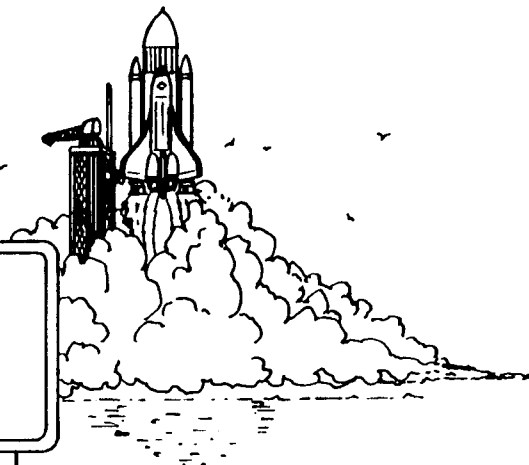
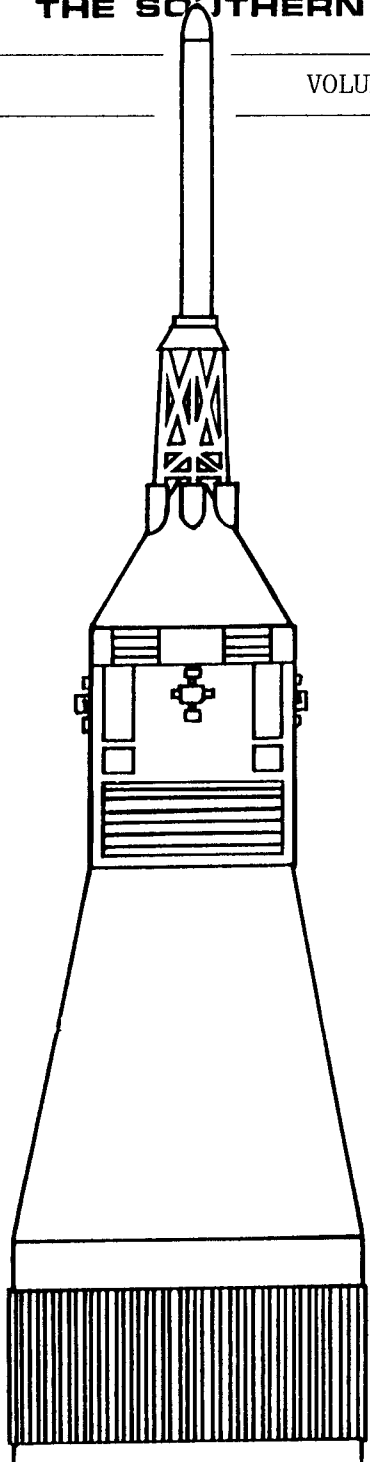


COUNTDOWN



**OFFICIAL NEWSLETTER OF
THE SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY**

VOLUME 4, ISSUE 5 SEPTEMBER/OCTOBER 1991



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The COUNTDOWN
Volume 4, Issue 5
September/October 1991

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: \$5 per year, 6 issues per year. Contents may be used with proper credit.

Cover logo: Bob Stott Jacket Design: Bruce Canino Editor: George Beever
Production Assistance: John Yost, Art Babiarz, Dale Greene, Dennis Stauffer
(THANKS GUYS!!!)

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Contributors to this issue: Ed Miller, Dale Greene, Glenn Feveryear, Mark Snyder.

SCHEDULE

Monday, October 21, 7-9PM: SPAAR Section Meeting, at George Beever's house, 129 Ashley Dr., Ephrata. For directions, call (717) 733-4170

Sunday, November 3, 1-5PM: SPAARSPAM-3 Section Sport Launch and Tailgate Party; Bring something to share, as well as your own utensils and drinks. Chilli and hot dogs provided. SPECIAL EVENT: .18mm ½A Streamer Duration X 2. Rules listed elsewhere in this issue.

Monday, November 18, 7-9PM: SPAAR Section Meeting, Lancaster County Public Library, N. Duke St., Lancaster. For directions, call John Yost (717) 684-9519.

Monday, December 16, 7-9PM: SPAAR Section Meeting, Lancaster County Public Library, N. Duke St., Lancaster. For directions, call John Yost (717) 684-9519.

WELCOME TO OUR NEW MEMBERS: Our newest members are Tim and Kevin Krall, 730 Tamarack Trail, Shillington, PA 19607 (215) 775-4999, and Wade and Amanda Latz, 315 W. Maple St., Palmyra, PA 17078 (717) 838-5819. Welcome to you all, and we're glad you are with us!

SECTION MEETINGSAUGUST 19, 1991

Present: Rita & Glenn Feveryear, E. Miller, Gary Feveryear, J. Yost, D. Greene, W. Rhoat, D. Stauffer, R. Rhoat, G. Beever

I. Treasurer: Ed Miller reported that there were 36 paid members; the balance at the end of the last meeting was \$244.46. Since then there were incomes of \$17.00 in dues, and \$2.62 in interest, bringing the current balance to \$269.08.

II. Newsletter: George Beever thanked Dale Greene, John Yost and Dennis Stauffer for their help with copying, and asked for any submissions.

III. Competition: Glenn Feveryear went over the tracking results from 7/21/91; discussed the events for SPAARSEC-V; reminded those present that the September 1 Sport launch would be Sounding Rocket Day.

IV. High Power: Ed Miller stated that he has yet to receive a reply from the FAA on our waiver request for the Sept. 1 Sport Launch. He also discussed the various kits under consideration for the HPR Workshop; a decision on this should be made at the September meeting.

V. Section Advisor: John Yost reported that our use of the library for meetings was OK'd until the end of the year, except for the October meeting. We will have to apply to use the library in 1992. After discussion, a vote was made to purchase The Handbook of Model Rocketry and The Rocket Book and donate them to the Lancaster County Library, in appreciation for the cooperation we have received from the Library since 1988. John was detailed to make the purchase with club funds through NARTS.

VI. Education: No Report.

OLD BUSINESS

George Beever reported he had contacted PARA about future mutual contest plans.

NEW BUSINESS

G. Beever passed out plans from exchange newsletters; passed around a hat with the SPAAR logo which is available.

Dale Greene then reported on his trip to NARAM-33.

The meeting then adjourned at 9PM.

SEPTEMBER 16, 1991

Present: Rita & Glenn Feveryear, Gary Feveryear, E. Miller, A. Babiarz, D. Greene, R. Rhoat, G. Beever.

Due to an unforeseen technical glitch (my tape recorder went on the fritz again) certain portions of the Sept. meeting were not recorded. I hate when that happens.

I. Treasurer: See the excuse above for why there ain't no figures here. See Ed to find out what we have and what we paid out.

II. Newsletter: Sent out 55 copies of the July/August newsletter to members, subscribers, and exchanges.

III. Competition: Glenn Feveryear went over the results from the SPAARSEC-V Section Meet, flown on 15 Sept. The results are listed elsewhere in this issue. The date for SPAARSEC-VI will be Sunday May 24, 1992, which is the Memorial Day Weekend. Possible events were discussed, including the provisional event Multi-stage Duration. The events will be decided in the near future.

IV. High Power: Ed Miller discussed the HPR Workshop program; a ballot vote was taken, and the T.H.O.Y Falcon was chosen as the model that will be built.

