Jeff Vincent brought a long a mostly-completed Saturn 1B, whereas Chris Pocock was nowhere close with his. The sleepless construction marathon was on.

On Saturday morning we took a rather interesting tour of Belgrade. Yugoslavia proved to be an interesting contrast to the United States. We found Belgrade to be a busy city, although a bit run-down. Of particular interest was a large fortress that had been sacked many times by the Turks. As we were to find out, anything that had been built in the past 1200 years or so had been destroyed by the Turks at least once.

Saturday evening produced the usual quest for wild night life. The best spot in town turned out to be the nightclub/casino in the Metropol that featured a magician, a stripper, a band, and a comedian. This type of show turned out to be the standard of entertainment in Yugoslavia, as evidenced by the thorough research the SNOAR NEWS staff conducted on the trip.

It was then onto Bulgaria. We traveled by bus into Bulgaria, and were fortunate enough to have an excellent driver, Vasa, who had lived in Canada for a time before returning to Yugoslavia. He proved to be a big help as a translator, guide, drinking buddy, and recovery team member. He was also adept at getting us through Bulgarian customs, as we had no problems. We traveled to Sophia, Bulgaria's capital city, and stayed at the country's best hotel. It was quite nice for Bulgaria, because it was built by the Japanese. It was evident that it was maintained by the Bulgarians, though, as there were a lot of little things broken or worn out. It was a welcome surprise, though, and Chris and Matt splurged by ordering two Pepsi's (the only thing even remotely drinkable in Bulgaria) from room service. We waited almost an hour to get it. At least we didn't get charged for the ice they brought; Harry Rose did!

The next day we were introduced to our KGB interpreter, who was a bit surly, and obviously tired of tourists. We went to the center of Sophia, saw the old churches, Communist Party HQ, and the changing of the guard at the tomb of Georgiev Dimitrov, a famous Bulgarian. We also got to shop a bit, which was an experience. There wasn't a lot of stuff to buy in the souvenir shops, so we headed off to the largest department store in Bulgaria. If you can imagine what the basement of a Woolworth's that has been closed for two years is like, then you've got an idea of how bad this place was.

Since we were wearing our USA jackets, people everywhere were coming up to us and asking us to change money. Because the Bulgarians can only buy certain imported goods with hard currency (not the "Lev" that is the Bulgarian currency), the dollar is worth about ten times it's "official" value on the black market. This got to be a real pain, as none of us were particularly interested in touring a Bulgarian jail, or getting stuck with Levs (which, of course, can NOT be turned back in for dollars!).

We we "treated" to a folk show and meal in a small town outside of Sophia that night. A good amount of white wine was consumed, with Dan Winings having the most fun. Of course, Jeff and Chris Pocock were not having as much fun, still struggling with their scale models.

We left the next morning for Jambol. On the way we stopped to take a tour of Plovdiv, which was largely forgettable. We also were overflown by a number of HIND helicopters, a real highlight. Upon arriving in Jambol, we were directed to the dreaded "Tounja" hotel. The place was a nightmare,

with small rooms, small beds, and even smaller bathrooms. The place was also buzzing with confusion, as the Bulgarians didn't seem too organized. A lot of people wandered around, met old friends, peeked at models, and generally just got in the way. In other words, it was just like any other rocket contest.

## Part 2: S8E Radio Controlled Rocket Glider

Radio controlled Rocket Glider (FAI class S8E) was held the afternoon of Wednesday, August 28. The day was clear, but windy, and this was a factor that affected all of the contestants.

The field was huge, perhaps the best one ever. It was basically acres and acres of clear farmland, with at least three miles of clear space in every direction before the nearest obstacles. There were no woods in sight, and only a few cornfields, which were a long ways away. The launch site was on top of a small hill, in a harvested wheat field. It was sometimes muddy, but it worked well, and the field was a pleasure to fly off of.

The Sixth World Championships turned out to be the largest spacemodeling world championships held, with 77 contestants from Bulgaria, the Soviet Union, Czechoslovakia, Poland, Yugoslavia, Romania, Spain, Switzerland, and the USA. The caliber of competition looked to be high, as there were a number of familiar names returning. It was easy to figure out who belonged to what country, as each team wore distinctive, colorful uniforms. The Americans wore the traditional white "USA" jackets (the "away" uniform, as opposed to the blue "home" uniforms worn in 1980 at Lakehurst. Sort of like the Dallas Cowboys and their jerseys, if you get the idea.).

The morning flying session was devoted to practice flying. As is customary, the US team did more test flying than any of the other teams. The Bulgarians, in their usual strict secrecy, were seen coming in from practice flights as the rest of the teams were going out. Flights of streamer duration, altitude, and B6 models left everyone convinced that many of the events would involve long chases. It did seem that S8E wouldn't be one of them, although the high winds made the boost phase tricky.

The first RC RG practice flights were by Phil Barnes. Starting with D12's, he quickly progressed to E6 flights for both of his prime birds. His straight boosts, even in the high winds, left little doubt as to the identity of the current world champion. Phil even drew a few rounds of applause for his boosts.

Second up with test flights was Jim Wilkerson, who wasn't as well practiced as Phil. Jim flew a copy of Bob Park's "Raven" design used at the Fifth World Championships. Jim's first flight with the newer of his two birds had a good boost and glide until it was about fifty feet off of the ground. Then it suddenly spiraled in! No damage resulted in the crash, and it was determined that the elevator control horn had broken off. Jim quickly repaired the damage, and put the bird up on another test flight. This time, the bird boosted OK, and transitioned well, but suddenly started

**Opposite page:** Jim Wilkerson gives the "thumbs up" prior to making a first round flight in S8E. Jim flew a version of Bob Parks's "Raven" design.



to spiral in again. It crashed in the timer's area, once again the victim of a broken control horn. The bird was too badly damaged to fly again, so Jim switched to his backup. The backup bird made a successful flight in the wind, so Jim decided not to risk any more flights in the high winds. Mike Micci, also disliking the high winds, declined to make a practice flight.

The actual competition began in the afternoon. The wind had slowed a bit, but it was still brisk enough to make actual flying questionable. For the first time, there were five countries competing in the SBE event, making the next time it is flown an official World Championship event. In Bulgaria, it was an unofficial world championship, or an official FAI event without world championship status, which means the places count, but no FAI medal goes with it, or...oh, forget it. Even Howard had a hard time explaining it. The five countries competing were Switzerland, Bulgaria, Czechoslovakia, Poland, and the USA. Curiously, the Soviets did not fly the event. This was the first time for the Swiss to fly the event ever, and they did well for their lack of experience.

The Bulgarians were flying near exact copies of Bob Parks' "Raven" design, except that the carbon fiber and Kevlar parts were replaced by fiberglass and balsa. They used black powder motors that had the casings wrapped in fiberglass to prevent burn-through. The Polish motors were 30 n-sec black powder versions, similar to the Bulgarian design. The Poles also had a variation of the Raven design, whereas the Swiss design more closely resembled the Phil's "Dark Star V". The Swiss had practiced with FSI E5's, but apparently had so many cats that they switched to a Romanian D motor for the contest.

