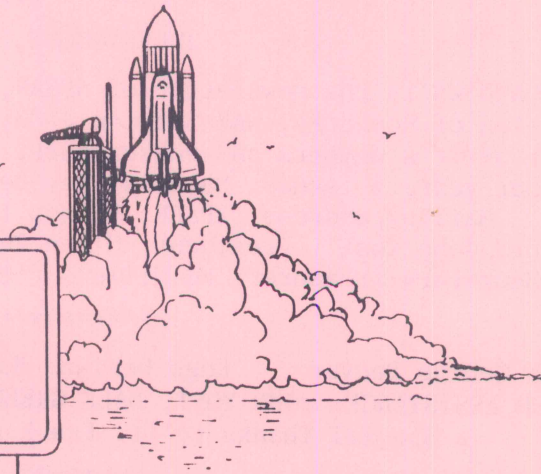


COUNTDOWN



OFFICIAL NEWSLETTER OF
THE SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY

VOLUME 4, ISSUE 4

JULY/AUGUST 1991



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SPAARPHOTOS

COVERAGE OF:

WUBBA-14

SPAAR SPORT LAUNCHES

The COUNTDOWN
VOLUME 4, ISSUE 4
JULY/AUGUST, 1991

The COUNTDOWN is the newsletter of SPAAR, the Southern Pennsylvania Area Association of Rocketry, NAR Section #503, and is intended for the use and enjoyment of it's members and subscribers. Non-member subscription rate: \$5 per year, 6 issues. Material may be used with proper credit.

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PRODUCTION ASSISTANCE: JOHN YOST, DALE GREENE, DENNIS STAUFFER (Thanks Guys!)
A Special Thanks to Lt. Frank Drebin, Police Squad.

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ON THE COVER

"Hey Mom, look what followed me home!! Can I keep it, huh, can I?" Karl Fehrenbach and his Bullpup-12D X4, at the June 9 Sport Launch.

SCHEDULE

SUNDAY, SEPTEMBER 1, 1991, 3-7PM: SPAAR Sport Launch, Cocalico High School, Sounding Rocket Day.

SUNDAY, SEPTEMBER 15, 1991, 9-5PM: SPAARSEC-V Section Meet, Cocalico High School. Events: B SuperRoc Duration, A Boost/Glide, Open Spot Landing, A Helicopter, B Eggloft Duration, A Streamer Duration. Sport flying is welcome, however sport flyers are asked to help out with range duties.

MONDAY, SEPTEMBER 16, 1991, 7-9PM: SPAAR Section Meeting, Lancaster County Public Library, Lancaster, PA.

SUNDAY, OCTOBER 13, 1991, 1-5PM: SPAAR Sport Launch, Cocalico High School.
PLEASE NOTE TIME CHANGE!!!!

MONDAY, OCTOBER 21, 1991, 7-9PM: SPAAR Section Meeting, Lancaster County Public Library, Lancaster, PA.

SUNDAY, NOVEMBER 3, 1991, 1-5PM: SPAARSPAM-III Section Picnic and Sport Launch, Cocalico High School. "Event" to be determined. Bring a covered dish or some other goodie to share!

* - Please note the date change

SECTION MEETINGS

June 17, 1991

Present: Glenn & Rita Feveryear, E. Miller, Gary Feveryear, J. Yost, D. Rhoat, B. Rhoat, F. Hoke, A. Babiarz, D. Greene, R. Hackman, G. Beaver.

I. Treasurer: Ed Miller reported that there were 37 paid members; the balance at the end of the last meeting was \$258.00; since then, there have been expenditures of \$50.39 for a battery for the launch system; incomes were 50¢ in donations, and \$20 in dues. This leaves a current balance of \$228.11.

II. Newsletter: G. Beaver reported that 55 copies of the May/June newsletter were made and distributed.

III. Competition: Glenn Feveryear initiated a discussion on NOVAAR's planned "¼A Championships" Open Meet scheduled for 22 Sept. A vote was then taken of those present, and SPAARSEC-V will be moved from 22 Sept. to 15 Sept. to allow those interested the chance to attend NOVAAR's meet.

Passed around four choices of events for SPAARSEC-V.

Announced results of SPAARSEC-IV, including the numerous new club records set in A and C Divisions.

Reviewed WUBBA-14.

Reminded those present about NOAHS-91.

IV. High Power Rocketry: Ed Miller discussed possible stability problems with the T.H.O.Y Phoenix kit, one of those under consideration for this coming winter's HPR Workshop.

Reported on progress in obtaining an FAA waiver for the Sept. 1 Sport Launch.

V. Section Advisor: John Yost discussed the library's new meeting room policy, and read the rules and regulations regarding the use of library facilities. A donation of model rocketry related books was discussed and will be offered.

General discussion followed, meeting adjourned at 9PM.

July 15, 1991

Present: Glenn & Rita Feveryear, E. Miller, F. Hoke, J. Yost, Gary Feveryear, D. Greene, D. Rhoat, D. Stauffer, G. Beaver.

I. Treasurer: Ed Miller reported that the balance at the end of the last meeting was \$228.11. There was an expenditure of \$11.25 for postage, and an income of \$32.50; this leaves a balance of \$249.46.

II. Newsletter: No report.

III. Competition: Glenn reported he had submitted a sanction request for SPAARSEC-V.

Passed out new club record certificates.

Discussed the tracking results from the June 30 Sport Launch.

IV. High Power Rocketry: Ed Miller reported on his progress with the FAA waiver request.

V. Section Advisor: John Yost drafted a letter to be sent to the library along with our request to use the library facilities.

VI. Old Business:

G. Beaver reported that he has not yet received a response from the Cocalico School District on our formal application for use of district facilities.

Members present voted to amend the section By-Laws to allow for the formation of a standing committee on High Power Rocketry.

VII. New Business:

Discussed contest plans for the 91-92 NAR contest year.

A motion was made and adopted to establish a \$15 petty cash fund, to allow for the purchase of items needed by the club without prior approval at meetings. This will be for small, inexpensive items only.

General discussion followed, and the meeting adjourned at 8:50PM.

SECTION NEWS NOTES

USE OF COCALICO HIGH SCHOOL: When the club first started flying at Cocalico, a representative of the school district was contacted in regards to permission to use the fields at the High School. This was back in 1988, and at the time, an informal agreement was all that was needed.

Since that time, the Cocalico School District has established the position of Director of Buildings and Grounds. This person at the present time is Mr. Robert Artz, who requested that we file a "Facility Utilization Form" with his office. This was done on June 25, 1991, and listed all of our scheduled launch dates for the remainder of 1991. This request was approved and returned to us on July 16, 1991, with the following special conditions:

1. Litter should be disposed of in appropriate receptacles;
2. No parking in grass areas;
3. No alcoholic beverages permitted on the premises;
4. All lawn and field care will be provided by the School District;
5. Please respect school property.

In our discussions with Mr. Artz, he stated that he was somewhat familiar with model rocketry, and had not heard any complaints about SPAAR or our activities. He did, however, express concern over the retrieval of models that might land on the roof of the High School. The roof is easily damaged, and he specifically requested that we make no attempt to go on the roof. This has been a long-standing restriction applied to the R/C model aircraft club that also flies out of Cocalico. Retrieval of models that might land on the roof might be accomplished by School District employees, and this will be explored. Mr. Artz also left the door open to the possibility of reserving portions of the field in advance for a Regional or Open Meet.

Mr. Artz also confirmed that the District is looking into the possibility of building an equipment maintenance facility on the west side of the school, where we have been doing most of our flying. At the present time, there are no firm ideas on the size or exact location of such a building. This simply underscores the need to look for another flying sight.

In regards to our current use of Cocalico, we are welcome, and have the right to use the school grounds, so long as we do our part and use the facilities in a responsible manner, as we have been in the past.

SPAAR GOES INTERNATIONAL: Our Canadian friend and member, Trevor Smedley, has sent us his new address:

Trevor Smedley
1747 Beech Street
Halifax, Nova Scotia
CANADA B3H 4B7

Trevor also says, "Come visit sometime!"
Hey, Trev, ya got enough room for about 37
"rocket nerds 'n geeks"?

FUN AND GAMES AT SPAARSPAM-III: We need your ideas for the "event" for our annual picnic, SPAARSPAM-III! Last year it was Open Eggloft Streamer Spot Landing. In '89 it was MicroRoc Non-Duration. What will it be this year?
Make your ideas known!

NOVAAR'S 1/4A OPEN: On Sept. 22, NOVAAR will host the 1/4A Championships at their new field in Virginia. The events will be: 1/4A HD, 1/4A FW (M), 1/4A PD (M), 1/4A RG, 1/4A SD, 1/4A BG, and 1/4A SRD. For more details, contact NOVAAR Section Advisor Ken Brown at (703) 451-2808.

