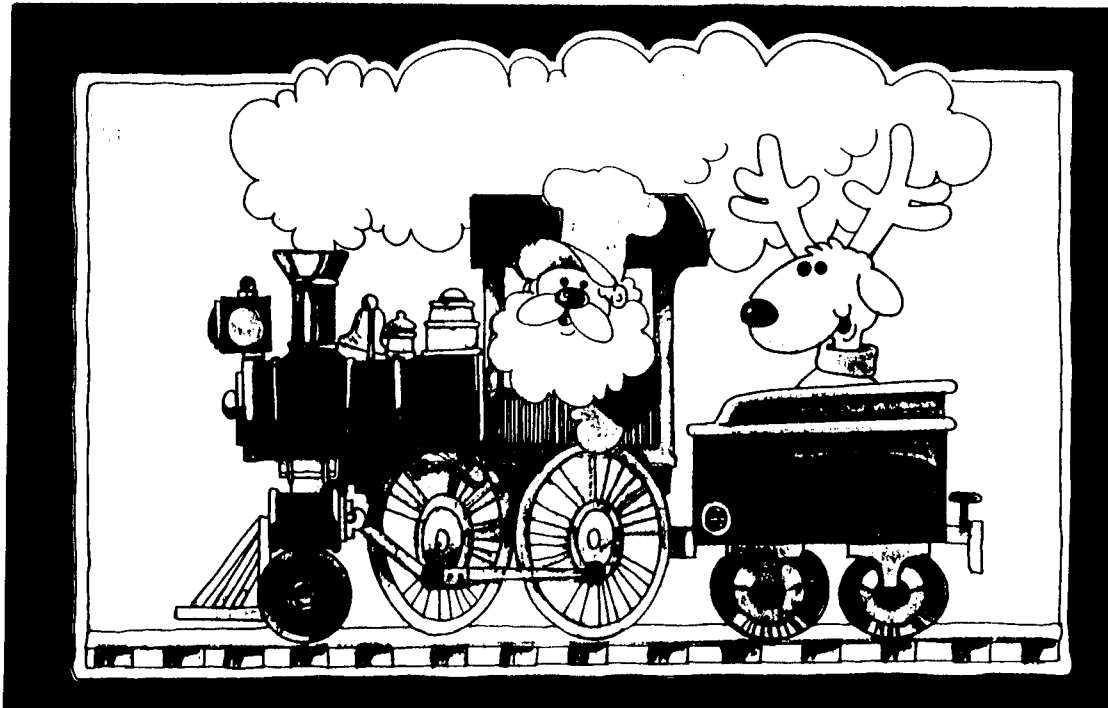


COUNTDOWN

OFFICIAL NEWSLETTER OF
THE SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY

Vol. 4 Issue 6

*Season's
Greetings*



Nov. / Dec. 1991

The COUNTDOWN

Volume 4, Issue 6

November/December 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, \$6 per year, six issues. Please send submissions to the address above. All material contained within may be used with proper credit.

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

Production Help: John Yost, Dale Greene, Art Babiarez. THANKS GUYS!!!!

Contributors: Glenn Feveryear, Rick Hackman,
Ed Miller, Dale Greene

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SCHEDULE

MONDAY, DECEMBER 16, 1991: SPAAR Section Meeting, Lancaster Co. Public Library, 7-9PM. Elections for 1992 will be held.

SUNDAY, DECEMBER 29, 1991: SPAAR Sport Launch, Cocalico High School, Denver, 1-5PM. Wear your mukluks.

SATURDAY, JANUARY 11, 1992: SPAAR Family Dinner, Country Table Restaurant, Mt. Joy, PA., Time To Be Announced. For more info, contact Dick Rhoat at (717) 627-2208.

UPCOMING EVENTS

SUNDAY, DECEMBER 15, 1991: PARA Sport Launch, Pennfield Middle School, Montgomery Co., PA. 9:30AM-2:30PM. Contact Bob Stott (215) 355-1119

NARAM-34 & NSL-3: Aug. 1-7, 1992. Hosted by SPECTRE, NAR Section #777, El Dorado Dry Lake, near Las Vegas, NV. Events: ¼A RG, ½A BG, A PD, B SD, C ELA, D FW, E SRA, PMC, R&D. FOR A & B DIVISIONS ONLY: C RG, D HD, SC. FOR C DIVISION ONLY: F HD, G RG (R/C OK), SUSC. FAA Waiver obtained.

For More Information Contact:

BOB SANFORD

(702) 452-1796

After 10:30PM Eastern Standard Time

From the Prez.....

