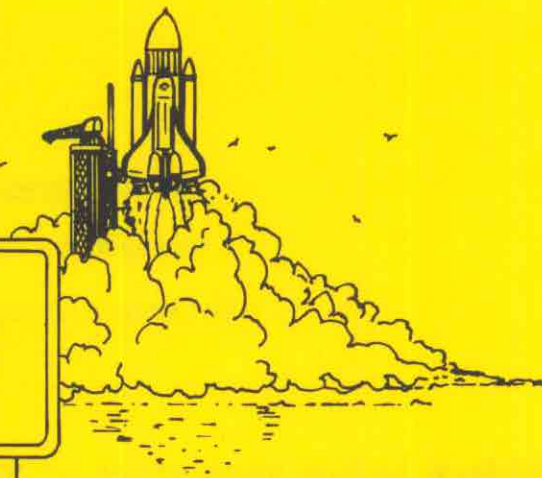


COUNTDOWN



OFFICIAL NEWSLETTER OF
THE SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY

VOLUME 6, ISSUE 5 SEPTEMBER/OCTOBER 1993

SOUTHERN PENNSYLVANIA
AREA ASSOCIATION
OF ROCKETRY



SPAAR, Home Of 1992-93 C Division Champion Glenn Feveryear
[Great job!]

The Countdown

Volume 6, Issue 5

September/October 1993

The Countdown is the newsletter of SPAAR, the Southern Pennsylvania Area Association Of Rocketry, NAR Section #503, PO Box 127, Reamstown, PA 17567. Non-member subscription rate, \$6 per year, six issues. Please make all submissions to address above. Material may be used with proper credit.

Cover Logo: **Bob Stott** Jacket Design: **Bruce Canino** Editor: **George Beever**

Thanks this time to: **Ed Miller, Rick Hackman, Glenn Feveryear, John Yost, Dale Greene, & Allen Nottle, President of Giant Foods**

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SCHEDULE

SUNDAY OCTOBER 10: SPORT LAUNCH, 1-5PM COCALICO HS, MOLDY OLDY DAY; THE MONTHLY MEETING WILL BE HELD PRIOR TO THE LAUNCH.
***** PLEASE NOTE CHANGE FROM SATURDAY TO SUNDAY *****

SUNDAY OCTOBER 24: HALLOWEEN SPORT LAUNCH, 1PM-5PM COCALICO HS; * PLEASE NOTE CHANGE FROM SATURDAY TO SUNDAY *** MEETING TO BE HELD PRIOR TO LAUNCH.**

SUNDAY NOVEMBER 14: SPAARSPAM - V, 1-5PM, COCALICO HS; THE MEETING WILL BE HELD PRIOR TO THE LAUNCH.
SPECIAL "EVENT": FUN SCALE SPOT LANDING.

FRIDAY NOVEMBER 26: TURKEYDAY + 1 LAUNCH, BELAIR, MD. TIME TBD.
CONTACT: GLENN FEVERYEAR, 717-456-5570 FOR DIRECTIONS

From the editor:

GIVING CREDIT WHERE IT'S DUE

I have to admit, when I goof up, I do it right. I also try to fix it when I can, which is what I'm trying to do here.

Back in mid-August, I was contacted by Steve Weaver, the editor of American Spacemodeling. Steve asked if SPAAR would like to be the subject of the "Section Profile" portion of the next issue of that magazine. I replied that we would, and set out to write an article about our club, its origins, activities, and its future. Section President Glenn Feveryear put the text onto the requested disc form. I dug up some old photos, had some members pose for a group shot at a recent Sport Launch, and sent the whole works off just after Labor Day.

The entire time that I was writing the piece, I couldn't shake the feeling that I was forgetting something very important. You know the feeling... "did I remember the wadding?", as the rocket arcs over at apogee. I re-read the article numerous times, wasn't satisfied with it, but off it went anyway.

So, of course it goes without saying that I figured out what was wrong with the article, about 2 seconds after I dropped it off at the Post Office. That is why I'm writing this.

Part of the article deals with when and how SPAAR was formed. What I forgot to mention was the huge part that a person by the name of Art Nestor played in the formation of our club. Many of you in the club may have never even heard of Art, but he is well known across the country within the model rocketry community.

In the early spring of '88, I went looking for an NAR Section to join. The only problem was, the only Section in all of Pennsylvania was the Pittsburgh Space Command. The Section Advisor was Art Nestor, so I wrote to him, asking if I could join just to be in contact with other rocket modelers. I would be happy to just to exchange information. Art replied that while PSC would be happy to take on a "long-distance" member, maybe I should try to start a club myself. Quite honestly, I hadn't really thought of that.

During the next few months, I corresponded back and forth with Art about this idea. He provided me with encouragement, ideas and insight that was invaluable.

I finally had the chance to meet Art at NARAM-35, and it was truly a pleasure. So, thanks, Art, we owe you a lot, and sorry for the oversight in American Spacemodeling!

SECTION NEWS NOTES

SCHEDULE CHANGES: Please note that all launches that had been scheduled for Saturdays this fall have been changed to Sunday afternoons, between 1 and 5PM. In addition, the monthly meetings will be held on those same days, prior to the launches.

STATUS OF COCALICO HS: As has been the case over the last few years, the fall soccer leagues are in full swing, making use of the "east" side of the school. In recent years, this was not a problem for us, since we simply moved over to the "west" side of the school. However, with the recent construction project still not 100% complete, we could not do so on Sept. 19, and this was a real problem.

When the construction is finished, it appears that we will be able to use the west side if need be. I will try to keep an eye on the progress leading up to our next launch, Sunday October 10.

MEETING PLACE NEEDED: Since the loss of the use of the Lancaster Library, our meetings have been held at various locations at various times. This is an unsatisfactory situation that needs to be addressed. If anyone has an idea for a permanent meeting site, preferably in the Lancaster area, please check into it!

WINTER WORKSHOP PROGRAM: The topics for this coming winter's workshops have been decided. The January '94 workshop will concern itself with E Helicopter, and February and March will cover Plastic Model Conversion. Kits will be offered for E Helicopter, and are hoped to be in the \$5-\$7 range. We are in need of a person or persons to run the PMC Workshop. Those who are interested should contact me at 717-733-4170 [George].