V. Section Advisor: No Report.

VI. Education: No Report.

OLD BUSINESS

None

NEW BUSINESS

Topics discussed included the annual SPAAR Family Dinner, the event for SPAARSPAM-3, the schedule for 1992, a rate increase for newsletter subscriptions, the CAPCON-91 convention, and the sight for the October meeting. PLEASE SEE THE "SECTION NEWS NOTES" PORTION OF THIS ISSUE FOR MORE DETAILS.

SECTION NEWS NOTES

THE SPAAR FAMILY DINNER: The third annual SPAAR Family Dinner is planned for Saturday, January 11, 1992. Dick Rhoat has volunteered to plan and organize this popular event. Dick says that he will present the details as he works them out. Find out who will be presented with the coveted SPAAR Rocket Lock Award! It could be you! Please plan to attend.

EVENT FOR SPAARSPAM-3: Yes, it's that time of the year again, time for our third annual tailgate picnic. As we did last year, all members are asked to bring something to share with everyone else. I know who is bringing the chili...me. Jim Lytle can probably be talked into being the hot dog man again. Don't forget to bring your own utensils (if you use them) and your own beverage (the soft drink variety, of course) and a few rockets to fly if the mood strikes you. And now, (insert drum roll here) the information you've all been waiting for... the "event" for SPAARSPAM-3 is...well, it's...sort of like...well, simply put it's...call it what you want (*cause we couldn't come up with a name) but here's the idea: take an 18mm 1/2A motor (which the last time I checked meant your choice of a 1/2A6-2, a 1/2A6-2, or a 1/2A6-2); put it in your favorite streamer recovered model; and somewhere in between the wadding and the streamer add another streamer, and there you have it! Would this be 1/2A Streamer/Streamer Duration? Do I stutter? The object is this: both the model and the separately ejected streamer are timed; the smaller figure is subtracted from the higher, and the result is your score. The lowest score wins....I think. How about 1/2A Streamer²? O yes, the date: Sunday, November 3, from 1PM to 5PM at Cocalico. Don't it figure? Just when you figure out Open Eggloft Streamer Spot Landing, they go and change it.....

CONTEST PLANS FOR '92: We are planning to hold either an Open or a Regional Meet in the spring, as a result of discussions with GSSS. They, in turn will do the same in the fall. Details TBA.

THE 1992 SCHEDULE: At the September meeting, the club's 1992 schedule was discussed. After a lengthy discussion, Glenn Feveryear volunteered to write up a proposed schedule for 92 that would incorporate the following changes: scheduling a sport launch at least once a month, including the months of December, January, February and March, months which we have not had regularly scheduled launches since 1988; flying on a monthly or an every 4 week basis, as opposed to the every 3 week rotation that we have followed since 1989. This will mean flying year 'round, but probably not as often. Special events, such as NAR sanctioned contests, will be scheduled around the sport launches. It is also proposed that if bad weather would force a cancellation during the winter months, the launch would not be rescheduled.

This may sound like a reduction in flying, but in reality it is not; things will just be spread out a bit more. Besides, if other clubs like PARA, GSSS and MIVARS can freeze their goodies off flying during the winter, why can't we?

RATE INCREASE FOR NEWSLETTER SUBSCRIBERS:

Sorry, folks. With increased postal and copying costs, we can no longer hold the line on the \$5 subscription rate. Starting 1/1/92, a one year subscription to this here newsletter will cost \$6. Thanks for your understanding. This of course does not affect members, who receive the newsletter as part of their membership.

LOCATION OF THE OCTOBER MEETING: Due to the fact that the library is unavailable to us on October 21, the club's monthly meeting for that date will be held at George Beever's house. The address is 129 Ashley Dr., Ephrata, phone # is 717-733-4170. Call for directions, evenings before 9PM. Everyone is welcome.

CAPCON-91: The NARHAMS Section is hosting a convention during the weekend of Oct. 19-20. Glenn & Rita will be setting up a SPAAR info table on the 20th. If you have anything that might help, contact them prior to Oct. 13.

THE REMMINGTON LAUNCH

Photos and text by Ed Miller

Wow! A Tripoli sanctioned launch only a four hour drive from home. The launch was being held by the Central Virginia Aerospace Association, Tripoli Prefecture #25. The date of the launch was June 1 & 2, 1991. I made my hotel reservations and saved my "Mad" money for three months. I also rushed assembly of a AAA Aviation Fuels Bandit 3X for my H motor conformation flight.

We left home on Friday night and after a four hour drive we checked into our hotel in Warrenton, VA. The next morning we were up with the sun and arrived at the launch feild two hours early. The weather was perfect, clear blue sky and no detectable wind. The launch feild was also perfect, 700 acres of flat grass land with only a few small trees. Some of the Tripoli members were on hand setting up. My wife and I helped with the set-up until everything was ready.

One of the first flyers to show up was Randy Tolley. His rocket, the Head Hunter, was the largest "model" at the event. It was so large that he had to rent a trailer to transport it. (photo 1) This monster had one K500, 2 J250s, and 2 H100s. The J and H motors were to be stagger started in flight by radio control. Parachute ejection was also radio controled. Unfortunately this rocket never got to fly, as the land owner shut down the feild just before lift-off. Many manufacturers were beginning to set up shop. Joseph Dantonio from Dynacom brought a truck load of fiberglass components and a few other surprises. He displayed an ARC fiberglass Black Widow, and an N3550 motor. (photo 2) Other manufacturers included Ron Schultz from LOC/Precision (photo 3), Blue Ridge Rocketry, Propulsion Industries, Ross Dunton of Magnum Industries, John Stanley of Rocket Research, Public Missiles, Robby's Rockets, MPL Developments, and a few others that I cannot remember.

The show started a little late, like all launches. My wife and I watched for about an hour before I decided to prepare my Bandit 3X for an H100 confirmation flight (photo 4).

The lift-off of my Bandit 3X was spectacular, especially to me. The Bandit 3X climbed to about 900' and deployed it's 48" parachute, to land about 300' away for a perfect flight. After I recovered my model I went over to the RSO table and my confirmation card was signed by Randy Tolley. Soon after my flight, Mike Showalter, president of the Virginia club, brought out his $\frac{1}{2}$ scale Patriot. He flew it with a J250 Hellfire and 2 H142 motors. The Patriot turned in an impressive flight. After seeing a few more impressive flights I went over to Ross Dunton of Magnum Industries for some serious power boost for my Bandit 3X. He fixed me up with a Vulcan Systems I160-10 Hellfire. I felt like a kid who had just bought his first firecracker. This 640 NS motor really made the Bandit turn on. The 4.5 pound Bandit literally leaped off the launcher on a 2' pink flame. I do not know the exact altitude that it achieved, but I can tell you that it sure looked small up there. The parachute deployed at apogee and the Bandit landed about 1000' away.