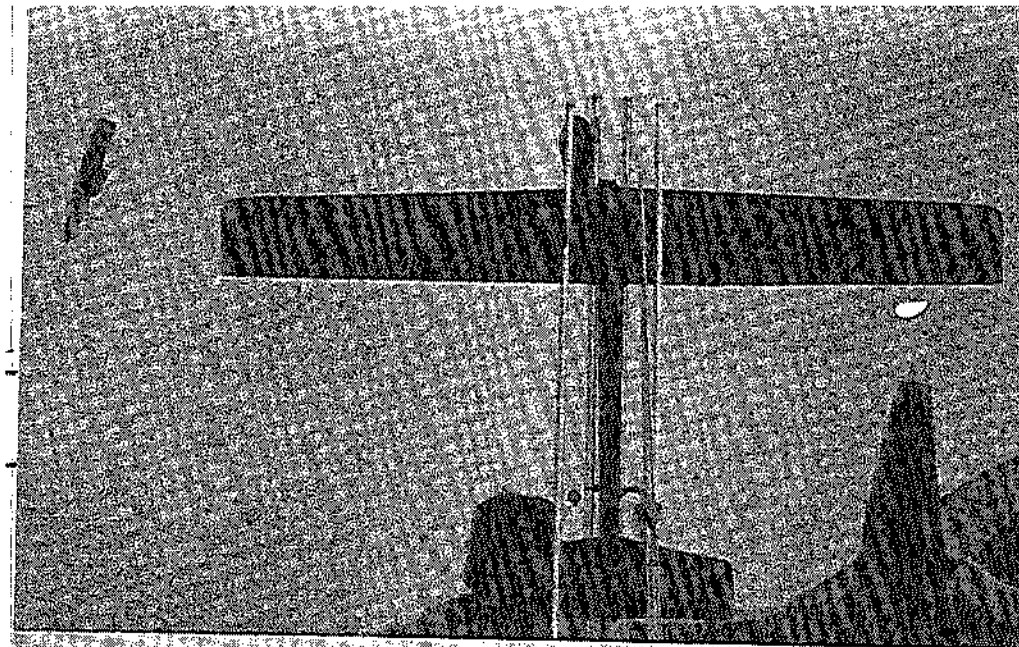
The Czech Taborsky bucked the digital 2 channel RC trend with a 2 channel pulse (i.e., Galloping Ghost) system. Taborsky used an original, all balsa design that was rolled on boost to insure straight up flights. The Czechs also used black powder motors. Nothing even close to the Aerotech E6 was seen, although more than one competitor wished out loud that they could have some.

Phil was the first of the Americans off the pad with a straight and high boost that was better than any of the other foreign competitors. Despite the high winds, Phil maxed. Jim Wilkerson was next off of the pad. He had a good clean boost that didn't go as high as Phil. After scratching for some lift, Jim ended up landing at the 247 second mark, short of a 300 second max. Given the windy weather, it was still a competitive flight. Mike Micci was last to go, and disaster struck! When the E6 ignited, the pod stripped from the bird, and proceeded to flutter around the range area for the long burn of the E6. It was ruled a DQ for safety reasons.

Phil was the only competitor to max in the first round. He was followed by two Bulgarians, Rusev (295) and Pavlov (279), a Pole, Tendra (274), Wilkerson, and the Czech Taborsky (235). Taborsky had a good first round flight, with a spiral boost and a chase down wind to hit a thermal. It did prove that the pulse system was capable of turning in a good time.

The weather conditions improved for the second round, and four modelers maxed as a result: Barnes, Pavlov, Tendra, and Wilkerson. As a

**Opposite page, top:** Mike Micci's E6 powered pod rips off after ignition in this shot by Chris Pearson. **Opposite page, below:** Phil Barnes guides his "Dark Star V" in search of lift while Trip Barber scans the sky, and Charlie Sykos keeps an eye on the time.



result, these were the top four places at the end of the second round. Phil flew flawlessly, easily maxing in this round. Wilkerson, his confidence boosted by a good first round, found enough lift to score a 360 second max. (All FAI duration events increase the max by 60 seconds each round.) Pavlov and Tendra also proved that a little lift made their birds very competitive.

Micci again ran into problems with his now-repaired ship. Mike had a good lift off, but the bird got sideways and made a huge loop. It looked like a sure crash into the timer's area, but somehow he pulled it out. It's not certain that he didn't actually fly under a timer's table on the loop. Mike was still in trouble, as the bird boosted into a higher loop, and impacted under power outside the contestants' tent area. It was a noteworthy prang, certainly rivaling Bernard Biales's "Nine Seconds of Terror" flight.

The Bulgarian Rusev had a poor 175 second flight, giving Phil a bit of breathing room. Taborsky also couldn't find any help, and was knocked out of the running with a 169 second flight.

That led into the dramatic final round. Besides Phil maxing to win the gold, there was another drama going on for the bronze medal. Wilkerson was a mere 25 seconds behind Tendra for third place. A good flight could possibly put him in contention. Jim had to wait, though, for Phil to finish flying before he could get into the air, so he couldn't count on the luxury of waiting for super air. Tendra launched shortly after Phil did, but didn't get a good boost, and couldn't get high enough to piggyback off of Phil's thermal. As a result, he had only a 270 second flight. That put Jim in the driver's seat, and he made the most of it. Another good boost was followed with some light lift that Phil discovered at the end of the flight, and Jim tried to stretch for a seven minute max. There just wasn't enough there to stretch it, and Jim landed after 402 seconds, just short of a max. It was good enough to give Jim the bronze medal in the event.

Mike Micci didn't fly his backup bird in the third round because his servos were reversed. His two zero scores in the first two rounds had put the US far enough behind for the team gold that it wasn't worth risking the bird.

As a result of consistent flying, the Bulgarians won the team gold, followed by the US and the Poles. In a bit of a surprise, the huge granite FAI trophy was awarded to the Bulgarians at the award ceremony. Apparently we had misunderstood the award to be an individual award in Poland, not a team award, as it turned out to be.

Phil and most of the Polish team partied well into the night, as might be expected.

### **SBE E RC RG**

#### **Individual:**

<b>Gold</b>	<b>Barnes (USA)</b>	1080 (300/360/420)
<b>Silver</b>	<b>Pavlov (BG)</b>	1059 (279/360/420)
<b>Bronze</b>	<b>Wilkerson (USA)</b>	1011 (249/360/402)

<b>11</b>	<b>Micci (USA)</b>	000 (000/000/000)
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#### **Team:**

<b>Gold</b>	<b>Bulgaria</b>	2515
<b>Silver</b>	<b>USA</b>	2091
<b>Bronze</b>	<b>Poland</b>	1075
<b>4th</b>	<b>Czechoslovakia</b>	0645
<b>5th</b>	<b>Switzerland</b>	0363

### **Part 3: S3A A Parachute Duration**

One of the new rules in FAI events is that all altitude and duration models must have at least half of their length be 18mm (except scale altitude). This has changed the strategy a bit, and lessened the importance of micro motors. For parachute duration, it also means that the event is a little easier to fly, since it means not cramming a huge chute in a tiny tube.