RAMTEC - 2: The RAMTEC-2 Regional Meet is scheduled for the weekend of June 11-12, 1994, at Allentown College in Center Valley. The events will be: **A Rocket/Glide, Multi-Round; B Eggloft Duration; C SuperRoc Duration; E Helicopter; & Plastic Model Conversion.**

SPAARSPAM-V ALERT!: It's coming up sooner than you think! Mark down Sunday, November 15 on your calendars, and bring the goodies. The "event" this year will be **FUN SCALE SPOT LANDING.** Fly your rocket that looks like a real one, and try to land it closest to the marker. No static judging of models. The winner gets to keep the target. What is it? Fly with us on November 15 and find out!

TURKEYDAY + 1 LAUNCH: Contact Glenn at 717-456-5570 for info on a planned launch on Nov. 26 near Belair, MD.

THE SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY

Five Years and Flying Strong

The origins of SPAAR go back to the early spring of 1988. In January of that year, I contacted Art Nestor, the Section Advisor of the Pittsburgh Space Command, at the time the only NAR Section in Pennsylvania. I expressed interest in joining PSC, if for no other reason than to be able to communicate with other rocketeers. Art suggested that I look into starting a Section here in this part of the state, and provided invaluable advice on how to do so. I then contacted John Yost through an NAR membership list, and the ball started to roll.

Our first meeting was in May, and it was decided to form a club. There were nine original members, of which six are still active today: John Yost, Dan Weinhold, Bill Rhoat, Rick Hackman, Mark Snyder, and myself.

Our first launch was held at Cocalico on June 20, 1988; the first newsletter went out that same month. As the summer of 1988 continued, so did the formation of the club, which, by the way, still did not have an official name. In August, our third sport launch was held at Comet Field in Lancaster. This was the first launch attended by Glenn Feveryear and Ed Miller, both of whom joined up that month. Dale Greene joined at the August meeting, which was the first to be held

at the Lancaster County Library. It is now safe to say that the strong foundation of the club was laid within these first few months.

At that August meeting, we decided to apply for an NAR Section charter. We also agreed on holding meetings on the third Monday of each month; a dues system was worked out; plans were made for a contest in September; and the search for a real name began. In addition, that was the month that our newsletter got a name: the Countdown.

In October '88, we flew "UNCLE-1": UNamed Club Launches Eggs. It gave everyone a taste of contest flying. Late that month, we were granted Section Charter #503, as SPAAR, the Southern Pennsylvania Area Association of Rocketry.

Membership continued to grow. It was about this time that Bill Rhoat's father Dick, a complete newcomer to the hobby, also joined up. He is still an invaluable member today.

The year of 1989 saw the beginning of many of SPAAR's traditions. SPAAR members appeared for the first time at an NAR sanctioned meet, the GODDARD-9 Open, hosted by GSSS in March. [Boy, was it cold!] The club's launch system, constructed by John Yost and Glenn Feveryear, went into

service in April; a Flight Card system was introduced to keep track of all of the club's flights. Our first Section Meet, the 7-event SPAARSEC-1, was flown in July. We learned two valuable lessons that day: keep the number of events down, and don't fly them in July! [Boy, was it hot!]

One of SPAAR's most hallowed traditions also began that fall: SPAARSPAM. This stands for SPAAR's Section Picnic And Meet. Despite the pleas of some of our more sane members, it is held in the first part of November. The idea was taken from pre-game tailgate parties often seen before college football games. Even while eating chili, chips, cookies, and the like, we even find time to fly some rockets. We also fly an "event", so to speak. In the past, they have included 1/2A Mini-Roc Non-Duration, B Big Bertha Duration, and that all time favorite, B Eggloft Streamer Spot Landing.

To help alleviate the long winter boredom, in January of '90 we held our first Winter Workshop. Now held once a month during January, February and March, they have covered many topics in competition, sport, and high power rocketry, as well as "Old Rocket Junk" and even an auction.

Also in January of that year, we held our first SPAAR Family Dinner, another tradition that continues to this day. Usually held on the second Saturday evening of January, it is a nice way to help get away from the "post-holiday blues".

In the area of competition, to date SPAAR has hosted nine Section Meets, two Open Meets, one Record Trial [SPAART-1 in July, 1990; Boy, was it hot! Think we'll ever learn?]; and most recently, the RAMTEC-1 Regional. SPAAR members also hold a number of NAR performance records. These include F Streamer and G Streamer, Ed Miller; B Boost/Glide and C SuperRoc Duration, Glenn Feveryear; and A SuperRoc Duration, George Beaver. Several A or B Division records are pending on behalf of Dan Yost, John's oldest son. SPAAR also keeps track of club performance records, recognized by a certificate.

SPAAR also has a number of members who are active in High Power Rocketry, in particular Ed Miller and John Balmer. Ed's construction and finishing techniques are gaining national attention [he did a number of display models for North Coast Rocketry], and John has gained recognition for his work on rocket-lofted movie and video cameras.

Most recently, SPAAR was well represented at NARAM-35. Glenn Feveryear emerged as the 1992-93 C Division National Champion, a well-earned title.

One of SPAAR's goals is to provide a welcome atmosphere for all types of rocket modelers. We are proud of the fact that we are not a one-dimensional club; we have room for all. Like all clubs, we have our problems and hurdles to overcome. But we've come a long way in 5 years. The next 5 can be just as bright!

NARAM-35:**A SPAARSPECTIVE**

The 35th National Association of Rocketry Annual Meet, or NARAM-35, was held this past August 1-7. It was hosted by the NARHAMS Section in Middletown, MD.

Seven members of SPAAR made the trip to NARAM. Some, like John Yost, Dale Greene, and Ed Miller had been to a number of previous NARAMs. For others, such as Rick Hackman, Patrick Boyle, Glenn Feveryear and myself, this was to be our first NARAM experience.

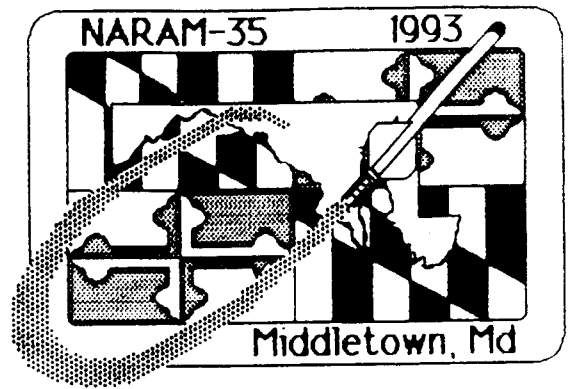
I asked for some impressions of NARAM-35 from those who attended. Some were quite interesting.....