Now that my two flights were in, my wife and i could spend out time being spectators. So many H motors were being flown that we actually got tired of watching them. Many interesting flights took place the remainder of Saturday and again on Sunday. John Fields flew a $\frac{1}{4}$ -scale Nike-Apache (photo 5) with a G125 and a D12 staged with a mercury switch. The Nike-Apache flew perfectly. Bob Dennett from Vulcan Systems flew a Caliber ISP with an experimental H750. I did not even try to take a picture of this flight. It flew out of sight within one second. Bob also flew a 1.5" diameter, 30" long model weighing 1.2 pounds with an I500. This model was the mother of all Warp Drives! Burn-out velocity was estimated at 1500mph. Unbelievably, both of these models were recovered. The best flight of the meet was by Lovett Reddick and his K powered Electronic Bruiser. Lovett must have spent over an hour prepping his Bruiser for flight (photo 6). When this model lifted off on K500 Hellfire power I thought we were watching a Wallops Island launch. The K motor

propelled the Bruiser on a 3 foot flame to about 5000 feet. The sky was so clear you could easily follow the flight to apogee. At apogee the Bruiser deployed a four foot drogue chute to bring it rapidly down to 1000 feet so that an eight foot parachute could be deployed by radio control. Lovett only had to walk 400 feet to recover his Bruiser.

After having experienced a Tripoli launch I am ready for more. Fortunately the Tripoli club in Virginia is planning to hold another launch this fall. Mike Showalter, the president of the Virginia club has told me that NAR members are welcome. Maybe SPAAR could organize a field trip to Virginia in spring to fly our workshop rockets that we will be building this winter.

SEE PHOTOS ON PAGE 16
PHOTOS BY ED MILLER

WINTER WORKSHOP PROGRAM

On the subject of High Power Rocketry, all members are reminded that the workshop program for this winter will feature the construction, finishing, and flying of a large, high power model with first a G, then an H motor. Three sessions are planned, in January, February, and March, and will again be held at the Delta Fire hall in Delta, PA. The dates of the workshops will be announced in the Nov/Dec Countdown.

As mentioned elsewhere, the kit chosen by vote at the September meeting is the T.H.O.Y Falcon. Ed Miller, who will be the instructor for the program, sent us the following information: "...the Falcon is \$62.95 (retail), minus 20% for 5 or more identical kits, which is \$50.36. We will also need two centering rings per kit for motor locks. This brings the price up to \$53.50. We must also add 8% shipping to orders over \$140.00. Shipping is \$4.28 per kit. The total per kit delivered is \$57.78." Ed wants to get the order in to T.H.O.Y by December 1, so get your \$57.78 to Ed by then. Make checks payable to Ed Miller, and send them to: 1809 Quarry Rd. Lebanon, PA 17042.

WORKSHOP SUPPLY LIST

Ed has also sent us a list of building materials needed for the workshop program:

1 No.1 type Exacto knife
1 or more No. 11 blades
1 or more saw blades for No. 1 knife
1 set of 5 minute epoxy (8oz total)
1 set of 10 minute epoxy (Optional)
1 cyano (thin type)
1 12" ruler
1 pencil or ball point pen
1 note pad (to mix epoxy)
1 box round tooth picks
1 1/4" dowel rod
1 fin coating, modelers choice:
 sanding sealer
 coating epoxy
 polyester resin
2 sheets 120 grit sandpaper
2 sheets 220 grit sandpaper
2 sheets 320 grit sandpaper
paper towels
Table cover for work area

AND NOW, THE NEWS

WE'VE MOVED: No, SPAAR hasn't, but two companies have.

As announced at the manufacturer's forum at NARAM-33, Apogee Components has moved from wintry Minnesota to Arizona. The new address is:

Apogee Components
19828 North 43rd Lane,
Glendale, AZ 85308

In addition, North Coast Rocketry has consolidated it's operations in Huntsville, AL. Send all correspondence to:

North Coast Rocketry
13011 Branscomb Rd.,
Huntsville, AL 35803

Of course, to every rule there is an exception. Product returns should still be directed to:

5500 Kenbridge Dr.,
Highland Hts., OH 44143

SPAARSEC - V: A WELL ATTENDED MEET

SPAAR's fifth Section Meet was flown on Sunday, Sept. 15, with a club record nine entrants flying six events. After the small turnout for the last Section Meet in May, it was very gratifying to see so many faces, both old and new, flying in this contest. The competition was good, but there were more than a few anxious moments throughout the day as far as the weather was concerned. The breeze shifted more than once, and rain threatened throughout the day. The fickle breeze caused a number of models to land on the roof of the high school, and a number of others headed for parts unknown.

Gary Feveryear, President Glenn's brother, did his first serious SPAAR contest flying and did very well for himself. Gary took first place in both B Eggloft and B Superroc Duration. His second flight in B Eggloft was good for 76.4s, almost eclipsing Ed Miller's club record 83.89s, which he set at SPAARSEC-IV. Gary's closest competitor here was George Beever, whose 31s flight was a good 45s behind! Amazingly enough, the second through sixth places in this event were only 9 seconds apart. Mark Snyder was third at 30s, Dick Rhoat flew a pop-lug design to 29s, Dale Greene took 4th at 27s, and Glenn took flight points with 22s. A point of interest is that Gary flew the egglofter designed by Mark Snyder, featured in the Countdown a few issues back.

Gary also took first in B Superroc with two flights totaling 825 points, flying a QCR model. In fact, he was the only contestant to make 2 qualified flights in the event. Brother Glenn took second with 456 points, with John Yost right behind at 449, and that ol' superroc fan Dick Rhoat came in 4th with 432.

A Boost/Glide caused a bit of frustration for a number of folks, including your editor. A first flight that was timed at 113s disappeared into a cut corn feild (!) and could not be returned; a B B/G was used as a last-ditch qualifier, and barely at 9s. Ed Miller got 58.8s out of an Estes Dragonfly, but it went on the roof. It counted a return, but he didn't have the model to fly again. The same happened to Mark Snyder; Dennis Stauffer flew an older CMR design,

which I believe sustained some damage when it struck the side of the school. These various and sundry problems didn't seem to bother Dale Greene, who had solid flights of 57s and 86s to take first place.

Mark Snyder came up from Maryland to fly some rockets, and oh yes, by the way, he took first place in both A Streamer and in Open Spot Landing. The A Streamer win was a classic. His first flight was with a 13mm model powered by a mini-motor, which thermalized away at 211.3s. In order for it to count, he had to have a qualified flight the second time around. No problem! Just pull out that FSI sport model, insert a streamer, and voila! 9.7s later, you have first place! If I am not mistaken, and if I am I'm sure I'll find out about it, he used the same Flight Systems sport model to take first place in OSL. The model darn near hit the SPAAR section flag, which was being used as the spot. On the other end of the scale was your editor, whose model landed in another county, far beyond the 50m limit.

In A Helicopter, Glenn Feveryear took first place with two flights that totaled 97s, with at least one of Glenn's newly orange painted models landing on the high school roof. John Yost took second with the oldest Mini-Rotaroc in existence. The poor old thing wheezed out 2 flights totaling 74s. Hey, if it works, don't mess with it, right? Ed Miller took second with a model that may have been the one he flew B HD with the Apogee mini B's at SPAARSEC-IV. Dale Greene flew an unknown design to a total of 58s, good for 4th place.