With the membership of SPAAR continually growing we must continue to increase our awareness and practices of safety. When SPAAR was a fledgling rocket club it was very easy for the activities of flyers to be monitored. Only two or sometimes three pads were used, very few wires ran across the field and most of the launch attendees were either flying or prepping models.

We need to be reminded that in the eyes of many spectators what we are doing is setting off fireworks. It is our responsibility to prove them wrong. The first place to start is by operating a safe and orderly range. The section has established some very basic rules for activities on the range in an attempt to maintain safety and order during a launch. Possibly, these haven't been transmitted very well to the membership or we have chosen not to pay attention to them. After the first of the year each member will receive a packet, in which, among other goodies will be a copy of these rules, the bylaws of the section and information on insurance coverages provided by the NAR. I urge everyone to spend a little time reading this information. This will help clear up questions as to why we operate as we do.

In the mean time, I need to point out a couple of areas of concern. Until recently we have not found it necessary to regularly place a barrier around the launch area. Obviously if this barrier is in place we are not to cross it. However, if the barrier is not in place we still must not stray into the area between launch control and the launch pads. Likewise, all persons placing rockets on the pads should stay to the outside of this area to avoid snagging the many wires present. Definitely running through this area to retrieve a rocket or just because it is the shortest distance to the pad is placing you and those at the launchers in danger.

Secondly, we are here to fly rockets. Not chase golf balls, run through the corn fields or climb on school district property. We work very hard to assure that our models are stable and safe but as we have all experienced flights don't always go as we may have planned. Everyone must be prepared to act if the call of "heads-up" goes out for a stray rocket.

Often people get discouraged when they join an organization to later find out there are many rules that have to be followed. SPAAR has tried to avoid over doing it. We don't intend to turn members away but instead provide a safe place to fly with as many opportunities to fly, as the day allows. Our range rules may seem a little silly sometimes but they do allow the range to operate in a safe and more efficient manner. Let's make safety a top priority this coming year.

To end on a lighter note, I would like to thank all who came out to the sport launches and meets this year. Your attendance made these events possible. Credit especially goes out to those who helped operate the range as launch control, trackers and timers. SPAAR is our section. We must all volunteer our time to make SPAAR what we want it to be. Get involved. We have something for everyone.



A LETTER FROM

. the Editor

Uh-oh. Here it comes again. It's that old end-of-the-year-I-need-your-help-with-this-newsletter speech. I know you've heard it before. It is still true!

I have had the pleasure of editing this newsletter in it's various shapes and forms since June of 1988. It has been both a lot of fun as well as a lot of hard work. I have had the chance to meet a lot of good people by doing this newsletter, both inside of SPAAR and out. I hope that you have enjoyed the finished product. But we still need your help.

I am very happy to say that at the present time there is more participation by members of this club with the production of this newsletter than ever before. Almost half of the copying is now done by various members. I cannot begin to describe how much of a help that has been. I can also always count on certain members to write an article, review a product or kit, or lend a photo. Those of you who regularly contribute their time and/or talent know who you are, and I cannot thank you enough. I think it's only fair to say that it's way past the time to share the burden.

If you are taking the time to read this, it must mean that you may even look forward to receiving your copy of The Countdown every other month. For those of you who can only make it to a few club functions per year, this newsletter may in fact be your only link to the club. If this is so, it is still your club and your newsletter. The same, of course, applies to those who are regular faces. The idea is the same for all members: you get out of it what you put into it. If you like the things that you see in The Countdown, just remember it was your fellow members who put it there. And if you don't like what you see, by all means do something to change it!

The message behind all of this, of course, is simple: WE NEED YOUR HELP. Help with articles. Help with production. Help with plans. Help with copying. Help with sorting, folding, stamping, mailing.

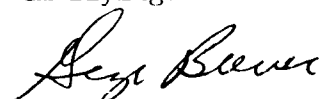
I cannot emphasize enough the idea that the form that whatever help you can provide has no limits or boundries. If you like to write, please do so. The topics are boundless. Your first rocket? Good idea! Your first club launch; your nicest paint job; your worst paint job; your first contest; your first (or best) home-made design. Your experimental programs. And, submissions can take almost any form. We love photos. Just ask those folks whose negatives I've borrowed! The same goes for plans. I've noticed that members who fly a particularly interesting model that they've designed themselves run in the opposite direction at launches when they see me approaching. They know I'm going to "put the arm" on them for the plans for the newsletter. There is a "sniglit" for that I think; how about "Editoraphobia"?

A club newsletter is a great place to share ideas with your fellow members. Find a new material for parachutes or streamers? Find a store that offers a good deal on spray paint? Let us know. Have you built a kit within the past that is of interest? Review it! Tell us what you think.