As for what impressed us the most favorably, Glenn said, "The smoothness of the range operations. I'm sure a lot of work was behind the two range set-up...other than tracking days the range ran like a large regional..." To John Yost, "the people, as always. The feeling of comraderie is very strong, especially at something this big. {Also} all the hard work that Tom Lyon and the rest of NARHAMS put into the event. I didn't envy them at all. I hope they enjoyed it." For Rick Hackman, it was "...how friendly everyone was. Total strangers came over to help me get signed up with the NAR." Dale Greene was impressed by the "good facilities, good planning. Most operations were

well run but informal enough to be fun".

One thing was for certain, there were so many things to do, that if you got bored, it was your own fault. With so many things going on, it's hard to pick out one thing that you enjoyed the most. However, Dale picked the "NAR Town Meeting and Association Meeting. Four hours of arguments, bickering, mud slinging - all done in accordance to Roberts [or Roberts] Rules of Order. Things haven't changed a bit in 20 years." For Rick, it was "meeting Mr. & Mrs. Vern Estes." John Yost was emphatic: "Winning events at NARAM has to top anything in this hobby, in my opinion. I truly enjoyed working with old friends, like Ed Pearson especially..." For Glenn, this was an easy one: "Winning the National Championship! It was also fun attending an event for a week where my hobby was the center of attention. It made me feel that we weren't just a small group of goofy rocket flyers but an organized crew that could have impact."

I was also interested in whatever negative impressions that our folks had. Not to degrade or poke fun, but to use as a learning tool. The responses were interesting. Dale was irked by "the range coming to a standstill due to people not showing up for their



range duty". Glenn replied, "I think it would have been nice to have the scale modelers standing-by their models during the public viewing. What few modelers I was able to snag offered lots of suggestions and insight on how they accomplished their construction". John Yost wrote, "My behavior with the DQ'd {1/2A} Cluster flight, although I still think it was DQ'd for the wrong reason." For Rick, it was "I wish I could have gone for the whole week. Who ordered the rain for Friday? It was great weather for a duck!"

Now, you didn't think that a large number of rocket nuts could possibly be in the same place, at the same time, for a whole week, without some humor creeping in, did you? What gave our people the biggest yuk? For John, this was easy. "Unquestionably, George Gassaway's midair snatch of Ken Brown's detergent bottle rocket." For the Feveryear clan: "We had set up our canopy, and Rita decided she wanted it closer to the Port-A-Pot. So, we recruited George, John, and Renee, and walked it across the parking lot, near the launch area and the Port-A-Pot." Rick thought that "Dale Greene's SuperRoc doing a better job flying as a boost/glider" was good for a chuckle. And as for Dale, it was "The look on George's face when they served his burrito at Chi-Chi's." [It was impressive]

As for how we did as a club in the competition, well, not too bad, all things considered. Glenn took 2nd Place in Sport

Scale and B Helicopter, on his way to the C Division national title. The Flirtin' With Disaster Team of John and myself took 1st in 1/2A PD Multi and 3rd in C SuperRoc Altitude in Team Division. At the banquet, the tables of some of the other clubs looked more like the display counter at a trophy supply company. I suspect that they may have grabbed a U-Haul to carry away all of that heavy metal. However, we did alright in the door prize category. The Feveryears took home an NCR Lance Beta kit, a video of NARAM-34, and various other items. Dale Greene came within one number of winning a replacement NCR Big Brute; it went to John Yost instead!

Our newsletter won an "Honorable Mention", and Kevin Funk finally got a most deserved recognition for WARP-9 when he was awarded the LAC Rockwell Trophy for the best newsletter. [Congratulations!]

SPAAR was active on the sport range, too. Ed Miller was only able to attend on Sunday, and I believe he got off the only Class B flight of the day. Again, his paint jobs received a number of "ooohs & ahhs". Rick Hackman got off some flights, as did Patrick Boyle, who flew his AeroTech "Cheetah" with an F motor. I managed to fly an Estes Titan IIIE, a Maxi-Force, and a LOC Onyx on an F14.

All and all, it was a great time. Hats off to NARHAMS for a great NARAM. They did a great job!

SPAAR SPORT LAUNCHES

August 15, 1993

Pretty good turnout on a beautiful day! It was Scale Day, so there were plenty of miniature missiles flying around.

Our friend from New Jersey, Bruce Canino, flew his rather unique AeroTech IQSY Tomahawk, the same model that he had entered in Sport Scale at NARAM. He put it on the roof on it's second flight, but it was recovered the next day. Other scale models that flew were: Little Joe II [Bill Rhoat]; Nike-Apache, Patriot, Nike-Tomahawk & Honest John [Ed Miller]; 1/100-scale, two stage Saturn 1B & Jupiter-C PMC [Glenn]; and 2 Saturn Vs and 2 1/70-scale Saturn 1Bs [George]. Ed's flights were distinctive in that they were all on AeroTech reloadables. Glenn's Jupiter was the first plastic model conversion ever at a SPAAR launch. George's Cox Saturn V burned the stuffer tube, which began melting the body itself. Mark has another toy.

September 5, 1993

This was the way it used to be! The SPAARSEC-9 meet was pretty much flown in the morning, which left the afternoon for sport flying. There were 60 sport flights made by 13 flyers. Just like the good old days, right? One notable

achievement was the fact that of Ed's 11 flights, all but 2 were with AeroTech reloads. The C12, D15 and C6 were particularly impressive. Patrick Boyle took more Astrocam pictures [hey Patrick, when will we see the final results?] The first Estes E15s were seen at a SPAAR launch. John Yost and George both flew AeroTech Mustangs on E15-4s, and George added a flight with a AAA PA Crude, also with an E15-4. They don't have the fire and noise of the AeroTech E15, but still not bad for a 32ns motor. Dale Greene brought out what has become a replacement for the late, lamented Big Brute: Das Not Yet Blue Max. This monster really is neat flown on G40s! Rick Hackman reprised "Agrarian Rocketry" with The Stalk. The plans for this corny vehicle will be in a future issue.

September 19, 1993

Problems with soccer games forced us to move to a different part of the field, which kept us to 18 flights. However, Glenn proved that yes, a LOC Onyx really can fly on a D12, but the E15 was better! Rick's Ramjet Interceptor obtained Target Lock on the cornfield [THUNK!!]; and George really should use a D20 in the first stage of the Megatron, not a D18. You could almost hear it GRUNT off the pad.