CONTEST POINTS

GLENN FEVERYEAR	152
GARY FEVERYEAR	145
GEORGE BEEVER	131
DALE GREENE	126
MARK SNYDER	98
JOHN YOST	80
ED MILLER	72
DICK RHOAT	33
DENNIS STAUFFER	11

TOTAL POINTS TO SECTION 848

TOTAL POINTS YEAR-TO-DATE 848

SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY
SECTION 503
SPAARSEC-5 RESULTS

B SUPERROC DURATION (POINTS)				
	FLHT1	FLHT2	FINAL	PTS
GARY FEVERYEAR	391	434	825	60
GLENN FEVERYEAR	456	-	456	36
JOHN YOST	449	-	449	24
DICK RHOAT	432	DQ	432	12
GEORGE BEEVER	DQ	424	424	6

A BOOST GLIDER DURATION (SECONDS)				
	FLHT1	FLHT2	FINAL	PTS
DALE GREENE	57.6	86.1	144	80
GEORGE BEEVER	113.3	9.0	122	48
ED MILLER	58.8	-	59	32
MARK SNYDER	39.9	-	40	16
DENNIS STAUFFER	24.3	-	24	8

OPEN SPOT LANDING (METERS)				
	FLHT1		FINAL	PTS
MARK SNYDER	5.26		5.26	20
GLENN FEVERYEAR	10.36		10.36	12
DALE GREENE	12.73		12.73	8
ED MILLER	16.15		16.15	4
GARY FEVERYEAR	20.82		20.82	2
JOHN YOST	25.34		25.34	2
DICK RHOAT	31.09		31.09	2
GEORGE BEEVER	50.0+		50.0+	2

A HELICOPTER DURATION (SECONDS)				
	FLHT1	FLHT2	FINAL	PTS
GLENN FEVERYEAR	29.5	67.3	97	90
JOHN YOST	40.3	33.7	74	54
ED MILLER	38.3	26.9	65	36
DALE GREENE	22.9	35.3	58	18
GEORGE BEEVER	DQ	53.8	54	9

B EGGLOFTING DURATION (SECONDS)				
	FLHT1	FLHT2	FINAL	PTS
GARY FEVERYEAR	19.8	76.4	76	80
GEORGE BEEVER	30.6	-	31	48
MARK SNYDER	29.9	11.8	30	32
DICK RHOAT	18.7	29.4	29	16
DALE GREENE	26.9	17.8	27	8
GLENN FEVERYEAR	22.3	15.7	22	8

A STREAMER DURATION (SECONDS)				
	FLHT1	FLHT2	FINAL	PTS
MARK SNYDER	211.3	9.7	221	30
GEORGE BEEVER	132.3	62.8	195	18
DALE GREENE	92.5	DQ	92	12
GLENN FEVERYEAR	DQ	56.6	57	6
GARY FEVERYEAR	20.2	28.8	49	3
DENNIS STAUFFER	46.6	-	47	3
DICK RHOAT	42.3	DQ	42	3

SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY
SECTION 503
SECTION PERFORMANCE RECORDS
ESTABLISHED SINCE APRIL 1, 1991

NAME	ROCKET NAME	ENGINE	DATE	TIME ALTITUDE POINTS
** AGE DIVISION A				
* EVENT 1/2ARG DANIEL YOST			05/26/91	26.41
* EVENT 1/2ASD DAVE BENDER	X-1	1/2A3-2T	05/05/91	22.09
* EVENT APD DAVE BENDER	X-3	A3-4T	05/05/91	50.89
* EVENT BELD DEREK YOST			05/26/91	17.22
* EVENT BHD DNAIEL YOST			05/26/91	56.65
** AGE DIVISION B				
* EVENT AALT AARON NEWMAN		A8-3	06/30/91	83.2M
* EVENT BALT AARON NEWMAN		B6-4	06/30/91	110.9M
** AGE DIVISION C				
* EVENT APA GOERGE BEEVER			07/21/91	61.0M
* EVENT ARG GLENN FEVERYEAR	VULTURE	A3-2T	09/01/91	109.80
* EVENT ASD GEORGE BEEVER		A3-6T	09/15/91	132.34
* EVENT BELA DALE GREENE			07/21/91	37.0M
* EVENT BELD ED MILLER			05/26/91	83.89
* EVENT FALT DALE GREENE		F25-6	06/30/91	292.3M

**SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY
SECTION 503**

NOAH-1 STANDINGS AS OF 10/01/91

1/2 A PARACHUTE DURATION

	FLHT1	FLHT2	FINAL	POINTS
GLENN FEVERYEAR	153.74	144.91	299	
JOHN YOST	113.00 (NR)	97.00 (NR)	FP	36

A STREAMER DURATION

	FLHT1	FLHT2	FINAL	POINTS
DALE GREENE	91.14	72.85	164	
GLENN FEVERYEAR	77.78	76.81	155	
GEORGE BEEVER	51.66	38.52	90	

A ROCKET GLIDER DURATION

	FLHT1	FLHT2	FINAL	POINTS
GLENN FEVERYEAR	77.15	109.80	187	
GEORGE BEEVER	49.40	27.64	77	
JOHN YOST	DQ (UNST)	-	-	

C HELICOPTER DURATION

	FLHT1	FLHT2	FINAL	POINTS
GEORGE BEEVER	74.72	69.54	144	
GLENN FEVERYEAR	61.90	-	62	

B BOOST GLIDER DURATION

	FLHT1	FLHT2	FINAL	POINTS
GEORGE BEEVER	8.67	72.95	82	

PRECISION DURATION (120SEC)

	FLHT1	FINAL	POINTS
NONE			

OPEN SPOT LANDING

	FLHT1	FINAL	POINTS
NONE			

A PAYLOAD ALTITUDE

	FLHT1	FLHT2	FINAL	POINTS
GEORGE BEEVER	61.18M	-	61M	840
GLENN FEVERYEAR	58.45M	-	58M	504
DALE GREENE	52.25M	-	52M	336

B EGGLOFTING ALTITUDE

	FLHT1	FLHT2	FINAL	POINTS
DALE GREENE	36.79M	-	37M	1080
GEORGE BEEVER	60.72M (DQ-BRK)	-	DQ	-
GLENN FEVERYEAR	53.96M (NC)	32.56M (DQ-BRK)	FP	108

SPAAR SPORT LAUNCHES

AUGUST 11, 1991

The sport launch on August 11 was the first at Cocalico since June 30. The winds were a bit high at the start of the launch, and in fact did not calm down until the last hour. Between 6 and 7 o'clock, there appeared to be a mad rush to fly before the launch broke up at 7. A total of 13 people made 50 flights, not bad, all things considered.

One of the more memorable flights was made by Dennis Stauffer, who was attempting to gain his NAR G Motor certification, flying an Aerotech G55-10 in an Estes Super Big Bertha. To paraphrase a comment often heard at rocket meets, "that thing took off like a shot!" Holy Ca-Whoosh, Batman! Unfortunately, the recovery system separated, but the boost was incredible.

Fred "Say Cheese" Hoke flew his Estes Astrocam 110 with a variety of motors and delay times, hoping to get that camera angle juuuuust right. Hope to see the pictures soon Fred.

August 11 was "Manned Launch Vehicle Day", and there were 9 flights to mark the occasion. Almost every US manned launch vehicle was represented, from the Mercury-Redstone, to the Space Shuttle. In fact, the only one missing was the Mercury-Atlas. We'll have to remedy that for next year.....