The US team of Ken Mizoi, Dan Winnings and Mike Micci looked to put on a strong performance. The standard US design consisted of about 6" long fiberglass models with a boat tail at the end. Ken Mizoi manufactured the tubes for the team. Parachutes were red plastic with at least 12 lines and about 36" wide. The US used a set of 6' tower launchers specifically constructed for the contest. Most of the other countries had similar designs.

As the team arrived on the field on Thursday morning, the weather was overcast, but calm, making it good PD weather. Trip Barber organized the recovery teams into two man groups stationed at various intervals. This system turned out to work very well.

The first round went very well for the Americans, as all three US flyers recorded four minute maxes. Due to the calm conditions and no thermal activity, all three birds were easily recovered.

In the second round, the wind picked up a bit, making recovery a bit more of a challenge. Mizoi and Micci maxed and were returned again. Winnings didn't get a clean chute deployment, and only got 58 seconds. The chute just never unfurled, apparently because the model was so light, and the deployment gentle. This hurt the US team chances considerably, as nearly everyone else was maxing.

The third round saw the threat of rain and the wind pick up even more. Micci was first up, off of his piston launcher, but his chute failed to deploy! The result was a zero score. Mizoi was next up, and he got good deployment and into light lift. The chase was on. Since Winnings was out of the running, the entire US recovery team concentrated on Ken's model. It slowly drifted over the rise in one of the plowed fields after easily making the six minute max. Spotters on the hill got a rough idea of it's location, and the hunt was on. Unluckily, so was the rain. The recovery team converged on a large collective farm about 3 1/2 miles downrange. It took us nearly 20 minutes to walk all the way around it. In the course of getting around it, we must have stepped in crap from all the animals on the farm: cattle, sheep, pigs, chickens, ducks, horses, mules, you name it, we stepped in it. There was no sign of the model in the clear. Jim Wilkerson insisted that it landed in a small cornfield near the farm, so, after a bit of convincing, we went in. Sure enough, Terry (Mr. Recovery Himself) Lee saw the model after only walking in about fifty feet! Needless to say it was a big lift for the muddy, drenched recovery team. Ken was also quite surprised to see that the model was returned.

Winnings ended up having to fly in the downpour, scoring a poor 36 second flight.

The flyoffs were held late in the afternoon, after S1A (B Altitude). By now the weather had cleared, so conditions were near perfect for a flyoff. A total of eight modelers were in the flyoffs, so it would be tough to win, especially with a seven minute max. Ken was up and got a good deployment,

but didn't hit the big lift that some of the other flyers did. He did squeak out a max, though. A concerted effort of the recovery team brought the model back from three miles downrange.

At the end of the first round, three flyers had dropped out, leaving Ken, two Czechs (Taborsky and Repa) and two Bulgarians (Mustakov and Marinov) in the hunt. Marinov went up early in the second flyoff round, and didn't deploy for a zero score. That left four contestants to fight it out for three medals. The sun was setting, making waiting a tough proposition. Ken launched and had a good deployment, but couldn't hit the lift. He landed after 289 seconds, far short of a 480 second max. The other Bulgarian also missed the lift, netting 347 seconds, and the bronze medal. The two Czechs did prove that the eight minute max could be achieved, as both did it. It looked like there would be a flyoffs for the gold, but neither had any models left. As a result, they tied for the gold.

Looking over the Czech models later, it was obvious what one of their advantages were. They were using quite small (6 mm) motors that had extremely small burnout masses. As a result, their models may not have boosted much higher than the Estes mini engines (13mm diameter), but they certainly were an advantage when it came to getting the maximum duration.

Nonetheless, Ken and the recovery team did a super job. The US team finished a miserable 7th in the overall standings, due to the low scores of Winings and Micci. (Note that flyoff times are not included in team scores. Only the first three rounds are used.) The Soviets took the gold, despite having no one in the final flyoff round, and the Romanians won their only medal of the meet, a silver. The Czechs, even with two gold individual medals, could only manage a team bronze. It was an indication of how competitive the contest would be.

### SSA A PD

#### Individual:

Gold	Repa (Czech)	1800 (240/300/360/420/480)
Gold	Taborsky (Czech)	1800 (240/300/360/420/480)
Bronze	Msuatkov (BG)	1667 (240/300/360/420/347)
3	Mizoi (USA)	1609 (240/300/360/420/347)
19	Micci (USA)	540 (240/300/000)
21	Winings (USA)	334 (240/058/036)

#### Team:

Gold	USSR	2634
Silver	Romania	2470
Bronze	Czechoslovakia	2451
4th	Bulgaria	2340
5th	Spain	2280
6th	Poland	1819
7th	USA	1774
8th	Switzerland	1233
9th	Yugoslavia	1206

### Part 4: SIA B Altitude

SIA was an unknown coming into the contest, as the event had not been flown at a world championships since 1978. Since motor technology, materials, and the rules had radically changed since that time, no one really knew what to expect.

What was obvious when we arrived on the field was that the Bulgarian organizers had no idea what they were doing when it came to tracking. They had some goofy set up with the Army where they tried to set up a three station system using only two trackers! They also had strange theodolites that read off the angles in strange increments (90° = 160 whatever), and a data reduction on a "high tech" Apple II computer that they had no idea how to use. (But they were proud of that computer!) Howard Kuhn and the FAI jury spent most of the day getting things straight.

The screw ups were a bit of good luck for the Americans as well. Trip Barber, a past veteran of international competition, had an extreme amount of trouble getting his models tracked at the Allentown practices. As a result, the US team brought a set of trackers. Since the Bulgarians were having problems, the US offered to set their trackers up and "help". Actually the system worked well. Phil Barnes, Dan Winnings, Terry Lee, Jim Wilkerson, and Charlie Sykos handled the tracking, relaying the results to Janet Rose at the range. Howard did most of the data reduction on his handheld computer. The Bulgarians were miserably slow at reducing data. They apparently attempted to include two altitudes for Bulgarian flyers that would have won medals. These were disallowed by the FAI jury, after comparison with the US tracking results. The US team did a spectacular job tracking models, getting somewhere in the neighborhood of 95% of all flights.

It took about an hour and a half to get things straight before the flying began. By the time flying started, the sun was out, the sky was clear, and there was no wind. Compared to the overcast skies of the morning, this was perfect flying weather.

The US team used two strategies in this event. The first was to use a specially developed Aerotech composite mini B motor. This little motor was 1/2" in diameter and 2" long, using materials similar to Aerotech's larger composite motors. Delay smoke was minimal, and the small nozzle made for difficult ignition, but when they worked, they worked well. Ken Mizoi and Jeff Vincent used these motors in 6" fiberglass models quite like the PD/SD birds. Trip Barber also had a 5" Aerotech mini-B model, but he also had a more radical design, a "dart" model that used an 18mm booster with a 13mm upper stage, both using Estes mini A motors. All models were tower launched, and they used mylar streamers for recovery.

The first round indicated that some spectacular altitudes were being turned in. A Soviet, Ilyin, had a tracked flight of 758 meters to put himself on top. Trip got tracked to 705 meters, which was the next best altitude. Most of the other flights were in the 300-500 meter range, including Vincent (485 m) and Mizoi (362).