I have seen more new faces at club launches than ever before, including some father/child combos. I think that this is fantastic! Sounds like the basis for a good story, no matter who writes it, child or parent.

If you submit an item to the newsletter, and you don't see it in print right away, don't be upset. Sometimes things just don't "fit" in a particular issue. Believe me, you will see it!

Finally, my family wishes to extend the warmest of holiday greetings to you and yours, and keep 'em flying!



SECTION MEETING MINUTES

October 21, 1991

Present: Glenn & Rita Feveryear, J. Yost, E. Miller, D. Greene, R. Rhoat, G. Beaver.

Treasurer: Ed Miller reported that there were 42 members; the General Fund balance at the end of the last meeting was \$269.39. Outlays were: \$7.75 for post office box rent; \$8.77 for a storage box for the range equipment; \$5.01 for postage; and \$30.00 for the NAR Section charter renewal and insurance. Incomes were: \$15 for SPAARSEC-V fees; \$10 in subscriptions; \$22.50 in dues; and \$58 for a workshop kit; this leaves a balance of \$323.86.

Newsletter: George Beaver thanked those who helped with copying, and asked for submissions.

Education: G. Beaver discussed the plans for this coming winter's workshop program.

Competition: Glenn Feveryear reminded everyone that the NOAHS-91 contest ends with the Nov. 3 sport launch; announced that NOVAAR will hold the "1/2A Championships Regional" in May of '92, and the NICE-13 Open will be held on June 14, 1992.

Section Advisor: John Yost reported on a letter that he had received from Jack Sarhage of GSSS, the new NAR Section Activities Committee chairman. This letter was a survey, requesting information about our club and it's members.

John also reported that he has not yet received a reply from the Lancaster Co. Public Library regarding it's use by SPAAR for meetings in 1992.

Old Business

Dick Rhoat discussed the plans for the SPAAR Family Dinner, to be held on January 11, 1992. After duscussion, it was decided to hold the dinner at the Country Table Restaurant in Mt. Joy. Dick will make the arrangements, and advise the members on his progress.

New Business

The club schedule for 1992 was presented for discussion by Glenn Feveryear.

The members present voted on the events for SPAARSEC-VI, to be held in May, '92, as well as the events for the Open Meet, scheduled for April, '92.

Refurbishing the launch system was discussed. In particular, the launcher pivots and control box are in need of repair or replacement. Dick Rhoat was asked to locate a number of camera tri-pod mounts for the launchers, and John Yost is to refurbish the controller.

The problem of range control was discussed. It was agreed by those present that there are times when there are too many people crowding the Range Control Officer/Launch Control Officer, to the point of distraction; in addition, care is not being taken by flyers who walk over and through the electrical wiring in the area. It was pointed out that there have also been times when some of the younger members and/or guests have not displayed safe behavior.

In order to alleviate some of the crowding problem at the range head, the club's Range Safety Officer, Dale Greene, was requested to make the determination if the range is busy enough to warrant setting up a separate check-in area, away from the control table; flyers would check their models in at this location, most likely in the parking lot area, where they will receive their pad assignments. They will then be allowed to proceed to the range head to hand their flight card to the LCO. Dale is not expected to perform all of these duties himself. If he asks a member to help out with this system, the members are asked to do so. This is also not to be taken as some sort of punishment, and fingers are not being pointed at any individual or group. We all must cooperate with these procedures to help ensure a safe, orderly range operation. This will benefit all members.

The meeting adjourned at 9:10PM.

SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY
SECTION 503
1991/1992 CALENDAR

DECEMBER 1991

MON 16 - SECTION MEETING
 SUN 29 - SPORT LAUNCH, 1PM - 5PM

JANUARY 1992

SUN 19 - SPORT LAUNCH, 1PM - 5PM
 MON 20 - SECTION MEETING
 SAT 25 - WORKSHOP, 10AM - 1PM, (DCVFD)

FEBRUARY

SUN 2 - SPORT LAUNCH, 1PM - 5PM **GROUND HOG DAY**
 SAT 8 - HIGH POWER WORKSHOP, 10PM - ?, (DCVFD)
 MON 17 - SECTION MEETING
 SAT 29 - HIGH POWER WORKSHOP, 10AM - ?, (DCVFD)

MARCH

SUN 1 - SPORT LAUNCH, 1PM - 5PM
 MON 16 - SECTION MEETING
 SAT 21 - HIGH POWER WORKSHOP, 10AM - ?, (DCVFD)
 SUN 29 - SPORT LAUNCH, 1PM - 5PM

APRIL

MON 20 - SECTION MEETING
 SUN 26 - OPEN MEET, 9AM - 5PM, SPAMO-1, LEESPORT, PA
 (SPAAR)

MAY

SUN 10 - SPORT LAUNCH, 1PM - 5PM **CLUSTER DAY**
 ALTITUDE TRACKING AVAILABLE
 SAT 16 & SUN 17 - HAC-1/2, MANASSASS, VA (NOVAAR)
 MON 18 - SECTION MEETING
 SUN 24 - SECTION MEET, 9AM - 5PM, SPAARSEC-6, DENVER, PA.