FLIGHT LOG

August 15, 1993

<u>FL#</u>	<u>NAME</u>	<u>MODEL</u>	<u>MANUF.</u>	<u>MOTOR(S)</u>	<u>RESULTS</u>
1	Dan'l F	Alpha III	Estes	E B4-4	Good Flight
2	Patrick B	Space Clipper	Quest	E C6-3	Good Flight
3	Patrick B	Space Clipper	Quest	E C6-3	Good Flight
4	Patrick B	Super Big Bertha	Estes	E D12-5	Good Flight
5	Patrick B	Super Big Bertha	Estes	E D12-5	Good Flight
6	Patrick B	Cheetah	AeroTech	AT E30-7T	Good Flight
7	Patrick B	Astrocam 110	Estes	E C6-7	School shot
8	Patrick B	Astrocam 110	Estes	E C6-7	Cornfield
9	Patrick B	Astrocam 110	Estes	E C6-7	Separation
10	Patrick B	Raven	Estes	E B6-4	Good Flight
11	Bruce C	IQSY T-hawk	AeroTech	AT E15-4WL	Good Flight
12	Bruce C	IQSY T-hawk	AeroTech	AT F14-4J	Roof job
13	Bill R	Der V-3	Estes	E D12-3	Good Flight
14	Bill R	Little Joe II	Estes	E A3-4	Good Flight
15	Rick H	XR-72	SB	E A8-3	Good Flight
16	Rick H	UFO-24	EM	E D12-0	Good Flight
17	Rick H	XR-55	SB	E C6-3	Good Flight
18	Rick H	Ramjet Int.	SB	E D12-3	Good Flight
19	Rick H	UFO-24	EM	E D12-0	Good Flight
20	Rick H	XR-61	SB	E D12-3	Good Flight
21	John Y	UFO-24/10	EM	AT E15	Good Flight
22	John Y	Mustang	AeroTech	AT E15-4WL	Good Flight
23	John Y	Rose-A-Roc	SB	E B4-4	73.2s/GF
24	Dale G	Not Yet Blue	Max ORI	AT G40-7WL	Good Flight
25	Dale G	Magnum	Estes	E D12-0/B4-6	Good Flight
26	Ed M	Rascal	Estes	AT B6-2RMS	Good Flight
27	Ed M	Nike-Apache	Estes	AT C6-5RMS	Good Flight
28	Ed M	Patriot	Estes	AT D13-4RMS	Good Flight
29	Ed M	Nike-Tomahawk	FSI	AT E18-4RMS	Good Flight
30	Ed M	Mx Honest John	Estes	AT F24-4RMS	Good Flight
31	Ed M	Azinon	SB	AT F52-5RMS	Good Flight
32	Glenn F	Arreaux	AeroTech	AT E15-4WL	Good Flight
33	Glenn F	Saturn 1B	Estes	E D12-0/B4-4	Good Flight
34	Glenn F	Jupiter-C	Glencoe	E C5-3	PMC/GF
35	Glenn F	Arreaux	AeroTech	AT E15-4WL	Good Flight
36	Glenn F	Grumpy Dog	SB	E D12-0/D12-3	Good Flight
37	Glenn F	Nomad RG	SB	E A8-3	30.7s/GF
38	George B	Mx Honest John	Estes	AT D13-4RMS	Good Flight
39	George B	Saturn V	Cox	AT E25-4T	Hot Flight
40	George B	Saturn V	Estes/NCR	AT E18-4RMS	Good Flight
41	George B	Saturn 1B	SB	AT E15-4WL	Good Flight
42	George B	Saturn 1B	SB	E C6-5 X 4	Good Flight

Flight Statistics

Models flown:

Estes: 14	Quest: 1	FSI: 1
AeroTech: 4	Glencoe: 1	Cox: 1
ORI: 1	Ed Miller: 2	
Scratchbuilt: 10		

Motor Usage:

Estes: 30	AeroTech Single Use: 10
AeroTech RMS: 8	

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SEPTEMBER 5, 1993

SPAARSEC-IX

1	Glenn F	1/2A HD[M]	1/2A3-2	28s
2	Glenn F	1/2A HD[M]	1/2A3-4	61s
3	Glenn F	1/2A HD[M]	1/2A3-4	35s
4	Glenn F	A HD[M]	A10-3	43s
5	Glenn F	A HD[M]	A3-4	166s
6	Glenn F	A HD[M]	A3-4	85s
7	Glenn F	B HD[M]	B6-4	50s
8	Glenn F	B HD[M]	B4-4	139s
9	Glenn F	B HD[M]	B4-4	119s
10	Dale G	1/2A HD[M]	1/2A3-2	14s
11	Dale G	1/2A HD[M]	1/2A3-2	14s
12	Dale G	1/2A HD[M]	1/2A3-2	12s
13	Dale G	A HD[M]	A10-3	22s
14	Dale G	A HD[M]	A10-3	25s
15	Dale G	A HD[M]	A10-3	15s
16	Dale G	B HD[M]	B4-2	35s
17	Dale G	B HD[M]	B4-2	43s
18	Dale G	B HD[M]	B4-4	49s
19	FWD Tm	1/2A HD[M]	1/2A3-2	32s
20	FWD Tm	1/2A HD[M]	1/2A3-2	53s
21	FWD Tm	1/2A HD[M]	1/2A3-2	28s
22	FWD Tm	A HD[M]	A3-2	86s
23	FWD Tm	A HD[M]	A3-2	23s
24	FWD Tm	A HD[M]	A3-2	58s
25	FWD Tm	B HD[M]	B4-4	25s
26	FWD Tm	B HD[M]	B4-4	132s
27	FWD Tm	B HD[M]	B4-4	38s
28	Patrick B	B HD[M]	B4-2	6s
29	Patrick B	B HD[M]	B4-2	8s
30	Patrick B	B HD[M]	B4-2	7s
31	Patrick B	A HD[M]	A8-3	4/DQ
32	Patrick B	A HD[M]	A8-3	4/DQ

33	Patrick	B A	HD[M]	A8-3	5s
34	Dan	Y B	HD[M]	B4-2	71s
35	Dan	Y B	HD[M]	B4-2	41s
36	Dan	Y B	HD[M]	B4-2	56s
37	Dan	Y A	HD[M]	A8-3	19s
38	Dan	Y A	HD[M]	A3-2	29s
39	Dan	Y A	HD[M]	A3-2	33s
40	Dan	Y 1/2A	HD[M]	1/2A3-2	26s
41	Dan	Y 1/2A	HD[M]	1/2A3-2	25s
42	Dan	Y 1/2A	HD[M]	1/2A3-2	26s