The second round went a little better for the US team, as Vincent posted a 507 meter flight, and Ken got on track with a 493 meter flight. Trip switched to his mini B single stage model, but it only got 676 meters, not good enough to beat his dart model. The flight did show the potential of



the Aerotech motors, as that flight was good enough for 4th (one more meter would have given it a tie for third). The Soviets came through again, though, as Coriapin scored a 778 meter flight to move into first.

The third round was an all out round for the competitors, who were discovering that the trackers were doing a great job tracking these small, high flying birds. Trip's mini B model went up, up, up.... and was never seen again. Lost track and lost model (the only model the US lost during the meet), probably because it blew out the tail cone rather than eject. Mizoi couldn't do better than 441 on his last flight, but Vincent squeezed out six more meters to score a 513. Coriapin flew to 753 meters in this round, leaving no doubt as to the validity of his earlier flight. No one else, however, could go higher than 566 meters in the round.

As a result, the Soviets took the gold and the silver individual medals, and Trip captured a well-deserved . . . Taborsky, who was to win a gold later in the day in PD, just missed a medal in this event, taking fourth with a 677 meter altitude. The Soviets also won the team gold medal, followed by the Czechs. The US won the bronze, just behind the Czechs.

The winning models seemed to defy common design strategies used in the US. The models were dart type models, like Trip's, but were smaller in the upper stage (9mm). The models had four balsa fins per stage, and stood about 10" long. Quite remarkably, they were rod launched, using the thin wire loops that are common in Europe. No doubt the key to their success was their small (8mm), sodium azide based motors. When talking with the Soviets later, they indicated that the motors work well, when they work. Apparently, about 1 of 3 blow up. What ever they did for the contest worked, as the motors didn't cato either in competition or on the test stand. If the US is to win in this event, advances in motor technology will have to happen.

#### S1A B Altitude

##### Individual:

Gold	Coriapin (USSR)	778 (730/778/753)
Silver	Ilin (USSR)	758 (758/628/000)
Bronze	Barber (USA)	705 (705/676/000)
9	Vincent (USA)	513 (485/507/513)
11	Mizoi (USA)	493 (362/493/441)

##### Team:

Gold	USSR	2117
Silver	Czechoslovakia	1780
Bronze	USA	1712
4th	Poland	1538
5th	Yugoslavia	1383
6th	Bulgaria	1315
7th	Romania	1259
8th	Switzerland	577

Opposite page: Trip Barber places his two stage dart model in the tower. The tiny model soared to 705 meters and gave Trip the bronze medal in S1A.



## Part 5: S4B B Boost Glide

Because of the spectacular times recorded in Poland in 1983, the FAI downgraded the boost glide event from C to B power for 1985. This was, of course, designed to keep the event from going into many flyoff rounds. Combined with the one minute increase in max times for each round, it should have worked. But, thanks to good weather and the huge field, it didn't work out that way at all.

Friday morning dawned calm and sunny, perfect flexwing weather. Everyone was flying some form of flexwings. The Bulgarians stuck to their basic "Opel" design, and the Russians used their "flip flop" clamshell ejected canard flexies. Most everyone else used a variation of Taborsky's canard design that won the gold in 1983.

The US team followed that lead, as both Charlie Sykos and Art Rose used red plastic winged Taborsky canards. Matt Steele bucked that trend using a Gassaway "Wind Drift" design with a "dead duck" DT. Matt also used a high tech booster that featured carbon fiber fins and body tube. The US team used cut off Estes B6 motors in this event because there were not enough Aerotech mini B motors available.

The first round was a disaster for the US. Matt flew first, but his flexie did not unfold one wing. It slowly death dived in, until, about 2/3 of the way down, it popped open. The glide was good, but it was too low to max, only getting 111 seconds. There was no visible damage to the glider. Art went next, and he apparently damaged his glider at ejection, as it landed 158 seconds later, short of a max. Only Charlie flew without problems, maxing with ease, and getting the model back. At the end of the first round, the US already had two modelers out of the chase. In light of 19 first round maxes, this was a major set back.

The second round didn't go better for Matt. This time he got a good boost and transition, and looked like he was on his way to a max, when a gust of wind flipped the model on it's back. It slowly spiraled in, never righting itself, for only a 97 second flight. Art and Charlie maxed, with Charlie's model returned again. Second round four minute maxes were common, and 15 flyers stayed in contention.

All eyes were on Charlie in the third round, and he came through with a great flight and a five minute max. His model drifted about 2 1/2 miles down field, but the recovery crew was right on top of it. Matt finally got a max, but Art only got about 3 1/2 minutes. Curiously, he was credited with a max. All 15 flyers who were in contention maxed, setting the stage for a spectacular flyoff.

The flyoffs were held in the late afternoon, when scale altitude flying was over. The sky was clear, with some lift available. The first round flights were something to watch, as 15 birds crowded the air during the 15 minute launch window. Charlie launched in the middle of the crowd, again scoring a max. His model was difficult to pick out, though, and was nearly lost in the confusion. It was picked up about a mile downrange, and returned in time for Charlie to re-prepare it and fly it for the next round. Six modelers made the six minute max, cutting the field considerably. It would be a real dogfight for the top three places.

The tension was thick as the second flyoff round started. A seven minute max in the no lift conditions would be extremely difficult. One of the Romanians went up, but didn't break six minutes. Charlie was up and

deployed cleanly, but found no lift. He just barely made the seven minute max. Taborsky, the returning champion, missed his max by 10 seconds, and had to settle for fifth. Besides Charlie, there were two Soviets and a Bulgarian fighting it out for the medals.

The sky was getting dark as the next round started. This figured to be the last round, as an eight minute max is a long time. Charlie again flew a perfect flight, but without thermal help, his bird could only get 325 seconds. The Bulgarian and the Soviets waited a bit, and all three maxed, knocking Charlie out of contention, and setting up another flyoff round.

Because of the darkness, the seventh round of S4B was delayed until Saturday morning. The flyoff started with Ilin, the Soviet, watching his model not fully deploy and death dive in. That left one Soviet and one Bulgarian in contention for the gold. The both launched into the same thermal, and it looked as if the Bulgarian had boosted higher. But the heavy Bulgarian design slowly lost altitude, and the Soviet model edged it 465 seconds to 448.

The Soviets won the team gold on the strength of their flyoffs times, as they were tied with the Bulgarians and Czechs going into the flyoffs. The US finished a dismal 6th, better than 1983, but not the improvement that was hoped for. The highlight was Sykos's flights, giving another American a 4th place, and an oh-so-close bronze.