JUNE

SUN 14 - SPORT LAUNCH, 3PM - 7PM **PATRIOT & SCUD DAY**
 SUN 14 - NICE 13, MANASSASS, VA (NOVAAR)
 MON 15 - SECTION MEETING
 SAT 20 - SUN 21 - WUBBA-15, ALLENTOWN, PA (PULSAR)

JULY

SUN 19 - SPORT LAUNCH, 3PM - 7PM **MANNED SPACE VEHICLE
 DAY**, ALTITUDE TRACKING AVAILABLE
 MON 20 - SECTION MEETING

AUGUST

SUN 16 - SPORT LAUNCH, 3PM - 7PM **MULTI-STAGE DAY**
 MON 17 - SECTION MEETING
 SUN 30 - SECTION MEET, 9AM - 5PM, SPAARSEC-7, DENVER, PA.

SEPTEMBER

SUN 13 - SPORT LAUNCH, 3PM - 7PM **SCALE DAY**
 ALTITUDE TRACKING AVAILABLE
 MON 21 - SECTION MEETING

OCTOBER

SUN 11 - SPORT LAUNCH, 1PM - 5PM **PLASTIC MODEL DAY**
 MON 19 - SECTION MEETING

NOVEMBER

SUN 8 - SPAARSPAM, 1PM - 5PM
 MON 16 - SECTION MEETING

DECEMBER

MON 21 - SECTION MEETING
 SUN 27 - SPORT LAUNCH, 1PM - 5PM

SECTION NEWS NOTES

1992 SCHEDULE: As you can see on page 6, the 1992 schedule is out.

The first change that you may notice actually takes place in 1991. For the first time since 1988, we will be holding regularly scheduled Sport Launches during the winter months. The first of these will be on Sunday, December 29, from 1PM to whenever the ice buildup on the models prevents launching, or 5PM, whichever comes first.

The popular "theme" launches will be continued for '92. They include "Ground Hog Day" on Feb.2; "Cluster Day", May 10; "Patriot & Scud Day", June 14; "Manned Space Vehicle Day", July 19; "Multi-Stage Day", August 16; "Scale Day", Sept. 13; and "Plastic Model Day", Oct. 11.

In addition, the club's altitude tracking equipment will be set up for use during three sport launches, May 10, July 19, and Sept. 13.

WINTER WORKSHOPS: The big news of course, is the High Power Rocketry Workshop program being presented this winter by Ed Miller. As has been reported at length, the object of this workshop series is to allow a "hands-on" approach to the topic of HPR. The kit selected for this project is the THOY "Falcon". Ed will be placing the order for these kits on Dec. 1, so if you are still planning to purchase one of these rather large critters, please contact Ed at (717) 865-6829 prior to Dec. 1.

Ed wants it to be known that even if you do not plan to actually buy and build the Falcon, by all means please attend this workshop series. There will be a ton of good information presented on the construction and flying of High Power Rockets. ALL ARE WELCOME!!!!!! The dates set aside for the HPR Workshop Program are Sat. Feb 8; Sat. Feb 29; and Sat. March 21, from 10AM to ? at the Delta Fire Co.

In addition, there is a Winter Workshop scheduled for Saturday, Jan. 25, from 10 AM to 1 PM. Nothing in particular is planned

for this workshop. It just might be a good day to bring a model to work on, watch videos from this past years launches (oh no, not that!) and just generally hang out with other rocket nerds 'n geeks.

THE SPAAR FAMILY DINNER: Is still planned for Saturday, January 11, 1992. Who will win the 1992 SPAAR Rocketlok Award? It could be you! Please come, enjoy a nice dinner with a bunch of nice folks, and watch as these guys try to act right (like eating with forks). Contact: Dick Rhoat, 1509 Rothsville Rd., Lititz, PA, 17543, (717) 627-2208.

SPAMO-1 OPEN MEET: Next year's attempt at an Open Meet will be on Sunday, April 26, 1992, at the Schuylkill Valley Middle School in Leesport. The events will be: $\frac{1}{4}$ A Rocket/Glide, $\frac{1}{4}$ A Boost/Glide, $\frac{1}{4}$ A Streamer Multi, C Helicopter, B Eggloft, and A SuperRoc Duration. What does SPAMO stand for? How about SPAAR's After March Open?