SEPTEMBER 1, 1991

At last, a SPAAR Sport Launch, and the weather was perfect! Who goofed? What happened to that breezy, rainy, rotten weather that we all know and love to fly in?

The thirteen members and guests that attended responded to the great weather, and made 61 total flights, including 17 that were part of "Sounding Rocket Day".

Bruce Canino and Sharon Selig from New Jersey brought along the Wise family from Delaware. The Wises brought some models that they had purchased at a yard sale, most of which were old Centuri models. Gee... ya think ya could let me know the next time these folks want to unload some "junk"?

Bruce also brought and flew his Flagship RC/RC, the first RC model seen at a SPAAR launch.

As part of Sounding Rocket Day, Glenn Feveryear flew his Aerotech IQSY Tomahawk. This was the same model that found a tree on it's first and only flight back in April, and was heroically rescued by Dan Weinhold. Maybe Glenn just wasn't supposed to have this model. Who knows, but the E15 CATO'd, doing some nasty damage to the interior of the model.

Rick Hackman pulled out some Estes classics for Sounding Rocket Day, the WAC Corporal and the Aerobee 300. Both turned in very nice flights.

Art Babiarz & Son., Inc. put on a very nice demo of their CHAD 2-stage Saturn V. Back in the spring, Art decided he wanted a little more oomph to his Saturn. So, he simply added a D12-0 to the D12-3 sustainer. Even though Art has had some weather-cocking problems with this arrangement, on this day it flew beautifully, putting on a good show for the video camera.

Prez Glenn got in some NOAHS flights, taking care of A RG and 1/2A PD. Glenn has provided an up-to-date list of the NOAHS standings through the end of September, and is included elsewhere in this issue.

SEPTEMBER 15, 1991

SPAARSEC-V was not the only flying done on September 15. There were 20 sport flights made that day, too, and almost half of them were made by some new faces. New member Kevin Krall and his dad Tim flew their Estes Javelin twice. Amanda Latz showed that the ladies know how to take care of business, as she and her dad flew a HelioCopter, a Voyager II, a Recruiter, and a Bull Pup 12D. Good job!

Aaron Newman had some interesting flights, which a couple were very exciting, to say the least. Aaron constructed a real nice model of an RAF AVRO Vulcan bomber. The only problem was, this Vulcan did a low-level run on the RSO at the time (me). But hey, the model sure looked neat! A little work should get the model stable. Aaron also brought out a very nice F/A-18 Hornet. Ya gotta give him credit; he's always got something new and interesting along!

FLIGHT LOG

11 August 1991

<u>Fl#</u>	<u>Name</u>	<u>Model</u>	<u>Motor(s)</u>	<u>Misc.</u>	<u>Result</u>
1	Renee Feveryear	Alpha III	A8-3	Sport/23.31	GF
2	" "	Alpha III	A8-3	"	GF
3	Daniel Feveryear	Gnome	1/2A3-4	"	GF
4	Dave Bender	Air Mail	D12-3	"	GF
5	" "	Big Bertha	B6-4	"	GF
6	" "	Transtar Carrier	C6-5	"	GF
7	" "	A-20 Demon	D12-5	"	GF
8	" "	Sky Demon	C6-0/C6-5	"	GF
9	W. Rhoat	Hercules	B8-5	NARTREK Payload	GF
10	Dennis Stauffer	Starblazer	B6-4	"	GF
11	" "	Starblazer	B6-4	"	GF
12	" "	Starblazer	B6-4	"	GF
13	" "	Super Big Bertha	G55-10	G motor cert. flight	SEP
14	" "	Wizard	A8-3	"	GF
15	" "	Wizard	A8-3	"	GF
16	" "	Wizard	A8-3	"	GF
17	R. Hackman	Wizard	A8-3	"	GF
18	" "	Rogue	A3-4	"	GF
19	" "	XR-72	A8-3	"	GF
20	" "	XR-49	B6-4	"	GF
21	" "	XR-55	C6-3	"	GF
22	" "	Avenger	C6-0/A8-5	"	GF
23	Gary Feveryear	Corsair	B6-4	"	GF
24	" "	Warp Drive	F100-10	"	NR
25	Robert Balogh	Nike-Ram IIB	F25-9WL	"	GF
26	Fred Hoke	Astrocam 110	C6-7	"	GF
27	" "	Astrocam 110	C6-5	"	GF
28	" "	Astrocam 110	B8-5	"	GF
29	" "	Astrocam 110	C6-3	"	GF
30	" "	Astrocam 110	B4-2	"	GF
31	Glenn Feveryear	Near F SRD	D12-5 (3)	"	SEP
32	" "	Shuttle Challenger	C6-3	MLV Day	GF
33	" "	Saturn 1B	D12-0/B4-4	MLV Day	GF
34	Ed Miller	Hornet	B6-4	Sport	GF
35	" "	Warp Drive 24	E30-10	"	GF
36	" "	Hercules	F100-6	"	GF
37	" "	Megatron	D20-0/D20-7	"	GF
38	" "	Trailblazer	D12-5	"	GF
39	" "	Magnum Wizard	D12-5 (3)	"	GF
40	" "	Eliminator	G42-4WL	"	GF
41	" "	Saturn 1B	D12-3	MLV Day	GF
42	George Beever	Mercury-Redstone	C5-3	MLV Day	GF
43	" "	Gemini-Titan	C6-5	MLV Day	GF
44	" "	Gemini-Titan	C5-3 (2)	MLV Day	GF
45	" "	Saturn 1B (Cox)	D12-5	MLV Day	NR
46	" "	Saturn 1B	D12-5	MLV Day	GF
47	" "	Saturn V	E15-4WL	MLV Day	CHU
48	John Yost	A RG	A3-2	NOAHS-91	DQ-UNS
49	" "	1/2A PD	1/2A3-4	NOAHS-91/113.0	GF
50	" "	1/2A PD	1/2A3-4	NOAHS-91/97.48	GF

Number of Flights Per person

Renee Feveryear - 2 Daniel Feveryear - 1 Dave Bender - 5
 Bill Rhoat - 1 Dennis Stauffer - 7 Rick Hackman - 6

Gary Feveryear - 2 Robert Balogh - 1 Fred Hoke - 5
 Glenn Feveryear - 3 Ed Miller - 8 George Beever - 6
 John Yost - 3 Manned Launch Vehicle Day Flights - 9