SPAAR SPORT LAUNCHESJUNE 9, 1991

The Sport Launch for June 9 was designated as "Military Day", with models of military rockets featured. When it was all over, 14 members made 78 flights all told, of which 21 were "military" flights.

For the most part, the military models were your basic Estes kits, with two notable exceptions. The first was Aaron Newman's home-brewed Tomahawk cruise missile, twin engine powered MIG-25 complete with scaled-down underwing air-to-air weaponry, and SNARK cruise missile. The largest exception was Karl Fehrenbach's Bull Pup-12D. Karl's Bull Pup was a four-times scale up of the Estes kit, which of course is a scale down of the real thing. Everybody follow that? It was powered by a G80, and boosted very well, but a separation problem occurred at ejection, however. Karl also flew a home built Terrier surface-to-air missile, which turned in a perfect flight on an E30-7. Additional "Military Day" flights included Aaron's SR-71, Phoenix, and ALCM (Air Launched Cruise Missile), Gary Feveryear's Bull Pup 12D, Dale Greene's Honest John, Karl's Patriot, AGM-78, V-2, and MARTE Mk.2; Ed Miller's Patriot and Phoenix, and your editor's V-2, Patriot, Phoenix, AGM-78, and an oldie but a goodie, a Soviet SS-1C SCUD B.

Besides the "military" flights, there were many other things going on. Fred Hoke continued his work with the Estes Astrocam 110. Fred is conducting an extensive program with this rocket boosted camera. To date, he has flown one particular Astrocam 40 times; we are looking forward to Fred's report on his findings in an upcoming issue of the Count-down. On the down side of the rocket camera story, however, was Dennis Stauffer. Dennis had been given an Astrocam-110 for his birthday (from his wife), and had just completed it's construction the night before the launch. Unfortunately, the model nosed over and impacted into the ground without ejecting it's 'chute. The problem? Why,

the old "ejection charge fails to go off" trick! Dennis has since informed us that the offending C6-7 as well as photos of the wreckage were returned to Estes. We hope that they "do the right thing" and replace Dennis' loss.

Would it have been a SPAAR launch without the guys pulling out some of the big stuff? Nah... Fred Hoke brought out a very nice Aerotech ARCAS, powered by an E30; Dale Greene flew his NCR Big Brute on a G40, and come to think of it, may slowly be replacing Glenn's "Grumpy Dog" as SPAAR's unofficial mascot, due to the number of times it has flown! Karl Fehrenbach also flew his LOV Viper-IV with four (altogether now) D12's; and Jim Lytle flew an Estes Commanche with a D12/C6/A8 combination, and we're not sure if he ever got it back. We know he didn't get his Estes Black Brant returned. This was the same model that he "almost" lost back in February, but was returned the next week. This time we're afraid it's gone for good.....

JUNE 30, 1991

The June 30 Sport Launch was marred by an hour and a half rain delay, as a rather heavy thunderstorm blew through the area. The launch was to have begun at 3 o'clock, however the first flights didn't get off the ground until after 4:30. The positive news of the day was the debut of the new altitude trackers, built over this past winter by club prez Glenn Feveryear. This resulted in a number of new club altitude records... which is somewhat obvious, considering that every tracked flight was a new record!

Because of the weather, 11 members made only 23 flights. The group of glaring R/C model aircraft types who showed up at about 6PM precluded any thoughts of flying past 7; they had come to lay claim to "their" field. Apparently, they were "willing" to let us fly there until 7, which is what our schedule says. More on this issue elsewhere.

SPAAR SPORT LAUNCHES

JULY 21, 1991

Has this been a strange year for flying weather or what? We hold a first-ever Sport Launch in the first Sunday in February, and the temperature is in the 60's; since then, stinko. In April, it blew; then, it rained; May saw more wind. A thunderstorm in late June. On July 21, it was the heat. Record heat, to be exact, like 102°. The kind of heat that drives you into the ground like a hammer driving a nail. Did we mention the wind? It did provide a little relief from the heat, but it didn't help the flying. I know, I know, stop complaining.....

July 21 was special for a couple more reasons: we went to Schuykil Valley in Berks Co., the first time that SPAAR "hit the road" for a Sport Launch since August '88 when we flew at Comet Field in Lancaster, and the fact that this day was set aside as the day to fly the altitude events for NOAHS-91. The launch was supposed to last from 9AM to 5PM, but things were packed up early, by 3PM. The heat more than anything was the reason; it also kept the number of flights low, at 29.

The altitude events flown were the ones to be flown at NARAM-33 next month: A Payload and B Eggloft. Dale Greene came out as the big points winner, by virtue of the fact that he made the only qualified B Eggloft flight, tracked to 36.8m, or 120.7ft. Dale also came in third in A Payload at 52.24m, or 171.4ft. Your editor took first in A Payload, at 61.2m, or 200.8ft. Glenn Feveryear took 2nd at 60.28m, or 197.8ft. Your editor also flew the first C Helicopter flights, totaling 143 seconds.

There were also some very interesting sport flights. Art Babiarz wanted to get some extra altitude out of his Estes Saturn V, so he simply "CHAD" (Cheap And Dirty) staged the model, by taping a D12-0 to the D12-3 already in the motor mount. Art compensated by adding a bit of weight to the nose (actually he used

the Apollo capsule from his Saturn IB). The Saturn V flew very well with this engine combination. Art also got very nice flights out of his replica of the original Estes Gemini-Titan twin engine model, as well as his vintage Centuri SR-71, which he converted to YF-12A standards. Another nice flight was made by his Estes Soaring Eagle, which spread it's wings impressively. Dale Greene flew his Big Brute with an Aerotech G80-10 Blue Thunder motor. The Blue Thunder motors are supposed to exhibit a blue exhaust plume, but this one had a bit of "stealth" technology built in. In other words, no one saw it.

UPCOMING SPORT LAUNCHES

Don't forget, a number of theme Sport Launches are planned for the rest of the flying season. The August 11 Sport Launch will be Manned Launch Vehicle Day, so bring out those Mercury-Redstones, Gemini-Titans, Saturn IBs, Saturn V, and Space Shuttles. If anyone has a Soviet Vostock or Soyuz lurking about, by all means bring that, too.

September 1 will be "Sounding Rocket Day." A large number of Aerobees, Tomahawks, Black Brants, Nike-Smokes, -Tomahawks, -Cajons and the like are expected.

The SPAARSEC-V Section Meet is scheduled for Sunday, September 15, from 9 to 5. This is a schedule change, from Sept. 22.

"Futuristic Day" had originally been scheduled for April, but was rained out. A new date has not been set.

The third annual SPAAR tailgate picnic and Sport Launch, SPAARSPAM-3, is scheduled for November 3, from 1-5PM. This year's "event" has not been decided. As you may recall, last year we flew "Open Eggloft Streamer Spot Landing", and in '89 it was "1/2A MicroRoc Non-Duration". What will it be this year? Come to a meeting and voice your opinion!

FLIGHT LOG

May 26, 1991

Sport Flights

<u>Name</u>	<u>Model</u>	<u>Motor(s)</u>	<u>Time</u>	<u>Misc.</u>
1. Dave Bender	Bowling Pin	D12-3	NT	SEP
2. " "	Yellow Jacket	B4-4	25.5	GF
3. " "	Longshot	C6-5	53.91	?*
4. " "	Mega Sizz	D12-5	NT	NR?
5. " "	Sky Demon	C6-0/C6-5	51.0	GF
6. A. Babiarz III	Talos	B8-5	NT	GF
7. " "	Honest John	A8-3	19.33	GF
8. " "	Birdie	A10-3	NT	GF
9. " "	Birdie	A10-3	NT	GF
10. R. Balogh	Up-rated Phoenix	E30-4	NT	GF
11. A. Babiarz Jr.	Sputnik	B4-2	4.72	GF
12. " "	Mercury-Redstone	C6-3	46.4	GF
13. Glenn Feveryear	S6A	?	NT	UNS
14. T. Smedley	Super Chicken	D21-4	NT	GF
15. " "	R/G	A8-3	NT	GF
16. " "	Pathfinder	D12-5	NT	GF
17. " "	Pathfinder	E15-7WL	NT	NR?