SPAARSEC-VI: Our sixth Section Meet, SPAARSEC-VI, is scheduled for Sunday, May 24, from 9 to 5 at Cocalico. The events will be: C Helicopter, Open Spot Landing, $\frac{1}{4}$ A Rocket/Glide, and D Dual Eggloft Altitude.

This gives us 5 to 6 months to get our models ready for these contests. Build, build, build!

ELECTIONS: The elections for the 1992 SPAAR Board of Directors will be held, as usual, during the December meeting. These positions are: Section Advisor, President, Vice-President, Secretary-Treasurer, and Member-at-Large. Be there to help shape the course that your club takes.

NOVAAR CONTESTS: The Northern Virginia Area Assoc. of Rocketry, NOVAAR, will be hosting a number of meets next spring. The " $\frac{1}{4}$ A Championships" will be held in May (exact date unknown at this time) and the events will be: SuperRoc Altitude, Scale Alt., SD(M), BG, R/G, HD, & FW. As the name implies, all of these events are $\frac{1}{4}$ A. NICE-13 is planned for June 14. Events: B ELD, $\frac{1}{2}$ A RG, S6A, D FW(M), and B Bi-Wing BG.

SPAAR SPORT LAUNCHESOCTOBER 13, 1991

The October 13 Sport Launch will be remembered for the large number of new faces that were there. The crummy weather was nothing new, and certainly not memorable.

The Gardei family came, ready to fly. They seemed to enjoy building and flying some of the larger Estes kits, among them the Super Big Bertha, Optima, and Alien Space Probe. Doug flew an interesting home-brew design, the Twin Lift. This model featured twin parasite gliders which separate at apogee to glide back to earth.

Art Babiarz, Sr. and Jr., flew some of their Estes oldies, with a new twist here and there. The good 'ol Big Bertha carried aloft a parasite glider which performed nicely. The same cannot be said, sadly, for the Sky Slash II. This is a boost/glider whose design goes back to about 1964. It did not fly well on this day, but it's still a pretty glider. Art also flew his old Estes Mercury-Redstone. This model has well over 100 flights on it!

Ed Miller flew some old familiar models such as the Bullpup, Armacron III, Super Nova, Eliminator, and Magnum Wizard. He also flew some new rockets that really made "big" impressions. One was a two-stage version of his Shock Wave design, powered by an F100 in each stage. The paint job on this model, various shades of metal flake purple, has to be seen to be believed. The other was an FSI kit, the Intrepid. This model is powered by an F100 in the main airframe, and 2 D20's in strap-ons. The launch sequence for this model is interesting. One second it's there sitting on the pad, waiting for launch. The next instant it's gone, and all you hear is a whooosh!

There were 17 flights made as part of the NOAHS-91 contest, the most of any given day this year. John Yost, Dale Greene, Glenn Feveryear and Dave Bender all made flights in this series.

NOVEMBER 3, 1991

SPAARSPAM-3 was held on November 3, and despite the breeze and temperatures in the 40's, over 50 flights were made. The weather made enjoying all of the great food a little difficult, but no one left hungry. In all, 16 people made a total of 55 flights, including 7 people who entered this year's event, 18mm ½A Streamer². The winner there was our newest member, Roger Dwyer, whose difference was 2.09 seconds. Second was none other than John Yost at 4.2s, followed by Glenn Feveryear in third at 4.84s, and Kevin Krall in fourth at 8.29s. The "Joisee Duo", Bruce Canino and Sharon Selig, made valiant attempts, but finished out of the running.

Bruce made up for it, however, with two nice flights on his Aerotech Initiator. They were made with an F14 Black Jack and an F25 White Lightening, respectively.

Amanda Latz just keeps right on flying, making 9 flights with only one problem. Her Viking had a stability problem that a little weight in the nose should take care of. Her father Wade got in his share of flying, too, including a real nice flight on an Estes Black Brant II.

Ed Miller flew a Mustang, Super Big Bertha Plus, and Intrepid without a problem. However, his Maxi-Alpha was severely damaged by a CATO of the D12-5.

Karl Fehrenbach was a busy man, too. He got in some beautiful flights with his Homebrew, Pathfinder, Starburst, Viper III, and, of all things, his version of an overgrown Wizard, which he calls the "Wizard 3X". Karl's version is powered by a single 29mm motor, in this case an F25-6WL.

The "Hot Dog Man", Jim Lytle, came up from Maryland to roast weinees and to fly his Ironman and Flying Saucer.

As mentioned above, Roger Dwyer was at his first launch, and both he and his wife Jill appeared to enjoy themselves. Believe me, Roger, it's even nicer when the weather cooperates!