FLIGHT LOG

1 September 1991

<u>Fl#</u>	<u>Name</u>	<u>Model</u>	<u>Motor(s)</u>	<u>Misc.</u>	<u>Result</u>
1	Sammy Wise	Buck Rodgers Fighter	B6-2	Sport	GF
2	" "	Payloader	A8-3	"	SEP
3	" "	?	A10-3	"	GF
4	Larry Wise	Space Transport	A8-3	"	GF
5	" "	Space transport	B6-2	"	GF
6	Donovan Wise	The Point	C5-3	"	GF
7	Sharon Selig	Helio Rocket	C6-3	"	GF
8	" "	IronMan	C6-5	"	GF
9	" "	Satelite Killer	C5-3	"	GF
10	Bruce Canino	Initiator	E15-4WL	"	GF
11	" "	Initiator	F14-4J	"	GF
12	" "	Nike-Apache	B4-4	SR Day	SEP
13	" "	Flagship	D12-0	RC/RG	GF
14	" "	Flagship	D12-0	RC/RG	GF
15	" "	Flagship	D12-0	RC/RG	GF
16	Jim Lytle	S-146	B4-4	Sport	GF
17	" "	Jupiter-C	C5-3	"	GF
18	" "	SA-14 Archer	F25-6WL	"	ND
19	" "	Phoenix	D12-3	"	ND
20	Ed Miller	Aerobee-Hi	E25-4/C6-5	SR Day	GF
21	" "	Nike-Smoke	C6-5	SR Day	GF
22	" "	Nike-Apache	B6-4	SR Day	GF
23	" "	Black Brant II	E15-4WL	SR Day	GF
24	" "	Cloud Buster	E60-6	Sport	GF
25	" "	Armacron III	B8-5 (3)	"	GF
26	" "	Sonic Shock	E25-7	"	GF
27	" "	Titan IIIE	D12-3	"	GF
28	K. Fehrenbach	IQSY Tomahawk	E30-4	SR Day	GF
29	" "	D-Region Tomahawk	C6-3	SR Day	GF
30	" "	Pathfinder	D12-5	Sport	GF
31	" "	Homebrew	F25-9WL	"	SEP
32	" "	LOC Starburst	D12-3 (2)	"	GF
33	" "	Pathfinder	D12-5	"	GF
34	" "	Viper III	D12-5 (3)	"	GF
35	Rick Hackman	Omega	D12-5	"	GF
36	" "	WAC Corporal	A8-3	SR Day	GF
37	" "	Aerobee 300	B6-4	SR Day	GF
38	" "	XR-36	A8-3	Sport	GF
39	" "	XR-72	A8-3	"	GF
40	Dale Greene	MPC Nike-Smoke	B4-4	SR Day	GF
41	" "	Rascal	D12-5	Sport	ND
42	" "	Psuedo Sounding Roc	E30-7	Sport	GF
43	Glenn Feveryear	IQSY Tomahawk	E15-4WL	SR Day	CATO
44	Art Babiarz	F-104A	B8-5	Sport	GF
45	" "	Saturn V	D12-0/D12-3	"	GF
46	" "	Bandit	B6-4	"	GF
47	" "	YF-12A	D12-3	"	GF
48	" "	Saturn IB	D12-3	"	GF
49	George Beever	Nike-Apache	A8-3	SR Day	GF
50	" "	IRIS	A10-3	SR Day	GF
51	" "	Aerobee	A8-3	SR Day	GF
52	" "	D-Region Tomahawk	A8-3	SR Day	GF
53	" "	D-Region Tomahawk	C5-3	SR day	ND
54	" "	Black Brant II	B8-5	SR Day	GF
55	" "	Little Joe II	A3-4	Sport	GF
56	" "	B B/G	B4-2	NOAHS-91/8.6s	

FLIGHT LOG (cont)

57	"	"	B B/G	B4-2	NOAHS-91/72.95s
58	Glenn	Feveryear	A R/G	A3-2	NOAHS-91/77.1
59	"	"	A R/G	A3-2	NOAHS-91/109.8
60	"	"	½A PD	½A3-4	NOAHS-91/153.74
61	"	"	½A PD	½A3-4	NOAHS-91/144.9

Number Of Flights per Person

Sammy Wise - 3 Larry Wise - 2 Donovan Wise - 1
 Sharon Selig - 3 Bruce Canino - 6 Jim Lytle - 4
 Ed Miller - 8 Karl Fehrenbach - 7 Rick Hackman - 5
 Dale Greene - 3 Glenn Feveryera - 5 Art Babiarz - 5
 George Beever - 9 Sounding Rocket Day Flights - 17

FLIGHT LOG

15 September 1991

<u>Fl#</u>	<u>Name</u>	<u>Model</u>	<u>Motor(s)</u>	<u>Misc.</u>	<u>Result</u>	
1	Amanda Latz	HelioCopter	C6-3	Sport	GF	
2	"	"	HelioCopter	B6-6	"	GF
3	"	"	Voyager II	B4-2	"	CHU
4	"	"	Recruiter	B6-4	"	?
5	"	"	Bull Pup	B6-2	"	GF
6	Kevin Kroll	Javelin	B6-4	"	"	GF
7	"	"	Javelin	A8-3	"	GF
8	Aaron Newman	Standard Arm	C6-5	"	"	GF
9	"	"	AVRO Vulcan	C6-3	"	UNS
10	"	"	Titan IIIIE	D12-3	"	GF
11	"	"	Black Hawk Glider	A8-3	"	PRG
12	"	"	F/A-18 Hornet	A8-3	"	?
13	"	"	½A BG	½A3-2	½A BG	RB
14	"	"	Stealth	B6-4	Sport	GF
15	"	"	Commanche	D12-0/A8-5	"	GF
16	"	"	Commanche	B6-4	"	GF
17	Dennis Stauffer	Wizard	B6-4	"	"	GF
18	"	"	Wizard	B6-4	"	GF
19	Ed Miller	F SD	F44-10	US Record Attempt	SHRED	
20	"	G SD	G55-10	US Record Attempt	Track Lost	

NUMBER OF FLIGHTS PER PERSON (SPORT FLIGHTS)

AMANDA LATZ - 5 KEVIN KRALL - 2 AARON NEWMAN - 9
 DENNIS STAUFFER - 2 ED MILLER - 2

Photo #1: The "Head Hunter"

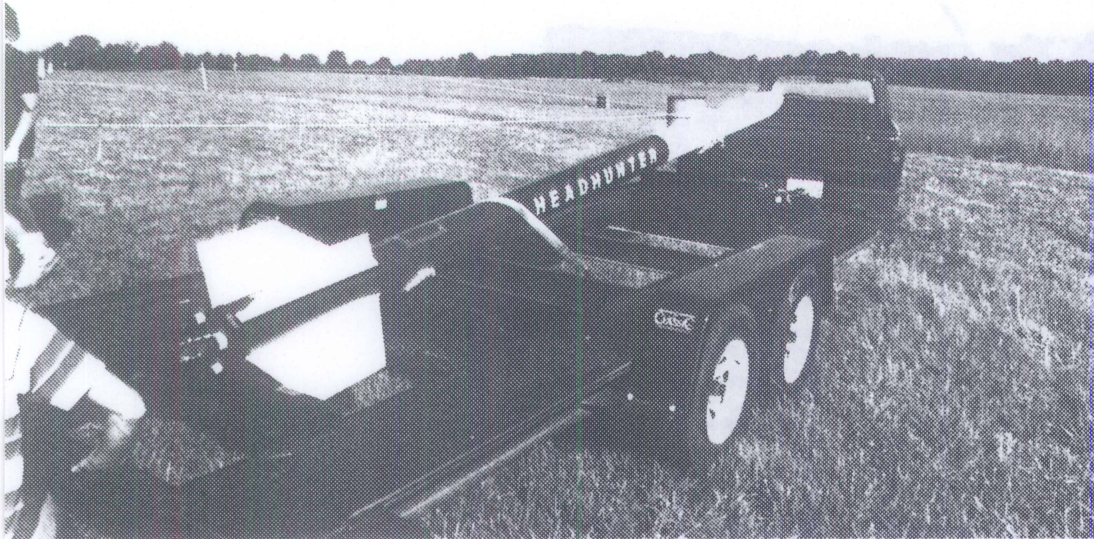


Photo #1: The "Head Hunter"



Photo #2: Joseph Dantonio of Dynacom with an ARC Black Widow and an N3550 motor.