* Club Record Attempt

FLIGHT LOG

June 9, 1991

<u>Name</u>	<u>Model</u>	<u>Motor(s)</u>	<u>Event/Time</u>	<u>Misc.</u>
1. D. Bender	Birdie	½A3-2	Sport	GF
2. " "	Thunderhawk	C6-5	C PD/53.55*	GF
3. Derek Yost	Ninja	A10-3	Sport	Gf
4. A. Newman	Stealth	A8-3	"	CHU
5. " "	Aerotech	B6-2	"	CHU
6. " "	SWAT	C6-3	"	?
7. " "	Tomahawk	B6-2	Military Day	GF
8. " "	Tomahawk	C6-5	" "	GF
9. " "	Phoenix	D12-3	" "	GF
10. " "	MIG-25	B6-4 (2)	" "	GF
11. " "	SR-71	C6-5	" "	GF
12. " "	ALCM	C6-5	" "	GF
13. " "	Zaxxon Fighter	B6-0/A8-5	Sport	GF
14. " "	Mach Rider	B6-4	"	GF
15. " "	SNARK	A8-3	Military Day	GF
16. " "	SNARK	B6-4	" "	?
17. D. Stauffer	Astrocam 110	C6-7	Photo Recon	PRG
18. " "	Yankee Clipper	A8-3	Sport	GF
19. " "	Yankee Clipper	A8-3	"	GF
20. " "	Yankee Clipper	B6-4	"	GF
21. " "	Yankee Clipper	B6-4	"	GF
22. J. Lytle	Black Brant III	D12-5	"	NR
23. " "	Commanche	D12-0/C6-0/A8-3	"	GF
24. F. Hoke	Astrocam 110	C6-7	Photo Recon	GF
25. " "	Astrocam 110	B8-5	" "	GF
26. " "	Astrocam 110	C6-7	" "	GF
27. " "	Mustang	E15-7WL	Sport	GF
28. " "	ARCAS	E30-4	"	GF
29. Gary Feveryear	X-16	C6-5	"	GF
30. " "	Nike-Apache	B6-4	"	GF
31. " "	GEO SAT LV	C5-3	"	GF
32. " "	Bull Pup 12D	B6-4	Military Day	GF
33. J. Yost	½A RG	½A3-2	½A RG/8.97	GF

34.G	Beever	Patriot	C6-5	Military Day	GF
35."	"	Phoenix	D12-3	"	GF
36."	"	AGM-78	C6-3	"	GF
37."	"	SCUD-B	B6-4	"	GF
38."	"	V-2	D12-5	"	GF
39."	"	Romulan Revolver	D12-3	D HD/57.78	GF
40."	"	Yost-A-Roc	D12-3	D HD/60.60	GF
41.D.	Greene	Apogee A SD kit	A3-4	A SD/149.33	NR@
42."	"	Honest John	C6-5	Military Day	GF
43."	"	Honest John	C6-5	"	GF
44."	"	B B/G	B4-2	B B/G/NT	GF
45."	"	Big Brute	G40-10WL	Sport	GF
46."	"	Gemini-Titan	B4-4	"	GF
47.R.	Hackman	XR-50	B8-5	"	GF
48."	"	Big Bertha	C6-5	"	GF
49."	"	XR-49	B6-4	"	GF
50."	"	XR-55	C6-5	"	GF
51."	"	Avenger	C6-0/A8-5	"	GF
52."	"	XR-49	C6-3	"	GF
53.K.	Fehrenbach	LOC Viper IV	D12-5(4)	"	GF
54."	"	Patriot	C6-3	Military Day	GF
55."	"	AGM-78	D12-5	"	GF
56."	"	V-2	D12-5	"	GF
57."	"	Terrier	E30-7	"	GF
58."	"	MARTE Mk.2	B6-4	"	GF
59."	"	Bull Pup 12D (X4)	G80-4	"	SEP
60."	"	Graduator	F80-10	Sport	GF
61.E.	Miller	Big Bird	C5-3	"	GF
62."	"	Patriot	B4-2	Military Day	GF
63."	"	Phoenix	D12-3	"	GF
64."	"	Magnum	D12-0/C6-7	Sport	GF
65."	"	Armazon III	C6-7(3)	"	GF
66."	"	Phantom 2600	G42-8WL	"	GF
67."	"	Black Thing	E60-6	"	GF
68.R.	Fuld	Gnome	A10-3	"	GF
69."	"	Recon-1	C6-3	"	GF
70."	"	Viking	C6-7	"	GF
71."	"	Hawkeye	A10-3	"	GF
72."	"	RotaRoc	B4-4	"	SHRED
73."	"	Athena	C6-3	"	GF
74."	"	Micron	A10-3	"	GF
75."	"	Voyager	E60-4	"	?
76."	"	Strike Fighter	C6-3	"	GF
77."	"	Starbird	C6-5	"	GF
78."	"	Nova	C6-3	"	GF

* = Club Record Attempt @ = NARTREK flight and Club Record Attempt
 GF = Good Flight CHU = 'Chute Failure PRG = Prang
 NR = No Return SEP = Separation of Recovery System ? = Result of flight unknown

Number of Flights Per Person

D. Bender	2	Derek Yost	1	Aaron Newman	13
D. Stauffer	5	J. Lytle	2	F. Hoke	5
Gary Feveryear	4	J. Yost	1	G. Beever	7
D. Greene	6	R. Hackman	6	K. Fehrenbach	8
E. Miller	7	R. Fuld	11		
Military Day Flights: 21					

FLIGHT LOG

June 30, 1991

Name	Model	Motor(s)	Event/Time	Hisc.
1. Daniel Feveryear	Gnome	1/2A3-4	Sport	GF
2. Renee Feveryear	?	A8-3	"	GF
3. Aaron Newman	Flying Wing	1/2A3-2	1/2A BG/126s	?
4. " "	What?	A10-3	A PD/A Alt	?
5. " "	Echo	A8-3	A SD	?
6. " "	Whitewing	1/2A3-2	1/2A BG	?
7. " "	Sizzler	B6-4	Sport/54.4s	?
8. D. Bender	Liberty	B8-5	"	?
9. " "	Yellow Jacket	B6-4	"	?
10. Derek Yost	Skinny Mini	A3-2	"	?
11. Dan Yost	Athena	B4-6	"	?
12. " "	Super Neon	B6-6	"	?
13. R. Hackman	Alpha - 3	A8-3	"	?
14. " "	XR-52	A3-4	"	?
15. " "	XR-37	B6-4	"	?
16. " "	XR-49	C6-3	"	?
17. D. Greene	Big Brute	F25-69L	"	GF
18. F. Hoke	Bi-Wing RG	B4-2	"	UNS
19. D. Stauffer	Blazer	B6-4	"	?
20. " "	Wizard	B6-4	"	?
21. " "	Wizard	B6-4	34.9s	?
22. E. Miller	E-18	D12-0	Sport/4.0s	GF
23. " "	Magnum Wizard	(3) D12-5	"	PRG

GF = Good Flight ? = Result Of Flight Unknown (Not Marked On Flight Card)
UNS = Unstable

Number of Flights Per Person

Daniel Feveryear	1	Renee Feveryear	1	Aaron Newman	5
Dave Bender	2	Derek Yost	1	Dan Yost	2
Rick Hackman	4	Dale Greene	1	Fred Hoke	1
Dennis Stauffer	3	Ed Miller	2		

FLIGHT LOG

July 21, 1991

#	Name	Model	Motor(s)	Event/Time	Hisc.
1.	D. Bender	Golf-1	A3-4	Sport	GF
2.	B. Rhoat	Yankee Clipper	B?	ESP	NR
3.	Gary Feveryear	CHR Rear Ejection	C6-3	Sport	CHU
4.	" "	IRIS	B6-4	"	?
5.	" "	D SD/D Alt	D12-5	D SD/D Alt	GF
6.	A. Babiarz	SR-71/YF-12A	D12-3	Sport	GF
7.	" "	Birdie	A10-3	"	GF
8.	" "	Saturn V	D12-0/D12-3	"	GF
9.	" "	Gyroc	A8-3	"	GF
10.	" "	Mercury-Redstone	C6-5	"	GF
11.	" "	Gemini-Titan	(2) C5-3	"	GF
12.	" "	Shrike	B6-0/B8-5	"	GF
13.	" "	Soaring Eagle	B4-2	"	GF
14.	" "	Junk	B8-5	"	GF
15.	D. Greene	Big Brute	G80-10T	Sport/72.0	GF
16.	E. Miller	Patriot 1/10	B4-2	"	GF
17.	" "	Hercules	F100-6	"	GF
18.	" "	Athena	A8-3	"	GF
19.	" "	Oddball	C6-0	"	GF
20.	" "	Oddball	D12-0	"	GF