FLIGHT LOGOCTOBER 13, 1991

<u>FL#</u>	<u>NAME</u>	<u>MODEL</u>	<u>MOTOR(S)</u>	<u>RESULT</u>	
1	G. Gardei	Super Big Bertha	D12-5	GF	
2	" "	Super Big Bertha	D12-5	?	
3	" "	Fireaero	A8-3	?	
4	Doug Gardei	Optima	D12-5	GF	
5	" "	Optima	E15-7WL	CHU	
6	" "	Alien Space Probe	D21-4	GF	
7	" "	Alien Space Probe	D21-4	GF	
8	" "	Twin Lift	C6-3	GF	
9	Alan Rubright	Mega Sizz	D12-5	GF	
10	" "	Rascal	C6-5	GF	
11	Dennis Stauffer	Wizard	A8-3	GF	
12	" "	Starblazer	A8-3	GF	
13	" "	Starblazer	B6-4	GF	
14	" "	Starblazer	A8-3	GF	
15	Dave Bender	Transtar Carrier	C5-3	GF	
16	" "	Airmail	E15-4WL	GF	
17	Art Babiarz Sr.	Mercury-Redstone	A8-3	GF	
18	" "	Skyslash II	A8-3	NG	
19	" "	Big Bertha + Parasite	A8-3	11.5s	GF
20	Art Babiarz Jr.	Talos	A8-3	28.0s	GF
21	" "	Honest John	A8-3	16.1s	GF
22	Ed Miller	Bullpup 12D	C6-5	GF	
23	" "	Supernova	B6-0/A8-5	GF	
24	" "	Omega	D12-0/B8-5	GF	
25	" "	Armacron III	(3) B8-5	GF	
26	" "	Eliminator	G42-4WL	GF	
27	" "	Intrepid	F100-6, (2) D20-0	GF	
28	" "	Magnum Wizard	(3) D12-5	GF	
29	" "	Shock Wave	F100-0/F100-6	GF	
30	George Beever	Demoted Corporal	F100-8	GF	

NOAHS-91 FLIGHTS

<u>FL#</u>	<u>NAME</u>	<u>EVENT</u>	<u>MOTOR</u>	<u>RESULT</u>
31	John Yost	Open Spot Landing	½A3-2	23.72m
32	Dale Greene	"	A8-5	15.88m
33	Glenn Feveryear	"	½A6-2	21.99m
34	George Beever	"	½A6-2	28.69m
35	Dale Greene	C HD	C5-3	DQ-UNS
36	Dale Greene	A RG	A3-2	14.84s
37	Dale Greene	A RG	A3-2	65.0s
38	John Yost	B B/G	B4-2	44.1s
39	John Yost	"	B4-2	54.0s
40	George Beever	½A PD	½A6-2	48.35s
41	George Beever	½A PD	½A6-2	27.75s
42	John Yost	Prec. Dur.	A8-5	157.5s=162.5%
43	Glenn Feveryear	" "	A10-3	22.59s=62.3%
44	George Beever	" "	C6-7	23.18=61.4%
45	Dale Greene	" "	E15-7WL	114.4=90.7%
46	Dave Bender	" "	B6-4	31.85=47%
47	Dave Bender	Open Spot Landing	A8-3	11.86m