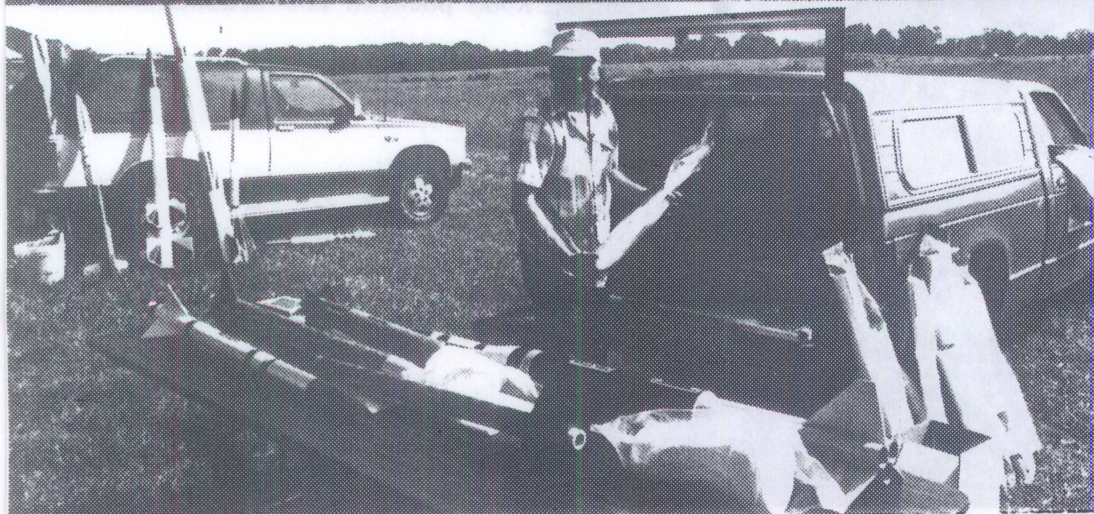


Photo #3: Ron Schultz of LOC/Precision.



Photo #4: Ed and his Bandit 3X prior to his H100 confirmation flight.

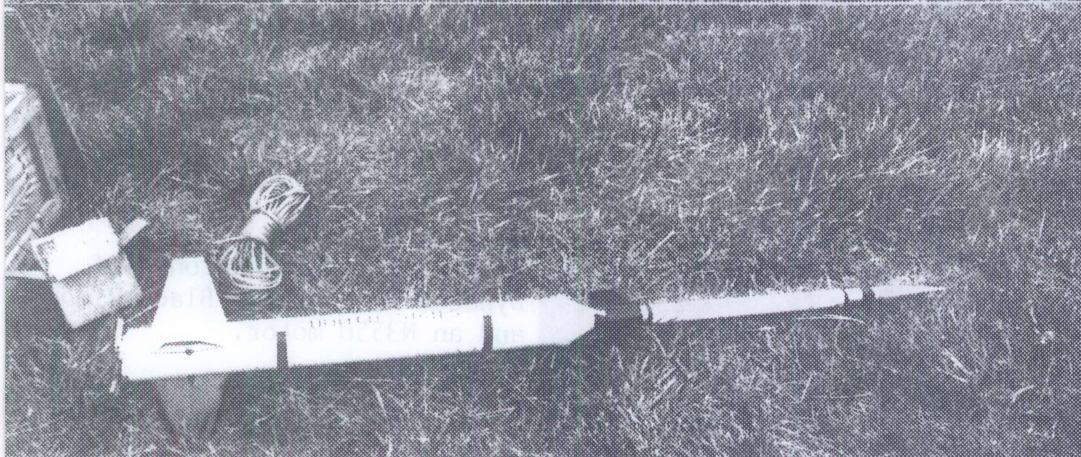


Photo #5: John Fields' 1/4-scale Nike-Apache.



Photo #6: Lovett Reddick's K500 powered LOC Bruiser.

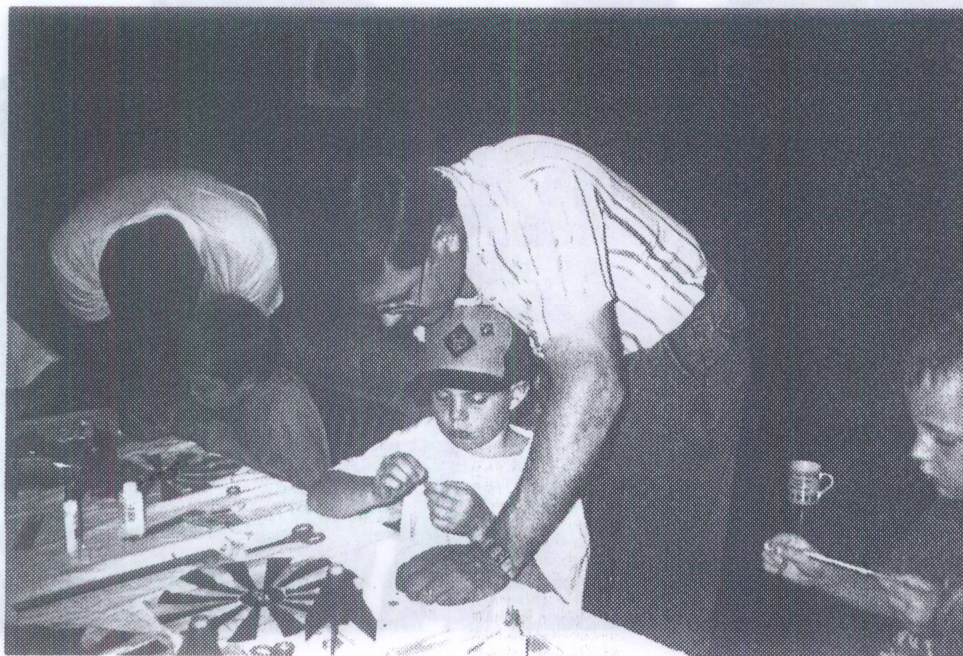
THE CUB SCOUTS AND MODEL ROCKETRY

Model rocketry and the Boy Scouts have been involved with each other for many years, and this was made evident recently.

Den 3 of Cub Scout Pack 433, based at the Camp Chapel Methodist Church in Perry Hall, Maryland, got a taste of rocketry this past summer as part of their "National Summer-time Activity". SPAAR members Carl Snyder and his father Mark are both involved with Den 3. With Mark's guidance, the Den built identical Estes "Liberty" kits during a building session at the Snyder residence in June. In the photo below, Jay Bloodsworth gets some advice from his father Jim, with Bryan and Steve Lopes working in the background. In all, 7 scouts and their parents participated in the program.

Launch Day was set for Saturday, August 31, at the Joppa View Elementary School in Perry Hall. With Mark Snyder providing assistance with prepping the models, as well as donating the use of his launch system, every Scout launched his model twice, with the exception of one scout whose model landed in a swampy area on flight #1 and was not recovered. All flights were successful.