NOAHS-91 FLIGHTS

#	Event	Motor	Perf.	Closure Rate	
21.	D. Greene	A Payload	A3-4	52.24m/171.4ft	8%
22.	" "	B Eggloft Alt	B6-2	36.8m/120.7ft	3%
23.	Glenn Feveryear	A Payload	A8-3	60.28m/197.8ft	5.7%
24.	" "	B Eggloft Alt	B4-2	53.91m/176.9ft/DQ	EGG 14.8%
25.	" "	B Eggloft Alt	B4-2	32.55m/106.8ft/DQ	EGG
26.	G. Beaver	A Payload	A8-3	61.2m/200.8ft	.4%
27.	" "	B Eggloft Alt	B4-2	60.72m/199.2ft/DQ	EGG
28.	" "	C Helicopter	C6-3	74.0s	N/A
29.	" "	C Helicopter	C6-3	69.0	N/A

GF = Good Flight NR = No Return CHU = Recovery System Failure
? = Result Of Flight Unknown (Not Marked On Flight Card)

Number Of Flights Per Person

Dave Bender	1	Bill Rhoat	1	Gary Feveryear	3
Art Babiarz & Son	9	Dale Greene	3	Ed Miller	5
Glenn Feveryear	3	George Beaver	4		

WHITE HOUSE ANNOUNCES JOINT US/USSR SPACE INITIATIVE

by John Yost

Before the recent summit between President George Bush and Soviet President Mikhail Gorbachev adjourned, the two leaders unveiled an agreement to have an astronaut/cosmonaut exchange as part of an expanded US-Soviet space initiative. The plan is for a US astronaut to fly on the Soviet space station Mir, while a cosmonaut will join the crew of a US space shuttle flight. It is only the second time in history that the two countries have agreed on a joint space venture. The first was the 1975 Apollo-Soyuz Test Project, ASTP. No date was given for the latest space plan.

The United States also invited the Soviets to participate in NASA's Mission To Planet Earth, a study of the earth's environment planned to begin in the late 1990's. According to the White House, the two sides agree "to share data and coordinate observations of their respective space and terrestrial environmental monitoring systems".

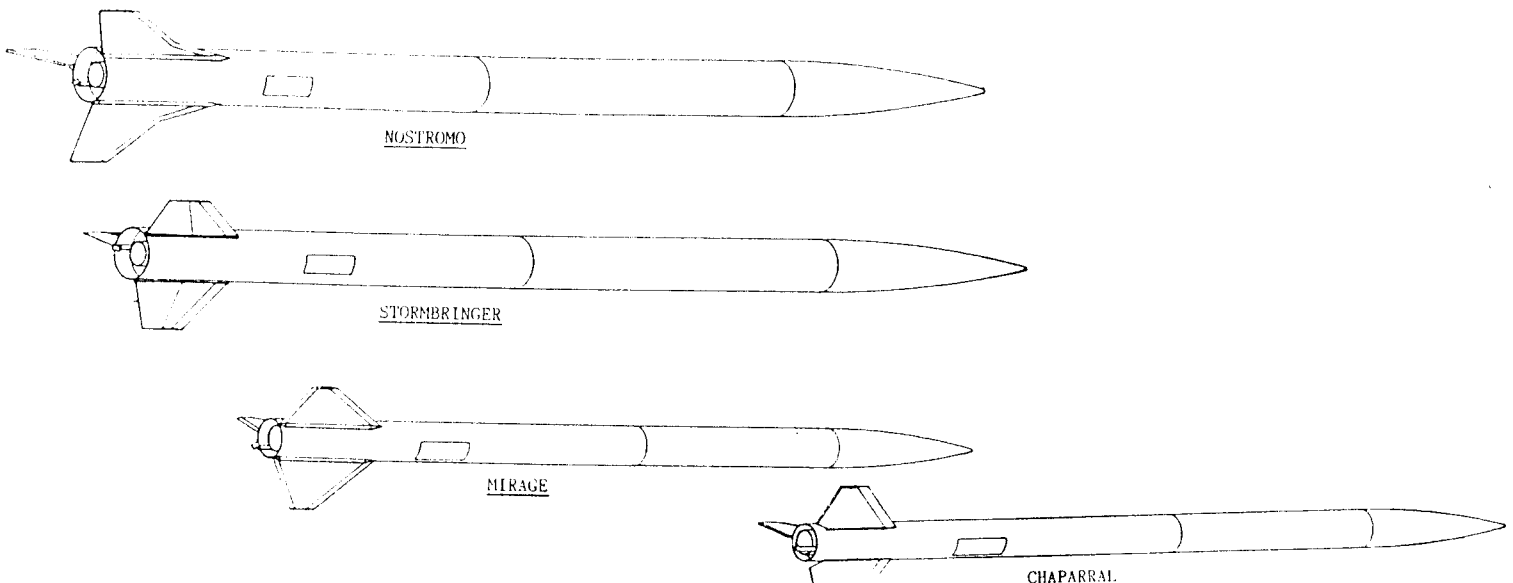
This agreement also calls for talks on space debris and other matters of mutual concern. Space junk is a very real hazard to the Mir station, and will be to the US space station Freedom, scheduled for launch around the year 2000.

NEWS FROM INDUSTRIAL SOLID PROPULSION, INC.

Our friend Bob Sanford has sent us some information on the kit line offered by ISP, Industrial Solid Propulsion. ISP is the parent company of Aerotech, and was the first to offer re-loadable motor technology in the higher power ranges.

Bob read that SPAAR was going to conduct a High Power workshop this coming winter, and wanted us to be aware that ISP is now producing the following kits: The "Mirage-SR" and "Chaparral-SR", both 1.9" in diameter and 43.5" long; the "Nostromo-SR", which is 2.6" X 58"; and the "Stormbringer-SR", 2.6" X 56". The first two listed kits sell for \$29.00, the last two for \$39.00 each. The kits feature the "Fin-Lock" assembly, pre-slotted airframes, "Labyrinth" baffle systems, and special mounts for ISP Reloadable Motor Systems.

The models all show a strong Aerotech heritage, and should be fine performers. For more information contact: Industrial Solid Propulsion, Inc., 1955 S. Palm St., Suite 15, Las Vegas, NV 89104 (702) 641-2302.



WUBBA-14 REGIONAL MEET

-or-

"Gee, isn't it neat to watch those long models go loopy-loop?"

Over the weekend of June 15 & 16, the WUBBA-14 Regional Meet was held in Center Valley, just outside of Quakertown, PA. Modelers from Pennsylvania, Virginia, New York, and New Jersey attended, representing SPAAR, NOVAAR, GSSS, ASTRE, and PULSAR. The events scheduled were F SuperRoc, 1/2A SuperRoc, 1/2A Rocket/Glider Multi, FAI S6A, 1/2A Flex-Wing, and E Helicopter.

The weather during most of the weekend was warm and breezy; at times, it was downright hot and windy! The SPAAR members there didn't mind, of course. We're used to it. As John Yost said later, "I was rather comfortable, in fact".

Our hosts, once again, were Art and Janet Rose. Janet didn't feel well most of the weekend, but still went out of her way to make the participants glad that they came. This is one of the reasons why WUBBA has become an annual "must" for many flyers in this area.

There were seven A and B Division competitors there, and, as usual, they put up some pretty impressive flights. These included GSSS' Matthew Whymark, who took 1st place in E Helicopter with two flights totaling 176 seconds; Bobby Gormley took first in 1/2A Flex-Wing with flights of 56s and 47s; and John Musarra, who took first in F SuperRoc.

In C Division, there were two teams, Huh? from ASTRE and Jankov-Pavlov-Kovelov+1 from NOVAAR, as well as 10 individuals.

FAI S6A, roughly equivalent to A PD (M), was won by Huh?, with a total of 156 seconds, even though they DQ'd their first flight. JPK+1 DQ'd on flight #2, but still took second place with 140s. NOVAAR's Ken Brown took third, and SPAAR's Glenn Feveryear placed fourth.

1/2A Flex-Wing's first place went to Ken Brown, with 285s. Second was Adam Nowatarski, third was our own John Yost, and third went to Warren Sisco. (Geez, Warren, we didn't even know you owned a 1/2A motor!)

The remaining events, 1/4a SRD, E HD, 1/2A RG MR, and F SRD, were all holdovers from last July's WUBBA-13.

The Huh? Team once again took first place in 1/2A SuperRoc, whose maximum length birds turned in flight times of 136 and 43 seconds, for a total of 179s. SPAAR prez Glenn Feveryear took second with two flights totaling 115s; your editor took third with 70s; Ken Brown came in fourth at 59s.

The JPK+1 Team showed their expertise in gliders once again, by taking 1/2A RG (M) at 224s, a good 48 seconds ahead of second place finisher Ken Brown's 176s. Huh? took third with 118s, and Glenn Feveryear took fourth with 108s, even though his third flight DQ'd when the wing stripped off at transition.