FLIGHT LOG
NOVEMBER 3, 1991

<u>FL#</u>	<u>NAME</u>	<u>MODEL</u>	<u>MOTOR(S)</u>	<u>RESULT</u>
1	Brandon Tabbutt	Recon-1	A8-3	GF
2	" "	Recon-1	A8-3	?
3	Amanda Latz	Viking	A8-3	UNS
4	" "	Bullpup 12D	B4-4	GF
5	" "	Voyager II	B6-4	GF
6	" "	Time Traveler	B4-4	GF
7	" "	Hawkeye	½A3-2	GF
8	" "	Photon Probe	B6-4	?
9	" "	Dragonfly	½A3-2	?
10	" "	Recruiter	B6-4	GF
11	" "	Maverick	A8-3	GF
12	Dale Greene	?	D12-3	GF
13	Bruce Canino	Initiator	F14-4J	GF
14	" "	Initiator	F25-6WL	GF
15	Mark Snyder	Bullpup 12D	B4-4	GF
16	Rick Hackman	XR-51	B6-4	GF
17	" "	XR-49	B6-4	GF
18	" "	XR-55	C6-3	GF
19	" "	Birdie	A3-4.	GF
20	" "	XR-52	A3-4	GF
21	" "	Omega	D12-0/D12-7	GF
22	Jim Lytle	Flying Saucer	C6-0	GF
23	" "	Ironman	C6-3	GF
24	Ed Miller	Big Bertha Plus	F100-6	GF
25	" "	Mustang	E15-4WL	GF
26	" "	Intrepid	F100-6, (2) D20-0	GF
27	" "	Maxi-Alpha	D12-5	CATO
28	Sharon Selig	Skylab	B4-2	GF
29	Karl Fehrenbach	Homebrew	F50-9	GF
30	" "	Wizard 3X	F25-6WL	GF
31	" "	Pathfinder	D12-5	GF
32	" "	Starburst	D12-3(2)	GF
33	" "	Viper III	D12-5(3)	GF
34	Gary Rubright	Cajun	B4-4	GF
35	" "	Phoenix	D12-3	GF
36	" "	Rascal	C6-5	GF
37	Alan Rubright	America	B6-4	GF
38	" "	Rascal	B6-4	GF
39	" "	Alpha	A8-3	GF
40	Wade Latz	Starbird	B6-4	GF
41	" "	Black Brant II	D12-5	GF
42	" "	Target Drone	A8-3	GF
43	" "	Alpha	D12-5	GF
44	Roger Dwyer	Mighty Man	B6-2	GF
45	" "	Menace	B6-2	GF
46	" "	Zinger	B6-2	GF
47	George Beever	Thunderhawk	B4-4	GF
48	" "	Saturn V	E15-4WL	GF
49	Roger Dwyer	½A SD 2	½A6-2	6.81/8.90= 2.09
50	John Yost	"	"	8.4/12.6=4.2
51	Glenn Feveryear	"	"	23.26/28.11=4.84
52	Kevin Krall	"	"	9.2/17.49=8.29
53	Sharon Selig	"	"	9.72/43.06=33.34
54	Jim Lytle	"	"	No Sep
55	Bruce Canino	"	"	No Sep

SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY
SECTION 503
FINAL NOAH RESULTS

1/2 A PARACHUTE DURATION

	FLHT1	FLHT2	FINAL	POINTS
GLENN FEVEYER	153.74	144.91	299	360
GEORGE BEEVER	48.35	24.75	73	216
DALE GREENE	22.36	25.32 (NR)	48	144
JOHN YOST	113.00 (NR)	97.00 (NR)	FP	36

A STREAMER DURATION

	FLHT1	FLHT2	FINAL	POINTS
DALE GREENE	91.14	72.85	164	360
GLENN FEVEYER	77.78	76.81	155	216
GEORGE BEEVER	51.66	38.52	90	144
JOHN YOST	15.00 (CATO)	-	15	72

A ROCKET GLIDER DURATION

	FLHT1	FLHT2	FINAL	POINTS
GLENN FEVEYER	77.15	109.80	187	1080
DALE GREENE	14.84	65.00	80	648
GEORGE BEEVER	49.40	27.64	77	432
JOHN YOST	DQ (UNST)	-	-	-

C HELICOPTER DURATION

	FLHT1	FLHT2	FINAL	POINTS
GEORGE BEEVER	74.72	69.54	144	1320
GLENN FEVEYER	61.90	-	62	792
DALE GREENE	4.0 (DQ-UNS)	-	-	-

B BOOST GLIDER DURATION

	FLHT1	FLHT2	FINAL	POINTS
JOHN YOST	44.10	54.00	98	1080
DALE GREENE	62.00	32.97	95	648
GEORGE BEEVER	8.67	72.95	82	432
GLENN FEVEYER	15.92	24.50 (DQ-NG)	16	216

PRECISION DURATION (60 SEC)

	FLHT1	FINAL	POINTS
GEORGE BEEVER	23.18	61.4%	480
GLENN FEVEYER	22.59	62.3%	288
DALE GREENE	114.40	90.7%	192
JOHN YOST	157.50	162.5%	96

OPEN SPOT LANDING

	FLHT1	FINAL	POINTS
DALE GREENE	15.88M	15.9M	240
GLENN FEVEYER	21.99M	21.9M	144
JOHN YOST	23.72M	23.7M	96
GEORGE BEEVER	28.69M	28.7M	48

A PAYLOAD ALTITUDE

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

B EGGLOFTING ALTITUDE

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

NOAH-1 CONTEST POINTS

GEORGE BEEVER	3912
GLENN FEVEYER	3708
DALE GREENE	3648
JOHN YOST	1380

The last words on NOAH-1:

1. Most of the flights were made during the last two months of the contest. Are we all procrastinators?
2. Dale Greene missed being the overall winner by 3 seconds. The entire contest boiled down to the results of one event. If Dale could have pulled three more seconds out of his Flat Cat glider to tie John Yost for first place in B B/G he would have had enough points to take first place overall from George Beaver.
3. Points difference between places 1 through 3 is 264 points. This shows that points were pretty well divided. Again, no one person ran away with all the points.