SPORT FLIGHTS

43	Dan	F	Alpha III	Estes	E B4-4	Good Flight
44	Josh	R	Bandit	Estes	E B4-4	SEP
45	Josh	R	Athena	Estes	E B4-4	SEP
46	Brandon	T	RECON-1	Estes	E B4-4	Good Flight
47	Brandon	T	RECON-1	Estes	E B4-4	Good Flight
48	Kevin	T	Skywinder	Estes	E C6-3	Good Flight
49	Kevin	T	Skywinder	Estes	E B4-4	Good Flight
50	Kevin	T	Skywinder	Estes	E C5-3	Good Flight
51	Kevin	T	Mosquito	Unknown	E B4-4	Good Flight
52	Patrick	B	Sup Big Bertha	Estes	E D12-5	Good Flight
53	Patrick	B	Sup Big Bertha	Estes	E D12-5	Good Flight
54	Patrick	B	Sup Big Bertha	Estes	E D12-5	Good Flight
55	Patrick	B	Astrocam 110	Estes	E C6-7	Good Flight
56	Patrick	B	Astrocam 110	Estes	E C6-7	Good Flight
57	Patrick	B	Astrocam 110	Estes	E C6-7	Good Flight
58	Bill	R	Mini Cobra	Estes	E A10-0/1/2A3-4	2nd st no ig
59	Bill	R	Sentinel	Estes	E C6-5	Good Flight
60	Bill	R	Der V-3	Estes	E D12-3	Good Flight
61	Bill	R	Sprint	Quest	E A8-3	Good Flight
62	Alan	R	Rascal	Estes	E B6-4	Good Flight
63	Alan	R	Alpha	Estes	E B4-4	Good Flight
64	Alan	R	Mega Sizz	Estes	E D12-5	Good Flight
65	Alan	R	Magnum	Estes	E C6-5	SEP
66	Alan	R	Magnum	Estes	E D12-0/B6-6	Good Flight
67	John	Y	UFO	EM	E D12-3	Good Flight
68	John	Y	Mustang	AeroTech	E E15-4	Good Flight
69	Ed	M	V-2	Estes	AT C12-4RMS	Good Flight
70	Ed	M	Athena	Estes	E B4-4	Good Flight
71	Ed	M	Warp II	Estes	E C6-0/A8-5	Good Flight
72	Ed	M	Rain Maker	Estes	AT C6-5RMS	Good Flight
73	Ed	M	Sentinel	Estes	AT B6-4RMS	Good Flight
74	Ed	M	Rascal	Estes	AT B6-2RMS	Good Flight
75	Ed	M	Patriot	Estes	AT D13-7RMS	Good Flight
76	Ed	M	Sup Big Bertha	Estes	AT F24-4RMS	Good Flight
77	Ed	M	UFO-29/10	SB	AT G64-4RMS	Good Flight
78	Ed	M	Titan IIIE	Estes	AT D15-4RMS	Good Flight
79	Ed	M	Warp Drive 24	SB	AT E30-10	Good Flight
80	Ed	M	Trailblazer	MRC	AT D13-4RMS	Good Flight

81	Rick H	UFO-24	EM	E D12-0	Good Flight
82	Rick H	Stalk	SB	E A8-3	Good Flight
83	Rick H	Stalk	SB	E B4-4	Good Flight
84	Rick H	Birdie	EM	E 1/2A3-2	Good Flight
85	Rick H	XR-12	SB	E B6-4	Good Flight
86	Rick H	XR-55	SB	E C6-3	Turn n' Burn!
87	Rick H	XR-55	SB	E B8-5	Turn n' Crash!
88	Rick H	XR-61	SB	E D12-3	Good Flight
89	Rick H	XR-61	SB	E B6-4	Good Flight
90	Glenn F	Little Loe II	Estes	E B6-4	SEP
91	Glenn F	Mustang	AeroTech	AT E15-4	Good Flight
92	Dale G	Not Yet Blue Max	ORI	AT G40-7	Good Flight
93	Dale G	SPT	SB	E D12-0/D12-5	Good Flight
94	George B	Mustang	AeroTech	E E15-4	Good Flight
95	George B	Solar Probe	Estes	E B6-4	Good Flight
96	George B	Recruiter	Estes	E C6-7	Good Flight
97	George B	PA Crude	AAA	E E15-4	Good Flight
98	George B	Bullpup 12D	Estes	E C6-5	Good Flight
99	George B	Der V-3	Estes	E D12-5	Good Flight
100	George B	Der V-3	Estes	E D12-7	Good Flight
101	George B	Firehawk	Estes	E C6-5	Good Flight
102	George B	Firehawk	Estes	E C6-5	Good Flight

Flight Statistics

Models flown: [Sport Flights only]

Estes: 28	AeroTech: 3	AAA: 1
MRC: 1	ORI: 1	Quest: 1
Ed Miller: 3	Scratchbuilt: 8	

Motor Usage: [All Flights]

Estes: 88	MRC: 1	Apogee: 4
AeroTech Single Use: 3	AeroTech RMS: 9	

September 19, 1993

1	Renee F	Rainmaker	Estes	E B4-4	Good Flight
2	Daniel F	Gnome	Estes	E 1/2A3-4	Good Flight
3	Daniel F	Gnome	Estes	E 1/2A3-4	Good Flight
4	Daniel F	Bandit	Estes	E B6-4	Good Flight
5	Glenn F	Onyx	LOC	E D12-3	Good Flight
6	Glenn F	Onyx	LOC	AT E15-4	Good Flight
7	Rick H	XR-14	SB	E B6-4	Good Flight
8	Rick h	XR-63	SB	E A10-0[3] A10-3[1]	Good Flight
9	Rick H	XR-55	SB	E C6-3	Good Flight
10	Rick H	UFO	EM	E D12-0	Good Flight
11	Rick H	Birdie	EM	E 1/2A3-2	Good Flight
12	Rick H	Stalk	SB	E C6-3	Shred

13	Rick H	Ramjet Int	SB	E D12-3	SEP
14	George B	Carlisle MK II	SB	Q A6-4	Good Flight
15	George B	TC Carrier	Estes	E A8-5	Good Flight
16	George B	TC Carrier	Estes	E B6-0/A8-5	Good Flight
17	George B	Megatron	FSI	FSI D18-0/D20-7	Good Flight
18	Dave B	Air Mail	SB	AT F24-4RMS	Good Flight

Flight Statistics

Models Flown:

Estes: 4	FSI: 1	LOC: 1
Ed Miller: 1	Scratchbuilt: 5	

Motor Usage:

Estes: 18	Quest: 1	FSI: 2
AeroTech Single Use: 1	AeroTech RMS: 1	

=====

THIS 'N THAT

HAVE PAYLOAD, WILL TRAVEL: I have a Microbrick Maxon kit sitting in my basement that is in dire need of a payload. The Maxon is a 4" diameter design that looks somewhat like the THOY Falcons that we built. I think that flying it without a payload of some sort is a bit of a waste. If any member wants to get together with me on this project, we can fly that camera or other payload that you've wanted to fly. Give me a call at 733-4170. [George]

FAMILY DINNER IN THE PLANNING STAGES: John Yost is checking out the Ponderosa Restaurant off of Rt. 30 in Centerville as a possibility for our Family Dinner in January 1994. We had our first get-together there back in '90. Tentative dates are January 8 or January 15. More information as it becomes available.