After leaving balsa wood fluttering down from above in '89 and '90, your editor finally got it right. I knew that if I kept at it, I'd figure it out sooner or later. Your editor took first place in E Helicopter, with two flights totaling 249s. The first flight was a Tom Whymark Romulan Revolver with an E15, at 91 seconds. The second flight was with a Yost-A-Roc, again with an E15, which flew away at 168s. Ken Brown came through again for second place at 201s, JPK+1 in third with 165s, and Tom Whymark fourth with 90s.

The most entertaining event, without a doubt, was F SuperRoc. This event was flown last year at WUBBA-13, and prompted CD Art Rose to state, "Next year we're going to fly the same events. Maybe we'll get it right!". It was rather interesting to watch the entries (including yours truly) lift-off the pad and go to "Warp Speed", literally. Your editor flew a model powered by 3 D12's, made up of a number of BT-50s. Wrong-o! Not one tube on the thing was not crimped when I got it back! I saw one model do two complete loops under power, some sort of record I think. Eventually, GSSS' Tom Whymark took first, Glenn Feveryear second, JPK+1 third, and Adam Nowatarski fourth. Whats in store for WUBBA-15? Anybody wanna try G SuperRoc? Heads UP!!!!!!!!!!

WUBBA-14 REGIONAL MEET RESULTS

JUNE 15-16, 1991

<u>Contestant</u>	<u>FAI S6A</u>	<u>1/2A SRD Len/Dur</u>	<u>1/2A RG M</u>	<u>1/2A FW</u>	<u>E HD</u>	<u>F SRD Len/Dur</u>
A Division						
John Musarra	11/12/9	100 DQ 100 8	NF	NF	DQ/50	313 20 NF NF
Maureen Musarra	DQ/DQ	NF	14/13/13	NF	cato/cato	342 DQ 304 DQ
Charlie Tolliver	DQ/11/9	100 DQ	NF	NF	53/DQ	283 DQ 283 DQ
Erin Whymark	DQ/11	93 13	NF	NF	52/DQ	241 22 NF NF
Jason Whymark	11/DQ/9	97 DQ	7/12/11	DQ/NF	DQ/70	284 DQ 238 DQ
Matthew Whymark	20/14/12	100 14	DQ/NF/NF	20/46	124/52	279 129 280 115
B Division						
Bobby Gormley	15/26/37	100 DQ 100 55	DQ/26/31	56/47	DQ/NF	236 DQ NF NF
C Division						
George Beever	NF	100 37 100 33	17/18/23	DQ/NF	91/168	235 DQ NF NF
Ken Brown	105/DQ/21	100 15 100 44	50/85/41	259/26	94/107	400 DQ 364 DQ
Glenn Feveryear	28/35/24	100 63 100 52	27/81/DQ	NF	DQ/67	249 44 249 130
Dale Greene	DQ/NF/NF	100 24 100 DQ	9/NF/NF	DQ/DQ	NF	NF
Huh? Team	DQ/59/97	100 136 100 43	37/47/34	NF	DQ/NF	NF
JPK+1 Team	62/DQ/78	100 DQ 100 DQ	86/79/59	221/DQ	114/51	400 57 400 DQ
Adam Nowatarski	NF	100 DQ 100 DQ	NF	85/93	NR	398 44 398 DQ
Will Safford	NF	NF	81/NF/NF	NF	NF	251 59 249 DQ
Warren Sisco	NF	NF	NF	21/DQ	DQ/DQ	250 149 NF NF
Tom Whymark	DQ/DQ/20	97 DQ 98 5	33/12/12	NF	90/DQ	390 70 370 90
Dan Winings	80/DQ/DQ	NF	NF	NF	NF	NF
John Yost	DQ/21/46	100 29	13/9/15	24/DQ	DQ/NF	NF

POINTS
(Unofficial)

C Division						
Ken Brown	684 total	120 (3rd)	30 (4th)	180 (2nd)	120 (1st)	234 (2nd)
Huh? Team	570 total	300 (1st)	150 (1st)	120 (3rd)		
JPK+1 Team	568 total	180 (2nd)		300 (1st)		
Tom Whymark	483 total	30 (FP)	15 (FP)	30 (FP)		156(3) 132(3)
George Beever	480 total		60 (3rd)	30 (FP)		78(4th) 330(1st)
Glenn Feveryear	447 total	60 (4th)	90 (2nd)	60 (4th)		390(1st)
John Yost	123 total	30 (FP)	15 (FP)	30 (FP)	48 (3rd)	
Adam Nowatarski	102 total				36 (2nd)	66 (4th)
Warren Sisco	45 total				12 (4th)	33 (FP)
Dale Greene: 45		Will Safford: 63		Dan Winings: 30		

THE SPAARSEC-V SECTION MEET

The SPAARSEC-V Section Meet will be held on Sunday, Septmeber 15, 1991 at the Cocalico High School in Denver, from 9AM to 5PM. The events will be B SuperRoc Duration, A Boost/Glider, Open Spot Landing, A Helicopter Duration, B Eggloft Duration, and A Streamer Duration. All SPAAR members who are also members of the NAR are urged to fly in the meet. As has been said before, if you have never entered a model rocketry contest, and are looking for a place to start, a Section Meet is the place. Even if you are not a competition enthusiast, but are an NAR member, please come and fly the meet. It will help the club as a whole, and who knows, you may come to like it! If you are not an NAR member, please come out to help with some of the range duties. After all, this is a club function. Sport flying is always welcome.

Included below is a quick run-down of the events to be flown, as well as a list of commercially available kits suitable for each event.

EVENT: B SUPERROC DURATION, PINK BOOK RULE 28

Object: To achieve the longest flight time possible, with the longest rocket permissible in it's power class.

Scoring: Length in cm X 2, plus the flight time in seconds.

Number of flights: 2, added together.

Lengths: Minimum 100cm, maximum 200cm.

Recommended motors: B Motors with medium-length delays, such as B4-4, B6-4, B7-4 (composite)

Kits: QCR Kit #70 "No Crimp II", \$6.

NCR: K-83, "Javelin B/C", \$14.

Apogee: MCK9 "Longshot", \$9.50

EVENT: A BOOST/GLIDE, PINK BOOK RULE 30

Object: To achieve the longest flight duration with a glider which is launched under rocket power. The gliding portion and the power portion of the model MUST separate.

Scoring: Time of flight in seconds, from first motion (launch) until landing of the glider.

Number of flights: 2, added together.

Recommended motors: A motors with short delays, such as the 18mm A8-3 or the 13mm A3-2.

Kits: QCR: Kit #40, "Never Loop I" (13mm mini engine) \$5.

Kit #45, "Never Loop II", (18mm standard engine), \$6.

NCR: K-64 "Stiletto A", \$11.

EVENT: A HELICOPTER DURATION, RULE 27

Object: To achieve the longest flight duration using an autorotating recovery system.

Scoring: Time of flight in seconds from launch until landing.

Number of flights: 2, added together

Recommended motors: A motors with short delays, such as A3-2.

Kits: QCR: Kit #95 "High Rotor II", \$5.

NCR: K-62, "Rotaroc A", \$12.

EVENT: A STREAMER DURATION RULE 26

Object: To achieve the longest flight duration time with a single stage model which employs a single streamer only as a recovery system. The streamer must be attached to the nose cone.

Scoring: Time of flight in seconds from launch to landing.

Number of flights: 2, added together.

Recommended motors: A motors with moderate to long delays, such as A8-5, A3-4, A3-6.

Kits: QCR: Kit #1, "Straight Up I" uses 13mm mini motors, \$4.50.

Kit #5, "Straight Up II", uses 18mm standard motors, \$5.50.

NCR: K-61, "Backlash A", uses mini motors, \$6.50.

K-69, "Backlash B/C", uses standard motors.

Apogee: MCK1 "Dragster", 13mm motors, \$5.95.
 MCK2 "Dragster", 18mm motors, \$6.95.

Estes: #0886 "Gnome", \$3.89	#0882 "Ninja", \$4.99
#0872 "Sparrow", \$3.59	#0877 "Meanie", \$5.49
#0876 "Micron", \$4.69	#1986 "Reliant", \$3.89
#1937 "Astro", \$4.29	#1381 "Yankee", \$4.29
#1917 "Zinger", \$3.59	#1292 "Wizard", \$4.29
#1225 "Alpha", \$6.79	

EVENT: OPEN SPOT LANDING RULE 40

Object: To land a single stage model so that the tip of it's nose cone is closest to a predetermined spot on the ground, whose recovery system is fully deployed. In Open Spot Landing, any type of recovery system is allowed.