## S4B B Boost Glide

### Individual:

<b>Gold</b>	Cuzmin (USSR)	2445 (180/240/300/360/420/480/465)
<b>Silver</b>	Marinov (BG)	2428 (180/240/300/360/420/480/448)
<b>Bronze</b>	Ilin (USSR)	2031 (180/240/300/360/420/480/051)
<b>4</b>	<b>Sykos (USA)</b>	1825 (180/240/300/360/420/325)
<b>16</b>	<b>Rose (USA)</b>	698 (158/240/300)
<b>23</b>	<b>Steele (USA)</b>	508 (111/097/300)

### Team:

<b>Gold</b>	USSR	2160 (Soviet totals in flyoffs highest)
<b>Silver</b>	Bulgaria	2160
<b>Bronze</b>	Czechoslovakia	2160
<b>4th</b>	Romania	2027
<b>5th</b>	Spain	1930
<b>6th</b>	<b>USA</b>	<b>1926</b>
<b>7th</b>	Poland	1829
<b>8th</b>	Yugoslavia	1761
<b>9th</b>	Switzerland	0000

## Part 6: SSC C Scale Altitude

C Scale Altitude (SSC) was the one event that did not have an 18mm minimum diameter restriction. As a result, the models were very small. The US strategy centered around the Aerotech composite mini C motor, which was provided in 6 n-sec, 8 n-sec, and 10 n-sec versions. These were similar to the mini B, with a 1/2" outside diameter. All US models were built around CMR RB-52 tubes. Art Rose, a bronze medal winner in this event in 1983, chose to model the D Region Tomahawk. Matt Steele used the Patriot surface to air missile. Dan Winnings, a late fill in for Chris

Morgan, used a Sandhawk.

A quick look at the static results gave an overview of who was flying what. The Soviets dominated the static results on the basis of their staged sounding rockets, the same type as they flew in 1983. The scale judges, while very fair and complete, gave more points to the staged models this time around. Art was incensed, as his 610 point score put him considerably down on the static score. Matt scored just behind Art with 602 points. Dan only got 534 points, showing the impact of having only six weeks to build a bird. The Bulgarians flew a new, clean sounding rocket (MP20), and were sandwiched between Art and Matt in static. The Czechs flew versions of the Sonda, while the Poles used the Meteor sounding rocket. The Romanians flew a strange three stage prototype.

The flying weather was good for tracking, with a few clouds here and there. Dan went off in the first round, and promptly went untracked. He also lost the nose cone to his model, but miraculously found it in the bottom of Matt's range box (or so it would seem). Art flew and also seemed to vanish into thin air, but got tracked. Art put up what had to be a perfect flight, and indeed it was, as the 1085 meters it flew to gave Art the lead at the end of the first round. The mini C's were impossible to see at liftoff and through boost, but the trackers were catching them at ejection. Matt, having waited for Art to clear his tower, had about 15 minutes left in the round. At ignition, the model kicked about 2' up the tower... and fell back! Misfire! The tiny throats of the mini C's were extremely prone to spitting out the ignitor. The model was repped, and placed back on the pad with time running out. 5...4...3...2...1...Start.... Bang! Another misfire. Time ran out before a third attempt could be made, so Matt ended up with a zero score in the first round. It was obvious that the Aerotech motors had promise, but only Art was able to coax it out of them during the first round.

The second round saw Matt going off first, since he had repped another engine and was ready. This time the motor ignited cleanly, the model tipped off just slightly...and flew into the base of a cloud, going untracked! The model was recovered, but another zero score. Dan also got a good flight in, but went untracked again. Art flew what seemed an identical flight to the first round, and it went to 1171 meters (although later, they didn't count the flight for some reason). It was a frustrating round, but Art was still in first place, and that took some of the edge off.

It was crucial that the US get tracks in third round. Dan flew first, and the US trackers were happy to report that they'd gotten his Sandhawk. Dan's altitude was reduced to 828 meters. Matt's Patriot tipped off again, but the trackers also reported that he'd been tracked. When the data was reduced, Matt's altitude turned out to be 801 meters. Art flew in the third round, but only came up with 751 meters.

The Russians had good success with their two stage models, as Ilin got 1014 meters in the first round to take second place, but they were hard to prep. This was evident in the third round, when it took them almost 50 minutes to prep one model. The Russian then looked up and saw a huge cloud above, with no time to wait it out. He shook his head, shrugged his shoulders, and raised his hand to launch the model. It lifted off cleanly, and staged...right into the base of the cloud.

When the dust had cleared, Art Rose had won the gold medal with his D Region Tomahawk that he had spent over 7 months on. The US team was jubilant, seeing Art up on the winner's stand, saluting the flag while the "Star Spangled Banner" was played. The Soviet Ilin took second with a

staged model, while a Bulgarian won the bronze with a single stage model. The Soviets captured the team gold, with the Bulgarians only 10 points behind for the silver, and the US less than 200 behind for the bronze. Indeed, the team standings were quite close.

### S5C C Scale Altitude

#### Individual:

		Total	Altitude/Static/Flight Points
Gold	Rose (USA)	1767	(1085/611/77)
Silver	Ilin (USSR)	1765	(1014/657/94)
Bronze	Kanev (BG)	1719	(1036/609/74)
9	Steele (USA)	1477	(801/603/74)
11	Winings (USA)	1437	(828/535/75)

#### Team:

Gold	USSR	4864
Silver	Bulgaria	4854
Bronze	USA	4682
4th	Poland	3891
5th	Czechoslovakia	3817
6th	Yugoslavia	3036
7th	Romania	1504

### Part 7: S6A A Streamer Duration

A Streamer Duration (S6A) seemed like a replay of PD, as most of the models and motors were identical. Hopes for the US team of Trip Barber, Phil Barnes, and Charlie Sykos were high, since all had flown quite well at the meet. Phil used a paper and balsa model, while Trip and Charlie used fiberglass, and all used tracing paper streamers. Most of the competition used some form of paper or mylar for streamers.

The weather was again good for flying, with good thermal activity, and light winds. This insured there would be plenty of first round maxes. Trip and Phil both maxed, but Charlie ran into problems and only got 105 seconds. All models were easily recovered. At the end of the round, there were 15 maxes.

The second round saw increased thermal activity, which was a blessing with 180 second maxes. Trip barely squeezed out a max, landing just after the watches stopped. Charlie and Phil didn't get the thermal help they needed, though, and just barely broke two minutes. Getting a max wasn't easy; only eight were scored, and Trip joined five other flyers with two maxes.

The pressure was on in the third round, as a four minute max would be a stern test. Trip launched into a weak thermal, and landed 167 seconds later, not good enough for a max. Trip eventually placed 6th overall. Phil and Charlie could also not buy a max, as they didn't even break two minutes in the round. A monster thermal came through the area after Trip flew, and it provided enough lift for six maxes. Three flyers, Taborsky, Pavlov (the defending champion) and a Soviet, Fyrsov, found themselves in a flyoffs.



The flyoffs were held during the last round of scale, which the Bulgarians had screwed up by making the rounds 90 minutes in stead of 60. The first model to go was the Soviet's, but it jammed on the pad, broke it's lug, and flew into the crowd, hitting an ugly press woman. It didn't do any damage, but it sure didn't leave a good impression. That incident left an interesting confrontation: Pavlov, the defending champ, and already a silver medal winner in S8E, against Taborsky, who won a gold in PD earlier. They both launched in the same thermal, and it wasn't clear until the final seconds which model would win. Nine seconds was the difference between the gold and silver, as Pavlov edged Taborsky to retain his world championship.