1994 SCHEDULE: It's never too early! What would you like to see in '94? How about a Club Record Attempt Day? An Altitude Day? Any ideas on how to celebrate the 25th anniversary of the first moon landing mission of Apollo 11? [July 16-25, 1969] Let's get some ideas!

CLUB ELECTIONS: It's that time of the year again. The nominations for club officers will be taken at the November meeting at SPAARSPAM-V, and the elections will be held at the December meeting.

CLUB DISPLAY: We have the opportunity to set up a rocketry display at HobbyWorld R/C in Shillington this winter. Models rocketry materials will be needed. More information as it becomes available.

The Rocket Workshop:

BODY TUBE CUTTER

by

Ed Miller

I built this tube cutter a few months ago and have used it many times since then. This is one tool that every hard core rocketeer should own.

Parts List

Source

1	2"x 2"x 6' aluminum angle w/ 1/8" thick wall	True Value
3	1/4"-20 x 3/4" Hex head bolt	True Value
2	1/4"-20 x 1/2" machine screw w/countersunk head	True Value
3	1/4" wing nut	True Value
2	1/4"-20 Hex nut	True Value
5	1/4" lock washer	True Value
5	1/4" flat washer	True Value
1	Pack of utility knife blades	True Value
1	Self-adhesive tape measure, 48", left to right numbering	True Value

Note: It is recommended that you use stainless steel fasteners.

Cut angle as shown in **Figure #1**. Use a power mitre saw or radial arm saw with a metal cutting blade to make sure the cuts are square. Use a flat file to smooth out all sharp edges.

Drill holes in parts as shown in **Figure #2**. Counter-sink the two holes shown.

Assemble as shown in **Figure #3**.

To use the tube cutter, see **Figure #4**. Clamp the utility blade between parts **C & D**. The tip of the blade should protrude just far enough to penetrate the wall of the tube you are cutting. If you are cutting a 3" diameter tube the blade must protrude about 1 1/2" from the "V" of the angle. Adjust the depth stop to the length of the tube desired. Place one end of the tube against the depth stop. Lay the tube against the angle. Only light pressure against the blade is needed. Rotate the tube while maintaining light pressure against the blade. It should take only three turns to cut the tube off. With a little practice you should be able to make perfectly square cuts.

FIGURE #1

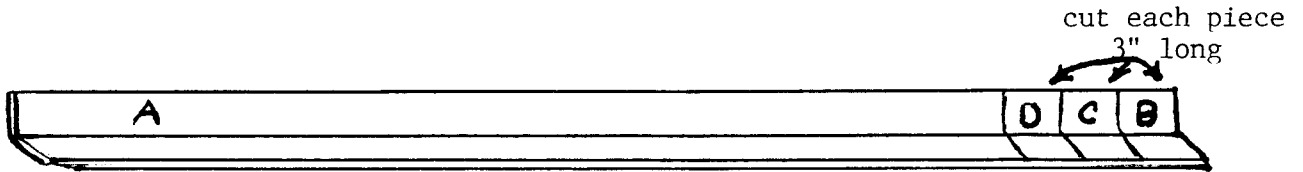
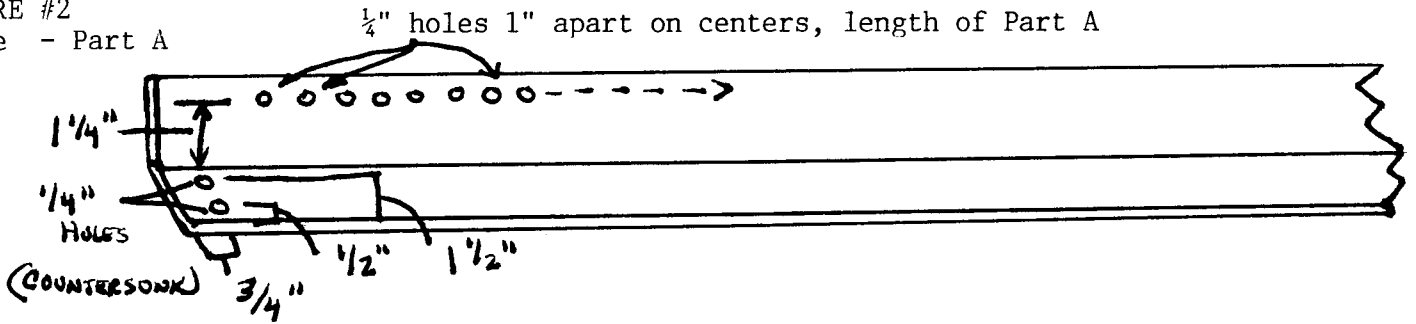