Scoring: The distance between the tip of the nose cone of the model and the target spot shall be measured. If the tip of the nose cone lands more than 50 meters from the spot, the model shall not place, but shall receive flight points; otherwise the model shall be given a score equal to it's distance in meters. The smallest score shall win.

Recommended motors: any NAR approved motor.

Number of flights: One only, no practice flights.

Kits: any.

EVENT: B EGGLOFT DURATION RULE 29

Object: To carry one USDA Large hen's egg, for as long a time as possible and recover it without damage.

Scoring: Flight time in seconds.

Number of flights: Two allowed, but only the best single flight is used as the score.

Motors: B motors with short delays, such as B4-2, B6-2, B7-4.

Kits: QCR: #105, "No Break II", \$5.

Apogee: MCK6 "Streamliner", \$15.95. (Apogee reportedly is also marketing an egglofter designed for their mini-B composite motor).

Estes: #1996 "Eggspress" (but be careful; weight should be eliminated)

MANUFACTURERS

QCR: Qualified Competition Rockets, C/O Ken Brown, 7021 Forest View Dr.,
Springfield, VA 22150 (703) 451-2808

NCR: North Coast Rocketry, PO Box 24468, Mayfield Hts., Ohio 44124 (205) 883-6020

Apogee: Apogee Components, 11111 Greenbrier Rd., Minnetonka, MN 55343 (612) 545-4635

Estes: Estes Industries, 1295 H Street, Penrose, CO 81240 (719) 372-6565

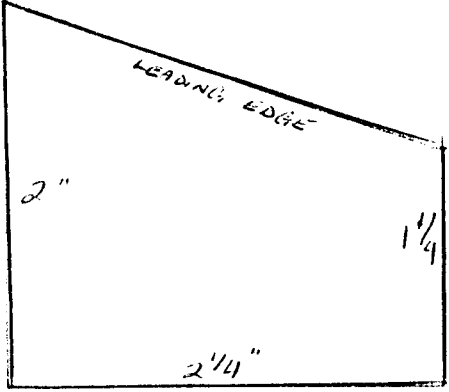
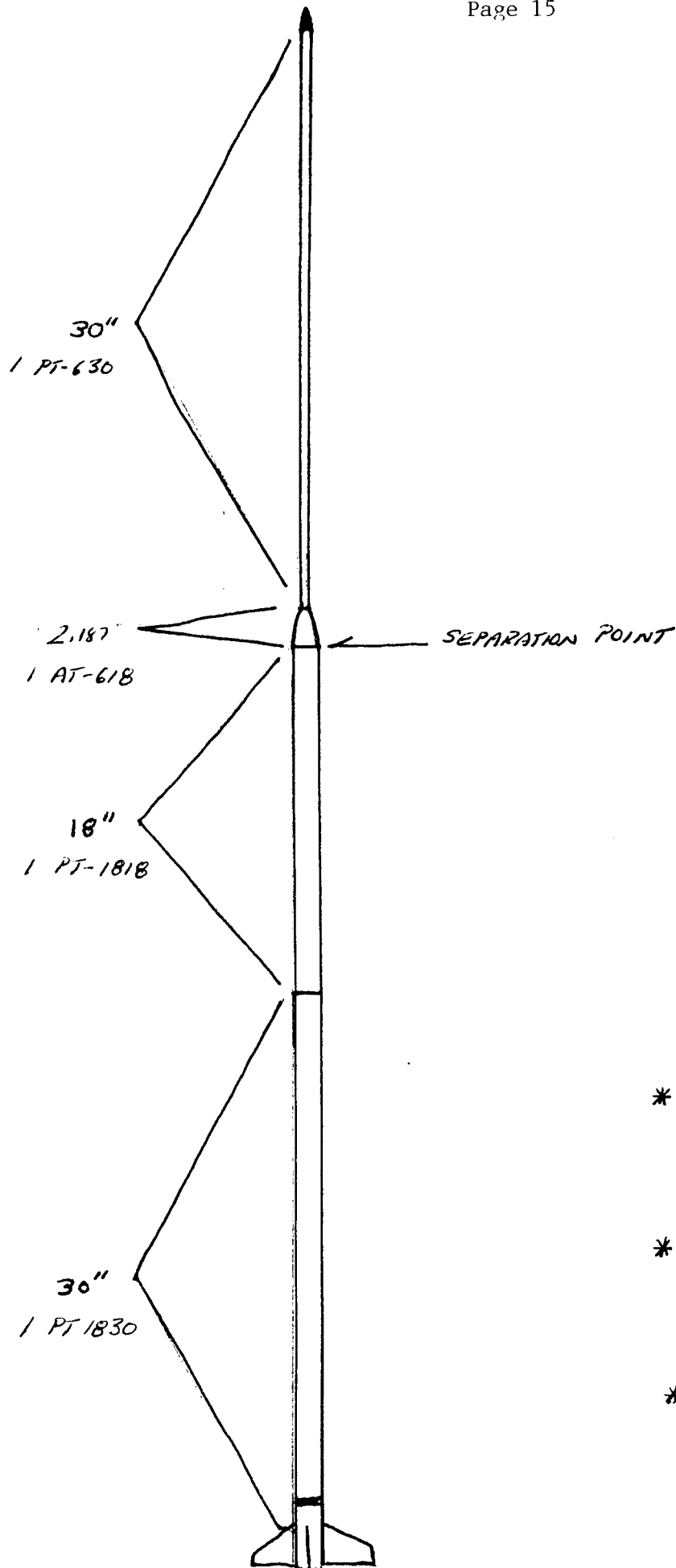
COMPETITION PLANS

The plans on the next two pages are for models suitable for use in SPAARSEC-V. The B Super-Roc model is one that your editor designed over two years ago, and flew well at SPAARSEC-I in July of '89. All parts are available from Apogee Components, address listed above. The model was constructed with cyano, with epoxy used for the fin fillets.

The "Spectre", an A Boost/Glider, is a design that originally appeared in a past issue of the "NOVAAR Free Press", the newsletter of the Northern Virginia Association of Rocketry. Construction is straight-forward and self-explanatory. We thank NOVAAR and designer Brian Robinson for use of the plan.