The Czechs scored well enough to win the team gold, followed by the Bulgarians. The US team, despite the problems of Sykos and Barnes, flew well enough to capture the team bronze, just ahead of the Soviets.

We were able to trade a digital stopwatch (free from Sports Illustrated) for the winning model, and again, the tiny A motor was a big part of the difference. The winning model had a thin, flimsy fiberglass body, swept back balsa fins, and a red mylar streamer. It was also rod launched. In all honesty, it wasn't much different that the US models.

#### SGA A Streamer Duration

##### Individual:

Gold	Pavlov (BG)	738 (120/180/240/198)
Silver	Taborsky (Czech)	731 (120/180/240/191)
Bronze	Fyrsov (USSR)	540 (120/180/240/000)

6	Barber (USA)	467 (120/180/167)
13	Barnes (USA)	358 (120/124/114)
15	Sykos (USA)	343 (105/130/108)

##### Team:

Gold	Czechoslovakia	1350
Silver	Bulgaria	1264
Bronze	USA	1168
4th	USSR	1155
5th	Romania	1092
6th	Yugoslavia	967
7th	Spain	848
8th	Poland	689
9th	Switzerland	384

Opposite page: Taborsky (#42) and Pavlov (#14) exchange greetings while checking in for the SD flyoffs. Pavlov, the defending champ, edged Taborsky by a mere nine seconds to retain his championship.

## Part 8: S7 Scale

The US team's Scale effort again missed the mark by a wide margin. The team left the US with only two members, Chris Pocock and Jeff Vincent, who had unfinished Saturn 1B's. Pocock came nowhere close to completing a model, even though he had help from other team members and parts from Vincent. Vincent, on the other hand, completed his model in time for turn in. Jeff really needed another week to have a competitive model, but what he turned in was not an embarrassment. A problem with his rub-on transfers caused most of the headaches, and kept the model from looking impressive.

There were only four prototypes flown in scale, the Soyuz, Saturn 1B, Saturn V, and the Ariane 1. Trip Barber observed that "this was worse than all the Tomahawks at a NARAM". Only two models were in contention for the gold with over 800 static points of a possible 850. Twardowski, the Polish defending world champ had another fabulous Saturn 1B with 1000+ hours of work in it, was in first with 814 static points. Gerencer, a Czech, was only one point behind with a Soyuz. The Bulgarian Soyuz models were grouped behind the leaders, followed by the Poles and Russians.

The Russians flew white Soyuz models that used RC systems to drop off the boosters in flight. For some flights they dropped two strap ons, and on others they dropped all four, but in any case, the flights were impressive. Radio glitches caused problems, though, as one fully prepped model dropped it's strap ons while on the pad. At least we got to see how they worked close up.

The Bulgarian Soyuz models had an impressive flight sequence. They would ignite four small motors that would burn, but wouldn't lift the model off of the pad. When all of the small motors had ignited, then the core motor would be lit to push the model off of the pad. The Bulgarians, no doubt remembering the ejection problems that plagued their two time champ in 1983 had also switched to RC activated recovery systems. These didn't work too well, as one activated in a helper's face during prep, and they failed to work in flight. Two of the Bulgarian Soyuz models pranged when they failed to eject, were repped, and pranged again. The other Soyuz worked on the first flight, then pranged on the second flight. The Bulgarians had five failures in six attempts!

The Poles also added to the demolition derby, as their 60 n-sec black powder motors seemed to eject right at burnout, causing parachutes to tangle and models to land hard. Other contestants, suffered parachute failures as well as the occasional unstable flight. It looked more like Plastic Model at NARAM-18 than it did scale at a world championships!

Mr. "World Famous" Jeff Vincent flew his Saturn 1B on an E28, and turned in a perfect flight that really pleased the crowd. Jeff's flight landed him 14th place, although the Bulgarians pulled a fast one in the final standings and didn't DO their two models that pranged, instead giving them their static points. Jeff really ended up in 12th place. Jeff attempted a second flight, again getting a good boost, but the upper stage chute didn't open, and the capsule landed hard.

**Opposite page:** Mieczyslaw Twardowski proudly holds the best scale model in the world, an immaculate Saturn 1B with more than 1000 hours of work in it.



The Poles were desperately working on their wrecked models, trying to get them in shape for the second round. Good 'ol American ingenuity came into play, as the US Team pulled out the Hot Stuff to help make the repairs. Much to the consternation of the Bulgarians, Czechs, and Russians, the US team gave two E28's to the two Poles who had motor problems in the first round. Twardowski, his model now back in shape, carefully installed the E28 that Chris Pearson had prepped for him. 3..2..1... and the E28 roared to life! The Saturn gracefully soared into the air on a perfect flight. The 73 points that that flight earned maintained Twardowski's frail one point lead, and he won the gold with that flight. The other Pole, Lyzniak, flew a spectacular Ariane model (the numerous markings were so perfect one couldn't tell how they were done!) with the E28 to tie for fourth, and give the Polish the team gold in scale.

### S7 Scale

Individual:	Total Static/Flight Points
Gold Twardowski (PL) 887 (814/73) Saturn IB	
Silver Gerencer (Czech) 886 (813/73) Soyuz	
Bronze Kanev (BG) 864 (789/75) Soyuz	

14 Vincent (USA) 701 (627/74) Saturn IB

### Team:

Gold	Poland	2563
Silver	USSR	2545
Bronze	Czechoslovakia	2479
4th	Bulgaria	2447
5th	Yugoslavia	2182
6th	Romania	1995
7th	USA	701

### Part 9: The Awards Banquet

In the morning before the awards banquet, we traveled to Borgas on the Black Sea for a little swimming and sun. The resort was woefully inadequate by US standards, with matchbook "cottages", and no facilities. Still, it was popular with the Bulgarians.

We assembled at the hotel for another parade in the evening. The team awards were presented in the town square, with the Bulgarian and Soviet flags waving next to the FAI flag. The townspeople were curious, but restrained.

The awards banquet was held in the dining room of the dreaded Tounja, and really wasn't anything special, except for the five varieties of drinks that everyone got (They really splurged!).

The US team made an all out effort to enjoy the festivities. It was the best effort by any team that had flown overseas. In addition, everyone who flew won some sort of medal, attesting to the overall strength of the team. It was an extremely good effort, and hopefully indicates that the US effort is getting stronger as our young competitors get more experience.

The Bulgarians didn't have as good of time. Instead of winning easily, as they expected, the Soviets came in and kicked their butts on their home field. The Soviet effort was quite impressive, whereas the Bulgarians seemed disorganized. The Czechs did well on the strength of their small

motors and Taborsky.

The entertainment for the night was memorable. There was the usual "folk dancers" and music, but what really caught our eye was the limber "Leopard Lady". In the end, the alcohol began flowing, and the party moved upstairs to our floor, with nearly every team showing up. The Yugoslavs were the big traders, the Poles and the Bulgarians the big partiers, and the Soviets were quiet, but quite friendly. Much trading, talking, drinking and backslapping happened before the night deteriorated.