The Scouts present also got a chance to see some other models flown, including scale models of the Sidewinder air-to-air missile, the WW II German V-2, and the US Army's Patriot Air Defense missile.



One week later, on September 7, SPAAR Section Advisor John Yost organized a rocketry demo launch for the benefit of those attending Pack 90's Annual Family Camp-out. Pack 90 is based out of the Farmdale Elementary School in the Mt. Joy area of Lancaster County. The Camp-out was held during the weekend of Sept. 7-8 at Sussquehannock State Park, in the southern part of the county. A number of SPAAR members helped out, including Dan, Derek, and John Yost; club president Glenn Feveryear; Ed Miller, Jim Lytle, and George Beaver.

The scouts and their parents took a break from the weekend's camping activities to take in the demo, which lasted about 90 minutes. Approximately 75 people watched as John orchestrated the launching of over 20 models. A variety of models were presented, including competition models like the Rota-Roc and the Flat Cat B/G; Jim Lytle impressed everyone with a beautiful flight on his Saturn V as well as a number of other sport models. Ed Miller received some "oohs & ahhs" with the last flight of the day, which was his FSI Hercules flown on F100-6 power. MC John Yost also impressed the crowd with his vintage 1969 Estes Mars Lander, which flew perfectly.

There was also another highlight to the demo: a model, allegedly an Estes "Yankee Clipper", which was constructed the morning of the launch by John Yost and cohort Bob Devenburgh, the Assistant Cub Master. It wasn't painted, and it wasn't pretty, and it was held together with super glue, but it turned in not one, not two, but three perfect flights!

Also helping out was Ben Kettering, the Cub Master, who had originally approached John with the idea for the demo. The demo was so successful (not to mention fun) that the SPAAR members present all commented that future demos would definitely be considered.

DALE'S TRIP TO NARAM-33

Part 1

SPAAR's Dale Greene recently attended NARAM-33 in Illinois. NARAM is the National Association of Rocketry's annual championship meet and sport launch. Dale has attended NARAM-30 in Alabama, NARAM-31 in Virginia, and NARAM-32 in Texas. Will he make NARAM-34 in Las Vegas in '92? Stay tuned, but in the mean time, here is his report on this years national championships:

This is the fourth NARAM I've been to, and I probably had more fun at this one than any other one before. A lot of people put a lot of effort into it; it was pretty well organized, despite a few glitches. The National Sport Launch started on Saturday, August 3, and lasted through the week. The sport launch was run by CMASS, with Chris Tavares as director. The CMASS people were out there all day long, 7 days in a row, running the sport range and doing a good job. We had a FAA waiver for "I" engines, for flights up to 1700'. This means a pretty heavy rocket for an "I" motor.

It was probably the best range-head set up I've ever seen, located in the middle of the worst flying field I've ever seen. It was the Pratt-Wayne Woods Preserve, and as the name might imply, there were A LOT of trees around. There were 2 separate range-heads: one for NARAM and FAI competition, and one for the sport flying. It worked really well, and they were able to fly from 2 range-heads simultaneously with no glitches whatsoever. The high power range was set up so the pads were 15' apart, and there was one HPR pad 200' away from the launch controller. The nice thing about that was that you could fly Gs without having to clear the adjacent pads. For the NARAM competition, there were 12 pads, which is a small number compared to the 24 at NARAM-31 and the 20 we had at NARAM-32. Some people doubted that we could fly off of 12 pads, but it worked very well. One of the reasons why was a change in the check-in procedure; pad assignments were made separate from the safety check-in. You were assigned a pad when you were ready to fly, after you had done your final prep. This saved time by not tying up the pads. The pads themselves were about 15' apart, which meant that you could fly off of a pad without clearing the adjacent pads.

Like I said, the range-head was a really

beautiful thing, but the flying field.... well, to the east of the range-head were thistles at least waist high, and in some places over my head; to the south was a swamp; to the north were railroad tracks; and to the west was a railroad trellis about 15' high, which was naturally the way the wind was blowing. Across from the railroad trellis were 2 sets of high tension wires, then there was a sea of reeds (cat 'o nine tails over my head), and beyond that the "Forest Of No Return".

The club that sponsored NARAM was NIRA, the Northern Illinois Rocketry Association. They developed a really great relationship with the FAA people. The FAA in that area was really concerned, as they had never dealt with anything like this before. Finally, one FAA official said, "Oh, this is sort of like an air show!", and once they made that connection, they thought it was really great. We were under an approach to O'Hare International Airport, with another, DuPage, close by. Things worked out really well, however, and that's probably a big step forward in working with the FAA on things like this.

THE "LARRY" AWARD

Matt Steele of North Coast Rocketry was nominated 3 times for the NARAM "Best Midwest Qualified Flight Award", which usually goes to the person with the most spectacular prang. He didn't win that, but he did win the "NARAM-33 Larry Award". To the west of the launch sight there were 2 sets of high tension wires. When NIRA flew there before NARAM, 3 guys landed models on these lines, and they all happened to be named Larry. So, it was decreed that anyone who puts a model in the power lines would be "Larry". As part of the manufacturer's demo, Matt had a beautiful flight of an Archer. Unfortunately, the model is still hanging in the power lines.

NEXT ISSUE: How I won $\frac{1}{2}$ A PD, or "Remember To Bring A Brick!"

PHOTOS FROM NARAM-33

(photos by Dale Greene)



LEFT: The North Coast Rocketry team prep a Patriot for a demo flight.



LEFT: Peter Alway and his Soyuz scale model.

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

_____ YES, I WANT TO JOIN SPAAR! HERE ARE MY DUES

_____ PLEASE CONTACT ME WITH MORE INFORMATION

NAME _____

STREET ADDRESS _____

CITY _____ STATE _____ ZIP _____

PHONE: AREA CODE () _____ AGE _____

DATE OF BIRTH _____

_____ I HAVE NEVER FLOWN ROCKETS. _____ I HAVE BEEN FLYING
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_____ I AM A MEMBER OF THE NAR. MY NAR NUMBER IS _____

_____ I AM NOT YET AN NAR MEMBER.

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DUES ARE PAYABLE FOR 12 MONTHS. RETURN THIS FORM TO:
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Membership Application

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 1311 EDGEWOOD DRIVE, DEPT M
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NAME _____

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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.

SIGNATURE: _____

DATE: _____

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SEPTEMBER/OCTOBER 1991

Volume 4 No. 5

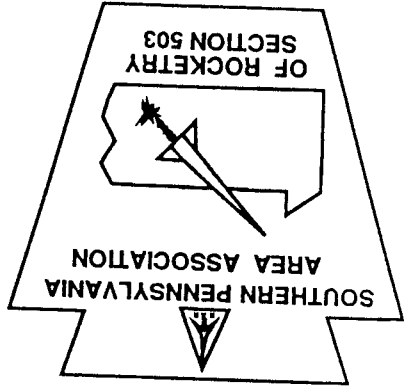
COUNTDOWN

*The Southern Pennsylvania Area
Association of Rocketry*



PROMOTING SAFE MODEL ROCKETRY
IN SOUTHERN PENNSYLVANIA
AND NORTHERN MARYLAND

SOUTHERN PENNSYLVANIA
AREA ASSOCIATION
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