B SUPERROC DURATION

George Beever
NAR 44391
16 May 1991

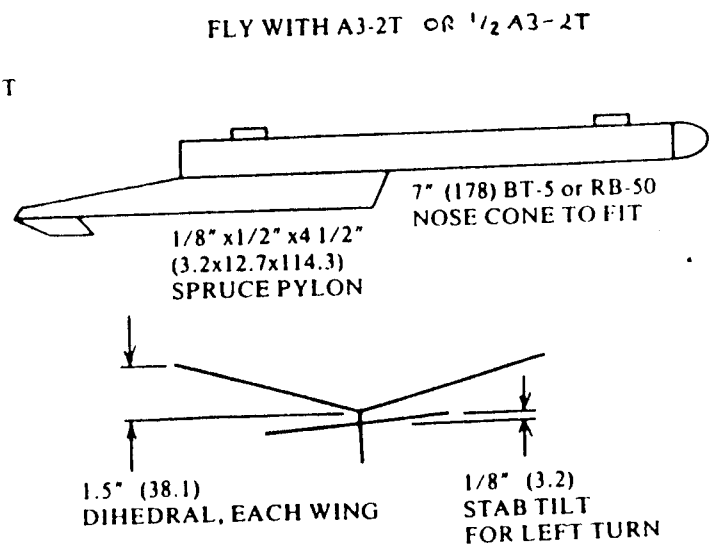
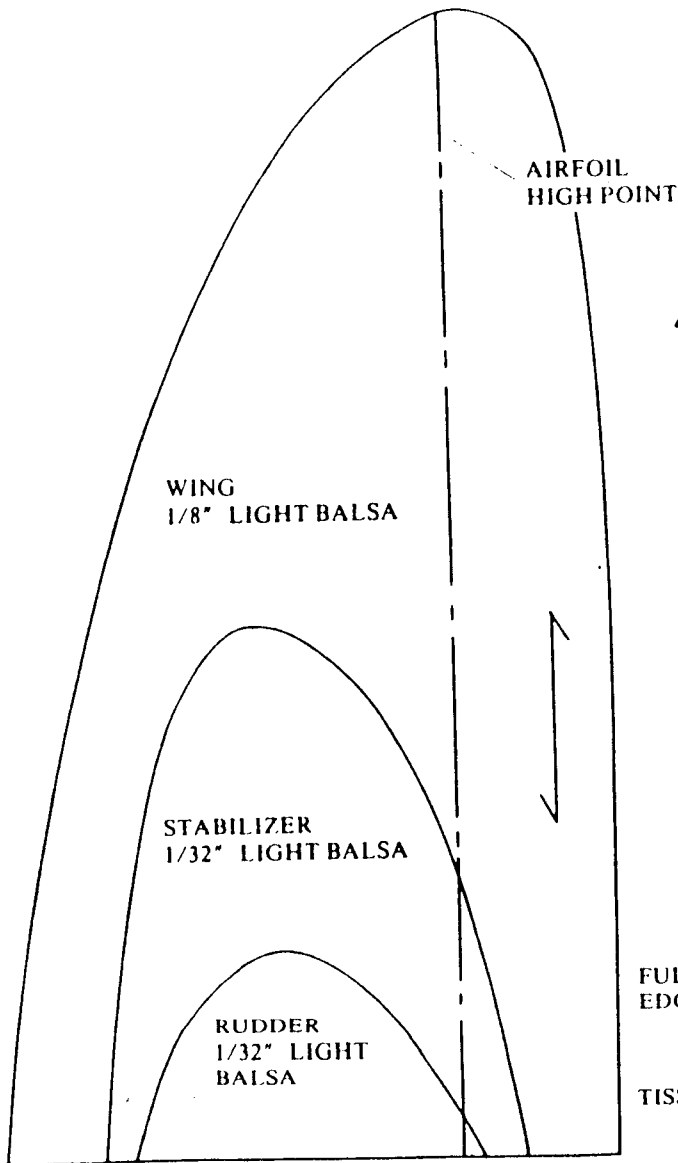
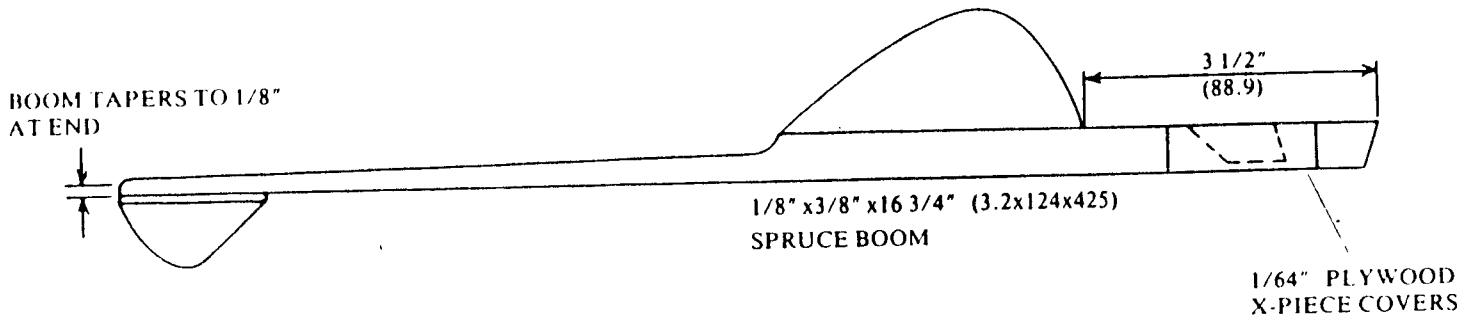


- * ABS-20 (APOYEE) OR 1/16" HARD Balsa -OR- 1/32" PLYWOOD FOR FINS (MAKE 3)
- * MODEL USES EXTERNAL SHOCK LINE, EPOXIED TO A FIN ROOT, AND TAPED TO BURNOUT C/G
- * ORIGINAL MODEL HAD A HOMEMADE NOSE CONE - APOYEE NOW SELLS A NOSE CONE FOR THE PT-6 TUBE.

Build the Spectre

Class A B/G

by Brian Robinson
from the NOVAAR Free Press



FULL-SIZE TEMPLATES—LEADING EDGES TO RIGHT

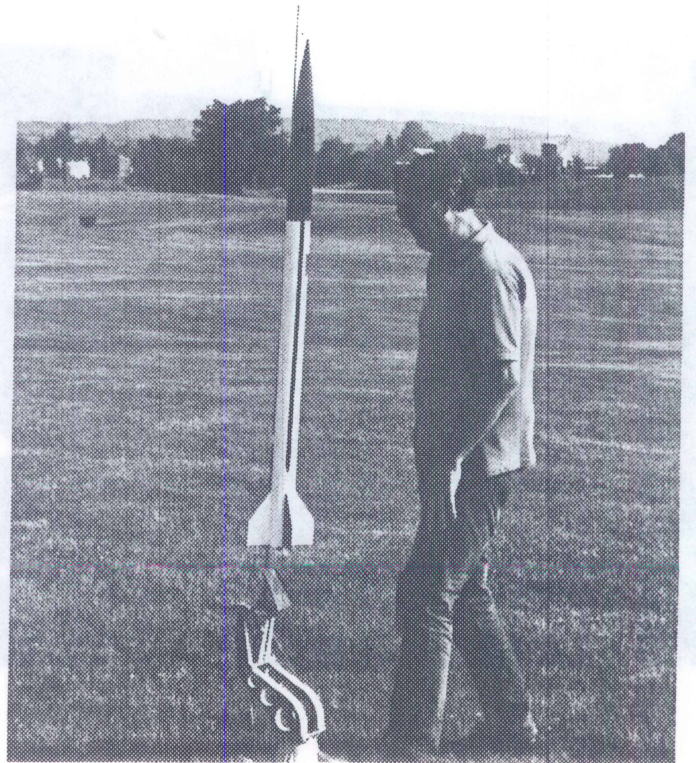
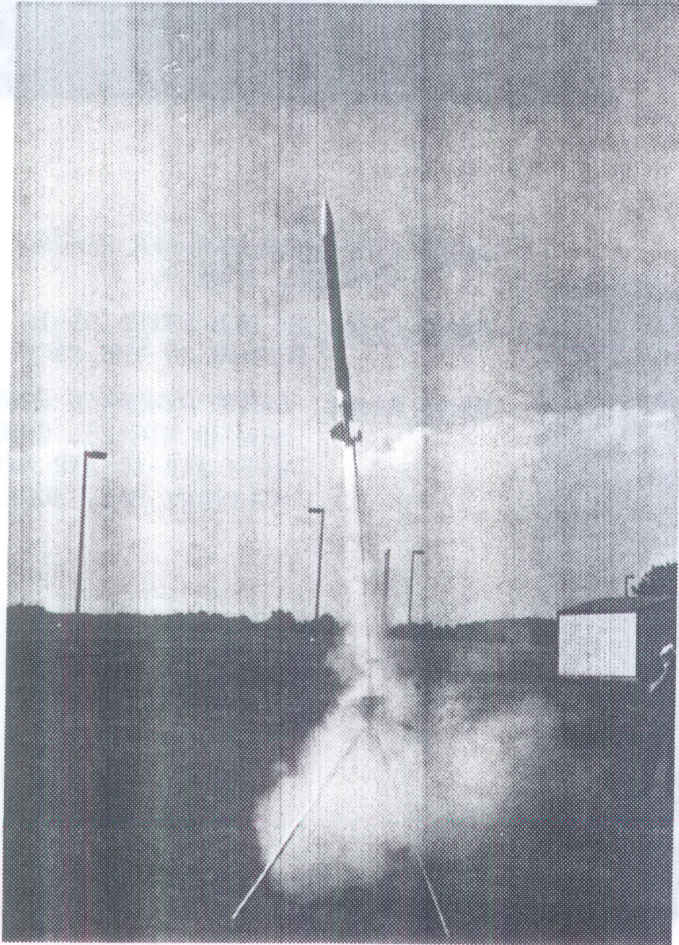
TISSUE LIFTING SURFACES FOR STRENGTH