### Final Team Standings for the 6th World Championships: (Calculated using a "sum of places" method)

- 1 USSR (19)
- 2 Bulgaria (21) (more silver medals)
- 3 Czechoslovakia (21)
- 4 USA (31)
- 5 Poland (33)
- 6 Romania (40)
- 7 Yugoslavia (48)
- 8 Spain (53)
- 9 Switzerland (57)

### Team Medal Count:

	Gold	Silver	Bronze	Total
USSR	4	1	0	5
Czech	1	1	3	5
Bulgaria	1	3	0	4
USA	0	1	3	4
Poland	1	0	1	2
Romania	0	1	0	1

### Part 10: Getting Home

Everyone looked forward to getting out of Bulgaria, and touring Yugoslavia. Once again we had little trouble getting through customs and out of the god-forsaken country. One of the things we found out after we left was that over 800 people had been massacred near Jambol during rioting in the winter. It seems that the Bulgarian government is in the process of nationalizing the people, and getting Turks living in Bulgaria to change their names. About 1000 people in one town refused, so the government rounded them up and made them stand in a field in the middle of December to change their minds. After two days and nights, about 800 didn't, so they were shot. Nice, civilized country! There were fears for our safety from Turkish terrorists, hence the tight security.

Yugoslavia was beautiful. The best part of the trip was in Dubrovnik, on the Adriatic Sea. We stayed in a brand new hotel in this scenic walled town, swam in the warm blue sea, and enjoyed the sunny topless beaches. From there we went to Split, and visited with members of the Yugoslavian team, who took us to two local hobby shops. The Pliviche Lakes national park was next, with its towering waterfalls and clear lakes.

During the course of our stay in Pliviche, we had some spare time on our hands. What do rocketeers do with spare time? Fly rockets, of course. The contest consisted of using the stock kits the Yugoslavs had given us, and

whatever foreign motors one had extra. Ken Mizoi had a nice flight of better than 6 minutes that looked like a lock on first, but sure enough, Phil caught a monster thermal and went out of sight at better than 15 minutes. Dan Winings had chute problems on three flights. We got a lot of strange looks from the locals, but it was fun.

We then toured Zagreb, our last stop before going home. By this time, we were ready for some Big Macs. Our flight to New York was uneventful, as was customs, where we simply overwhelmed one inspector. From there, everyone said their goodbyes, and headed for home, happy to be back in the USA.

The 1985 World Spacemodeling Championships was an outstanding contest, with the level of world class competition raised to new heights. The United States team brought home two World Champions, two bronze medalists, and team medals in four events. It was the strongest showing ever by a US team overseas. Certainly the future looks bright for the US for the next championships scheduled for Yugoslavia in 1987!

*All photos in this article by Chris Pearson and Matt Steele.*

**Below:** Art Rose is awarded the gold medal for scale altitude.



## Quotable Quotes

As overheard by our staff

"Any real men want to time me?"

Bernard Biales at the '82 flyoffs prior to planting his third RC RG.

"Yes, the scale team continues it's not-necessarily proud, but unbroken, tradition of kit builders."

Trip Barber, watching Jeff Vincent and Chris Pocock frantically attempting to finish their Saturn 1B models in a hotel room somewhere in Belgrade, Yugoslavia...or was it Sofia, Bulgaria? Or, was it...

"Where the hell is Borgas, Bulgaria?"

Chris Pearson in Borgas, Bulgaria.

"It's nice to know that the Bulgarians have the equivalent of a Mark Bundick"

Matt Steele, observing the Bulgarians making a shambles of the tracking set up.

"Oh, Bunny? Don't talk to me about him!"

Howard Kuhn

Tour guide (and KGB agent): "Does everyone have their passport? You cannot leave Bulgaria without it. On the other hand, if you want to stay..."

Jim Wilkerson: "Oh, I'll be throwing mine away shortly..."

"Oh, thanks, Phil!"

Chris Pearson, after discovering a wad of \$100 and \$50 bills in the multimeter case that Phil lent him.

"This is the only hotel I know of that must steal towels from it's customers!"

Matt Steele, examining four different towels at the famed "Hotel Tounja".

"I am not working feverishly!"

Matt Steele, leisurely working on his models in the motel.

"Oh, this must be Scale Streamer Duration."

Otakar Saffek, after the scale rounds went into the SD flyoffs.

"It looks like a demolition derby" Matt Steele on S7 Scale.

"Cripe, it looks more like Plastic Model at a NARAM!" Chris Pearson.

"There's nothing like a warm, bitter Bulgarian beer to quench one's thirst."

Trip Barber, in some Bulgarian excuse for a dining room.

Overheard early in the morning following a long night:

Anne-Marie Sykos: "Here's some aspirin. How much do you want?"

Jim Wilkerson: "The whole bottle!"

## Some Recollections of Bulgaria

By Norton Freak (Now 10 lbs lighter, and thinner)

"Some guys have all the luck."  
The Bulgarian Banquet Band

"How many of you know A divisioners who cut out fins with scissors?  
Wait a minute, all you guys do, too?"  
Overheard at a table that contained half the US Team.

"The food has been sanitized for your protection."  
Jeff Vincent, staring at a plate of tomatoes.

"My fun meter is pegged out!"  
Trip Barber, during another exciting tour of some ransacked church.

"My fun meter is flaccid."  
Ken Mizoi at the same exciting tour.

"She was a big girl, and she knew what she wanted."  
Jim Wilkerson, who obviously didn't get what HE wanted out of the deal.

"She fulfilled a long-standing fantasy."  
Wilkerson, putting his foot into his mouth.

"Well, nothing really happened. Her roommate was there."  
Wilkerson, admitting the truth, two days later, under intense pressure.

"How's this going to be written up in SNOAR NEWS?"  
Jim, paying his subscription money.

"This must not be a first class place. We got our food served quickly."  
Phil Barnes in Split, Yugoslavia.

"If my mind finds out what my body's been doing, there will be hell to pay!"  
Jeff Vincent

"I wonder what's for dinner?" Trip Barber  
"Take a wild F@\*\*ing guess!" Chris Pearson

"I feel better already. They must have stopped jamming our brainwaves."  
Jeff Vincent, upon leaving Bulgaria.

"This was officially an unofficial event... No wait, let me explain..."  
Howard Kuhn, explaining the status of SBE (E RC RG).

Trip Barber on his secret to success: "Cause I live right, and you don't"

Mike Micci: "Hey, watch out for the."  
Matt: Ouch! OWWW!  
Mike: "...lit DT fuse on that glider!"

"Drugs are a way of life"  
Terry Lee

"God, I'm going to miss this place!"  
A quite sarcastic Phil Barnes leaving Bulgaria.

It is now Sunday evening, five days after landing back in the good ol' U.S. of A. from the Internats. I sit here at my Selectric, gulping down an A&W rootbeer, munching on a "Pound and a Halfer" Fritos cornchips, while nibbling on a can of Planters Sweet & Crunchy Peanuts, a dozen popsicles, and OD'ing on MTV (I hate MTV).