FIGURE #2

Frame - Part A



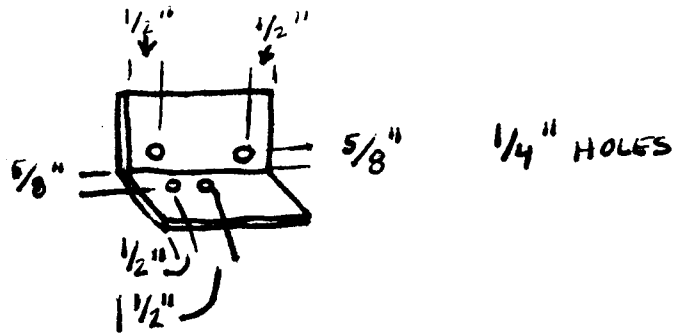
DEPTH STOP

Part B



FLANGE

Part C



CLAMP

Part D

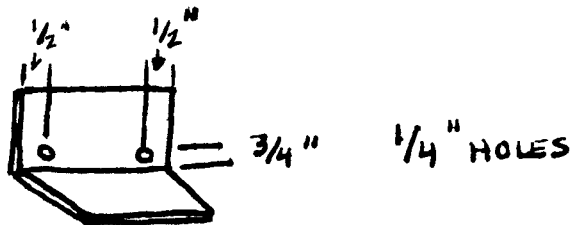


FIGURE 3: Assembly

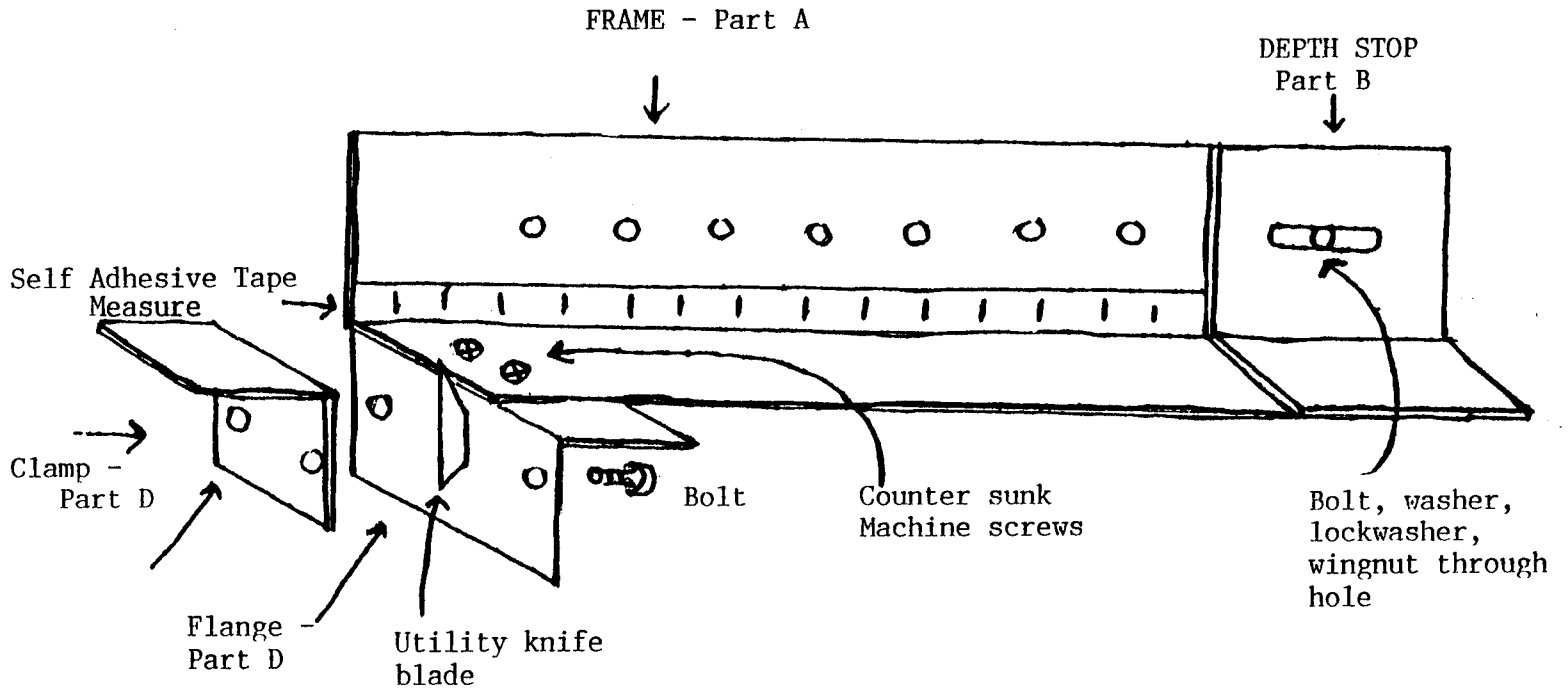
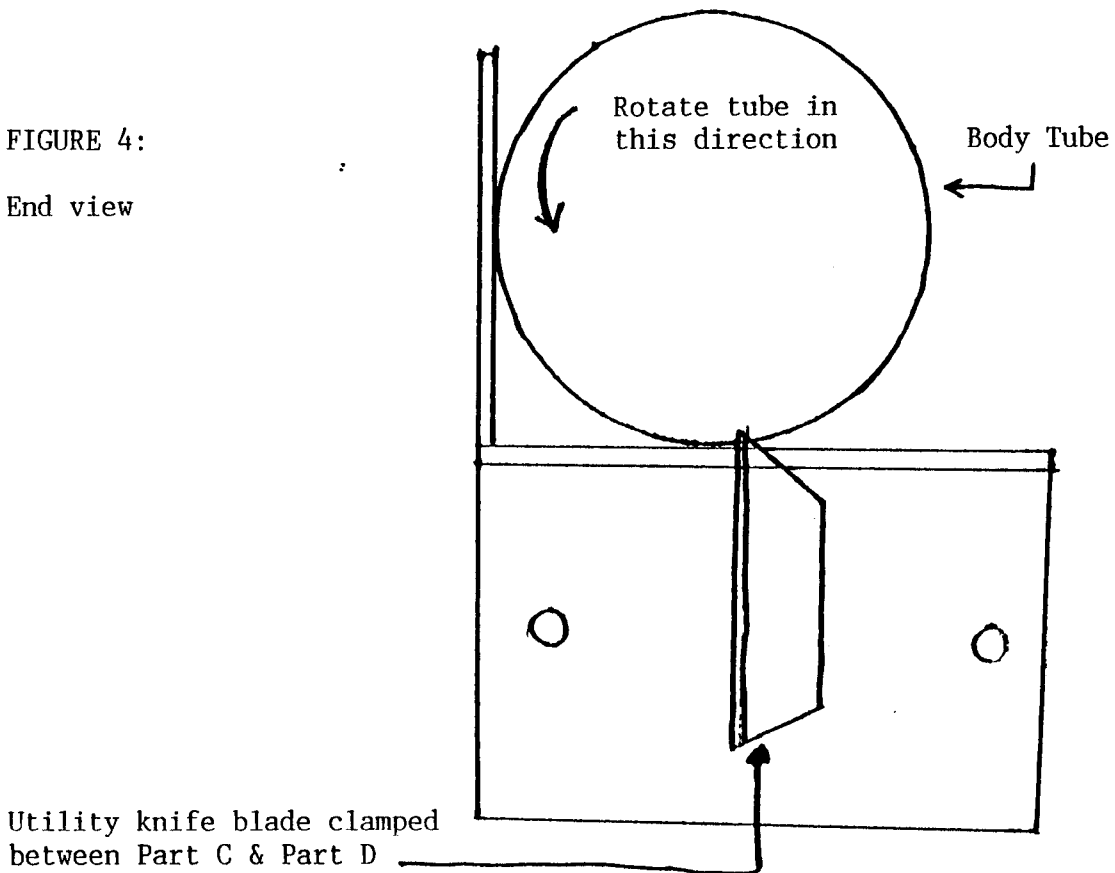