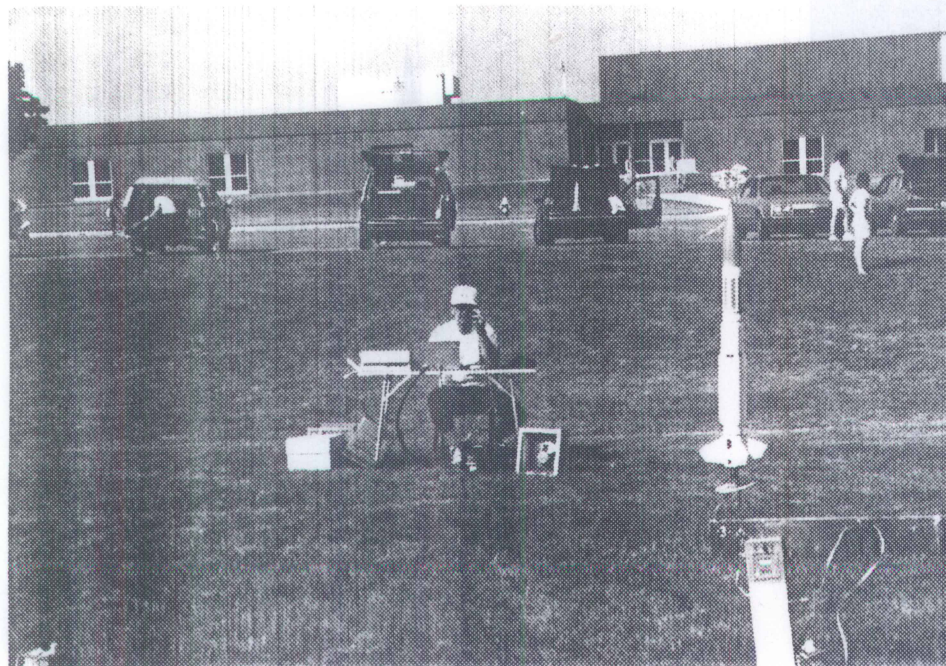
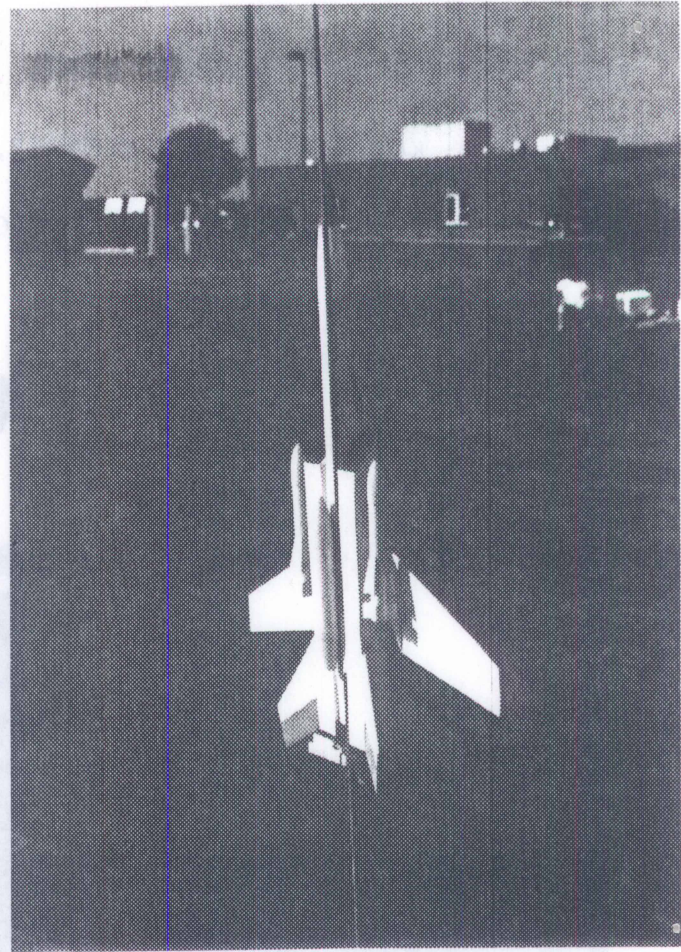
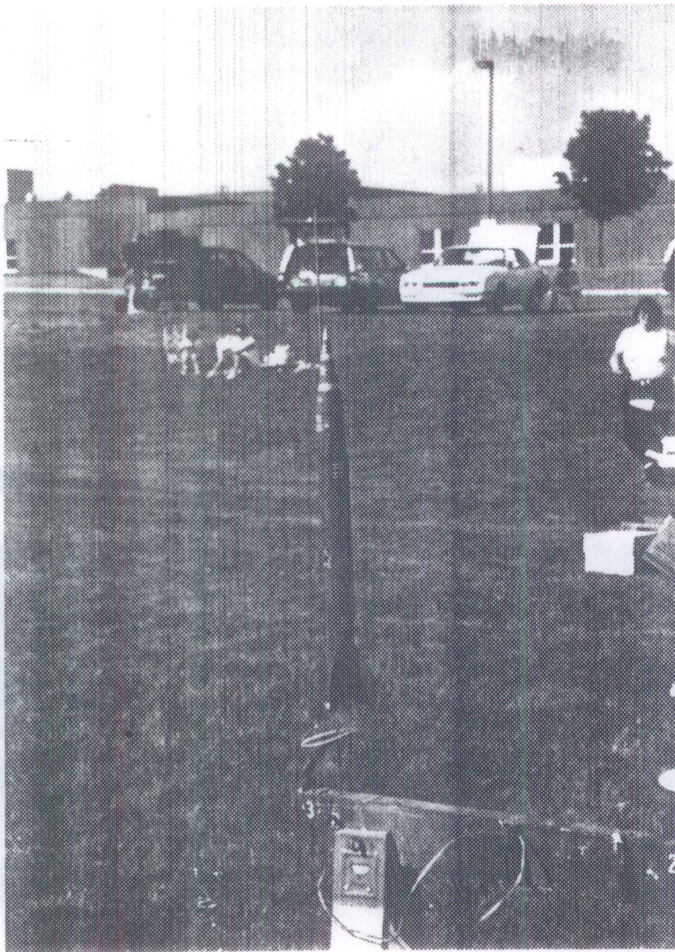
SPAARphotos

Right: JOHN YOST MANS "TRACKING WEST",
JUNE 30.

Below, left: KARL FEHRENBACH'S VIPER-IV,
JUNE 9.

Below, right: FRED HOKE EYEBALLS HIS ARCAS,
JUNE 9.





Left: JIM LYTLE HANDLES RANGE CONTROL, JUNE 9.

Above Left: AN OLD ESTES SS-1C SCUD-B ON THE RACK

Above Right: AARON NEWMAN'S HOME-BREWED MIG-25, COMPLETE WITH AIR-TO-AIR MISSILES MILITARY DAY, JUNE 9.

**SOUTHERN PENNSYLVANIA AREA
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NATIONAL ASSOCIATION OF ROCKETRY, SECTION 503
PO BOX 127, REAMSTOWN, PENNSYLVANIA 17567

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I pledge to conduct all my model rocket activities in compliance with the NAR/HIA Safety Code. I will never fly model rockets at the same time or in the same vicinity as other types of rockets.

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MEMBERSHIP CATEGORY (Check one only):

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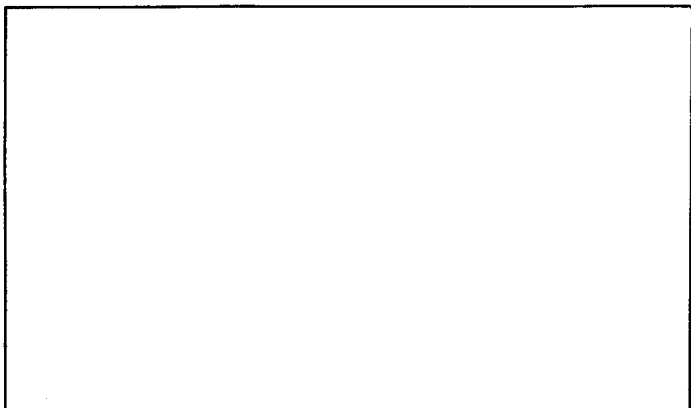
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- RENEWAL (NAR # _____ Section # _____); Deduct \$1. \$ _____
 - FAMILY PLAN (Details below); Deduct \$8..... \$ _____
- Amount Enclosed..... \$ _____

Family Plan: Full rate for one family member, others at \$8 discount — one American Spacemodeling per family.

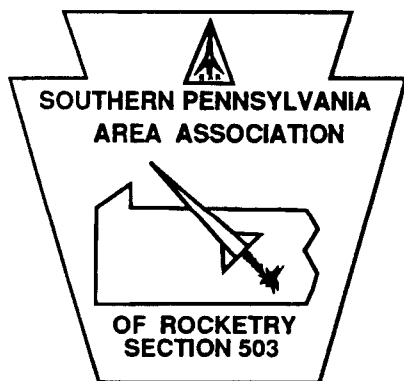
NAR Membership dues include \$8.88 for a subscription to American Spacemodeling.

Canadian Modelers: Write to the Canadian Association of Rocketry, P.O. Box 1031, Postal Station B, Mississauga, Ontario, Canada L4Y 3W3.
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**SOUTHERN PENNSYLVANIA
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AND NORTHERN MARYLAND



*The Southern Pennsylvania Area
Association of Rocketry*

COUNTDOWN

Volume 4 No. 4

JULY/AUGUST 1991