Why am I involved in an oral and visual junk food binge, you ask? Well, if you had spent any of the time in that beautiful and scenic country that I had, you would probably be feeling the same way that I do right now. Besides, I am a firm believer that anything worth enjoying is worth doing to excess.

**TOMATOESI** - First and foremost, we had tomatoes with every meal, including breakfast. Yech! This spawned the team joke that tomatoes must be the Bulgarian National Fruit. Sometimes they didn't even bother to slice them, just gave them to us whole.

**BULGARIAN BITTER** - This was the beer that they served us. . . Ack! Truly awful stuff. Always served warm. Right after this came WARM MINERAL WATER (aka Aika Seltzer). This is what you got if you asked for water; big mistake. Drink this and the next thing you knew it was "Two exits! No waiting!". Better than Ex-Lax.

**SMELLY SHOWERS** - I've seen bigger bathrooms in mobile homes! In Bulgaria they save a lot of time cleaning the bathroom simply by installing the shower head right over the lavatory sink (no shower curtains, no nothing!). Take a shower and you clean the bathroom at the same time. In addition, they must have taken the bathtowels from everyone in town because no two were alike.

**THE ADVANTAGES OF SOCIALISM** - One of the great things about this system is that it serves everyone equally, equally poor that is! Nothing worked! The one great example of this was the People's Generator at the launch site (Unfortunately this generator powered the site P.A. system). It broke down about once a day, usually during some important speech. The most memorable time was on the final day during the closing ceremonies. So what did they replace it with? A generator by Honda, of course. Even in the most expensive hotel in Bulgaria, there were light bulbs burned out, showers that didn't work, stuff in the room breaking, and how about that unforgettable 45 minute wait for room service?

**THE FOOD** - Would you believe that almost everyone in the tour got sick? Yup. Even the bus driver, and he was a native! If I ever hear the words "Mixed Grill" again, I think that I'll puke.

**THE LIQUOR** - Lots of it, and very potent. If you want to get roaring-ass drunk in a hurry, try Schlivovitz (Yugoslavian Plum Brandy). Never get in a drinking contest with the Polish team. You can ask Wilkerson and Barnes about this.

**THE AWARDS DINNER** - The most memorable part of this was of course, the Leopard Lady, who could do things with her body that you have never dreamed of before. Hence the famous "un-printable Qutable Quote".

**Other random observations:** Gypsy women sweeping the gutters in the morning with brooms made of twigs. . . . Street urchins coming up to you and asking for a Coke (Bulgarian "Koca Kora: is the worst!). . . . Strangers in

the street approaching you (seeing that you were an American) and asking to change money. . . . The worst department store in the world (but the Best in Bulgaria!) . . . . Absolutely terrible ice cream. . . . No Big Macs. . . . Topless beaches. . . . HIND-B helicopter gunships flying overhead on the way to Jambol. . . . Every type of animal excrement known to man on your shoes. . . . German Pepsi-Cola. . . . Naked children running around the beach at the Black Sea. . . . Wesson oil soup. . . . Stinkies and Funzies. . . . "Trade motors, comrade?" . . . . "Where the hell is Borgas, Bulgaria?" . . . . Lots of bread for meals. . . . Donkey carts. . . . Chickens in the streets of the city. . . . KGB agents. . . . Mineral water. . . . Mike Micci stepping on a groundhog and scaring himself as well as the poor Bulgarian groundhog.....

Needless to say, the whole thing was an experience, which should never be repeated.

And now, a word from our sponsor:



## HOLIDAY SPECIALS FROM NORTH COAST ROCKETRY

### Airframe Tubing/Coupler Assortment

This handy package allows one to "stock up" on North Coast Rocketry's exclusive airframe tubing at a bargain price! Included in this assortment are the following:

- BT-9 airframe tubing with 1 coupler and 2 engine blocks
- BT-11 airframe tubing with 1 coupler and 2 engine blocks
- BT-18 airframe tubing with 1 coupler
- BT-23 airframe tubing with 1 coupler
- BT-26 airframe tubing with 1 coupler

All this for just \$13.00! That's better than 20% off list price! Get 'em while they're hot! Order Catalog Number AFTA-1.

### Nose Cone Assortment

To go hand in hand with the Airframe Tubing Assortment special, we're discounting our nose cones as well! Look what comes in this package:

- |                 |                   |
|-----------------|-------------------|
| NC-9 Nose Cone  | NC-11 Nose Cone   |
| NC-18 Nose Cone | NC-23 Nose Cone   |
| NC-26 Nose Cone | PLUS 5 Screw Eyes |

This assortment is available for the discounted price of \$18.00. You're not going to find a better deal than this! Order Catalog Number NCA-1.

*Happy Holidays from North Coast Rocketry!*



Aerotech has improved their E motors! Gary Rosenfield has announced that new E10, E28, and E55 motors will have smoky exhausts. The E28 and E50 North Coasters will also feature the smoky boost phase, as well as improved delays. Look for similar changes to the F and G motors in the near future! One thing not to look for is the mini B and C motors produced for the US Team. They are simply too labor intensive for production motors. Besides, there doesn't seem to be much of a market for a \$9 C motor (that's what team members paid) unless you're flying in a world championship meet.

Latest letter from J. Pat Miller says that Massachusetts has voted to ease consumer regulations, thanks to Estes and Harry Stine. I guess the State Fire Marshall was quite unprofessional. This guy got up and walked out during Harry's testimony, and refused to be present for the Estes/NAR launch. He showed up after the vote was taken on easing the regulations. He had sent an engineer in his place, and the guy voted in favor, so the vote went 8 to 5. So, he was quite obstinate in getting his vote changed, but the rep from the Attorney General's office said all he could do is abstain, as he had not objectively reviewed the technical evidence nor followed the rule changing procedures. The final vote was 7 to 5. It is likely that Rhode Island will now follow suit, although New Jersey will probably require a bill through the state legislature to change things.

No official news on NARAM yet, as Bunny is still trying to hammer out details with Chanute AFB officials. The date looks to be tentatively set for the second week in August. When the NARAM date is settled, look for Chris Pearson to announce the next LDRS date. We'll keep you posted. It looks as though the Los Angeles Rocket Society (LARS) will make a strong bid for NARAM-29.

Something may be going on in Mineral Point, Wisconsin, aka AVI Astroport. Mike Bergenske has renewed his NAR membership, and is thought to be considering a comeback. There is nothing definite right now, though.

Have you heard of the Young Astronaut Program? Well, the NAR has. The NAR and Estes will be helping the YAP chapters select their regional winners. Each of the youngsters (6-16) will fly a 1/2A6-2 PD birds at a local level, with the winners to be shipped to regional processing centers. The regional centers will fly 100-300 of the models in 2-3 weeks, and those winners will advance to national level competition. Regional directors include Chris Tavares (MA), Mark Johnson (KS), Jerry Gregorek (OH), Art Markowitz (FL), Martin Bowitz (CA), Tony Medina (WA), John Pursley (TX), Ed Pearson (MD), Dick Nelson (NY), and Matt Steele (UT). This could mean a big influx of junior members into the NAR. Chris Pearson was reportedly less than enthused when he realized that flying 100 of these models was still less total impulse than one G motor flight!