FIGURE 4:
End view



SOME FINAL THOUGHTS ON NARAM-35

by George Beever

I first read about NARAM in the late Sixties in the Estes Model Rocket News and in Model Rocketry magazine. Since that time, I had wanted to go to one. I came close in 1989, when NARAM-31 was hosted by NOVAAR in Virginia. However, our son Mark was born on August 3 of that year. As patient as my wife is, that might have stretched things to the limit. So, when I found out that NARAM-35 was going to be so close, I could not wait to go. This was to be my first NARAM. I wasn't disappointed. In short, I had a blast.... First and foremost, it was a real treat to finally meet so many of the great people that I gotten to know over the phone lines or the mail during the past 5 years. It was great to finally speak in person with Art Nestor, Bob Sanford, Ed LaCroix and Peter Alway. My only regret was that there never seemed to be enough time to talk! It was really nice to see old acquaintances, like Dr. Bob! Kruetz from GSSS, whom I hadn't seen since a Jersey meet back in 1990. The same goes for our old buddies Bruce Canino and Ken Brown. And, in what might have been the highlight of my week, I actually introduced myself to Vern Estes. I had always wanted to meet this man. He is a true gentleman.

Tom Lyon and the rest of the NARHAMS crew deserves a tremendous amount of credit for the job they did. I was most impressed with Vince Sempronio's on-the-field results computer set-up... the sport range was expertly run by the CMASS folks. Chris Tavares was born to be behind the microphone at a sport launch... A few months prior to NARAM, I had heard a rumor that the unofficial T-shirt was going to read, "I survived the Postage Stamp NARAM", in reference to all of the grief that NARHAMS took for their "postage stamp sized field". I didn't see the shirts, but I did see that no one overflew the field. In fact, NARAM-34 CD Bob Sanford was heard to say, "This field is great. What was everyone worried about? I still like my desert, though!"... It would have been nice if Estes and AeroTech could "have made nice" and been there, but I suppose the current legal troubles prevented that. It was their loss. I was disappointed with myself a couple of times, by getting too caught up in the competition. I forgot, at times, that this is nothing more than a game, really... I agree with Rick Hackman; who ordered the rain for Friday?... My biggest laugh came when the "Ren & Stimpy" team walked up to accept their awards. Somebody was doing a great impression: "Steeempy, weeee deeed eeet!" The burrito was a good one, too... The "Dead Last But Finished Awards" were hilarious ...And no, I wasn't trying to bribe the CD by buying him a beer Wednesday night. I know him to be a man of integrity that can't be compromised with a cheap stunt like that... well, two beers, maybe! **[JUST KIDDING, TOM!]**

SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY
SECTION 503
SPAARSEC-9 RESULTS

1/2A HD Multi (sec)	FLHT1	FLHT2	FLHT3	FINAL	PLACE	POINTS
A, C, T Division						
Glenn Feveryear	28	MAX(1)	35	123	1	230
Flirtin w/Disaster	32	53	28	113	2	138
Daniel Yost	26	25	26(2)	77	3	92
Dale Greene	14	14	12	40	4	46
A HD Multi (sec)						
A Division						
Daniel Yost	19	29	33(3)	81	1	240
Patrick Boyle	ROT	ROT	5	5	2	144
C, T Division						
Glenn Feveryear	43	MAX(4)	85	248	1	240
Flirtin w/Disaster	86	23	58	167	2	144
Dale Greene	22	25	15	62	3	96
B HD Multi (sec)						
A Division						
Daniel Yost	71(5)	41	56	168	1	250
Patrick Boyle	6	8	7	21	2	150
C, T Division						
Glenn Feveryear	51	139(6)	119	309	1	250
Flirtin w/Disaster	26	133	38	197	2	150
D Greene	35	43	48	136	3	100

FINAL POINTS

Glenn Feveryear	720
Daniel Yost	582
Flirtin w/Disaster	432
Patrick Boyle	294
Dale Greene	242

Total: 2270

LEGEND:

ROT - DQ, No Rotation

SPAAR Records

- | | |
|--|--|
| (1) 1/2A HD, C Div @ 61 sec
Surpassed, John Yost 42.7 sec | (5) B HD, A Div @ 71.4 sec
Surpassed, Daniel Yost 56.7 sec
Pending U.S. Record |
| (2) 1/2A HD, A Div @ 26.4 sec
No Previous Record
Pending U.S. Record | (6) B HD, C Div @ 138.84 sec
Surpassed, Glenn Feveryear
61.87 sec |
| (3) A HD, A Div @ 33.4 sec
No Previous Record | |
| (4) A HD, C Div @ 166.4 sec
Surpassed, John Yost 74.0 sec | |

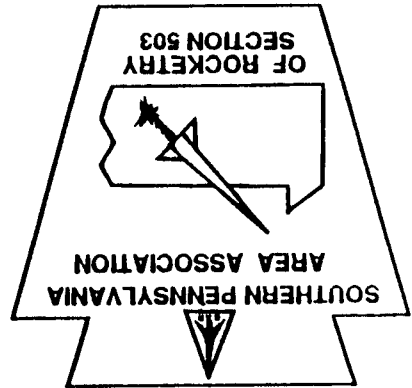
COUNTDOWN

*The Southern Pennsylvania Area
Association of Rocketry*

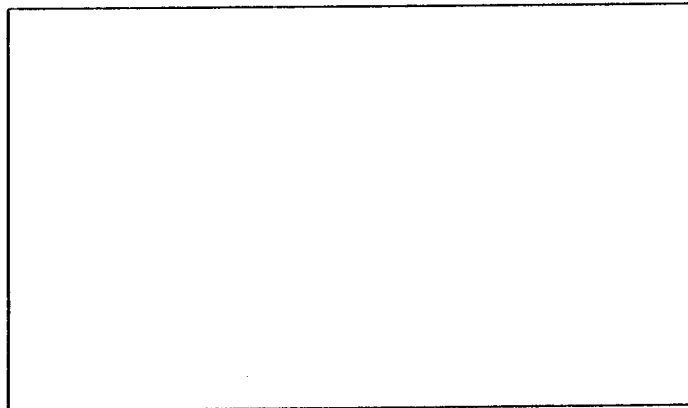


PROMOTING SAFE MODEL ROCKETRY
IN SOUTHERN PENNSYLVANIA
AND NORTHERN MARYLAND

SOUTHERN PENNSYLVANIA
AREA ASSOCIATION
OF ROCKETRY



TO:



SPAAR
P.O. Box 127
Reamstown, PA. 17567