THE 1991 CAPITOL AREA ROCKETRY CONVENTION

CAPCON-91

During the weekend of October 19 & 20, the NARHAMS Section of the NAR hosted the first Capitol Area Rocketry Convention, or CAPCON-91 for short. SPAAR members Glenn and Rita Feveryear, Dale Greene, and George Beever made the trip to Greenbelt, MD., to attend. It was certainly worth the trip!

The convention was held at the Owens Science Center, not far from the Goddard Space Flight Center in Greenbelt.

Saturday, the 19th, was the day set aside for the various seminars as well as having the range store open for business. Sunday was the day for a sport launch, as well as a tour of NASA GSFC.

The four SPAAR members who attended managed to attend just about every one of the seminars. Dale and Glenn were very interested in attending the classes on launch systems and clustering techniques, in which John McCoy was the instructor. Glenn and George attended a competition seminar hosted by Dennis Kryway, a member of the US Team that recently returned from a trip to the USSR. Dale Greene joined them for the next class, given by Dave O'Bryan on fibreglassing techniques. This particular seminar appeared to be one of the most popular. Another seminar that drew a large crowd was the one given by long-time NAR photographer Alan Williams.

Ed Pearson, who has been involved with the hobby as long as just about anyone, conducted a beginner's workshop. SPAAR's Rita Feveryear attended Ed's class, and came away with a model built from an MRC kit. Rita says that she flew the model at Sunday's sport launch, and the flight was flawless. Congratulations Rita!

A seminar on High Power Rocketry was presented by Bob Lussier. Bob's message was relatively simple: Build 'em strong, and use lots of epoxy! On display were a number of Bob's models, including a LOC King Viper III, which barely fit into the room. A video presentation on the subject of HPR was also quite entertaining.

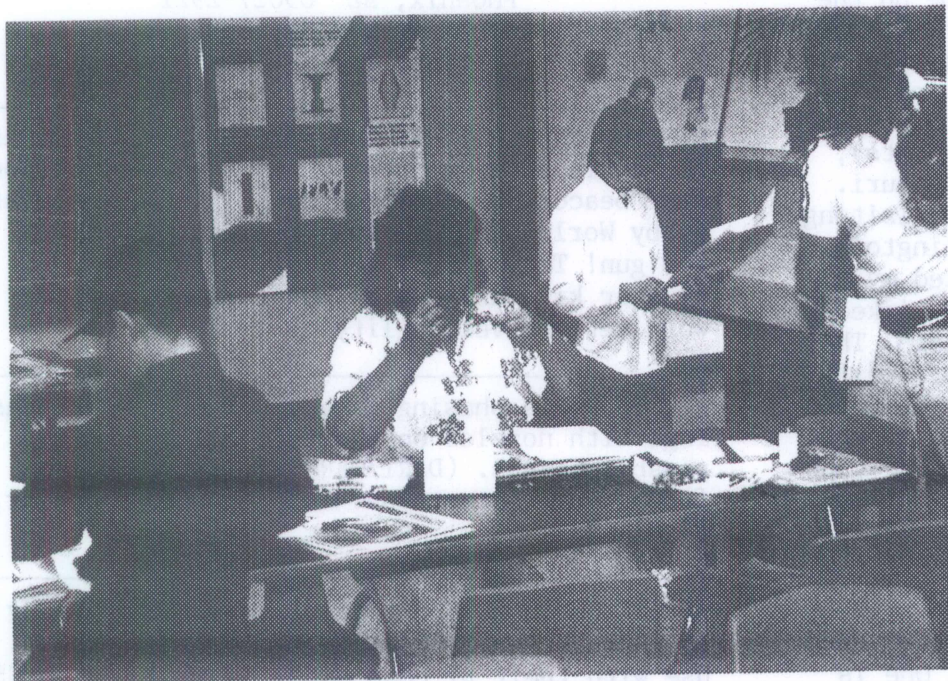
A workshop for newsletter editors was given by Robert Austin, editor of the LAC Award winning ZOG-43, from NARHAMS. Needless to say, it was a very useful exchange of information.

A Range Store was also available to those attending. Ken Brown of Qualified Competition Rockets set up shop early and appeared to be doing a brisk business. (In fact, how come every time I see Ken I reach for my wallet?) Your editor purchased some of Ken's kits designed for the new Apogee $\frac{1}{4}$ A motors, which should be interesting. Also there was AAA Model Aviation Fuels, offering some very good deals on FSI, MRC, Aerotech, as well as their own kits.

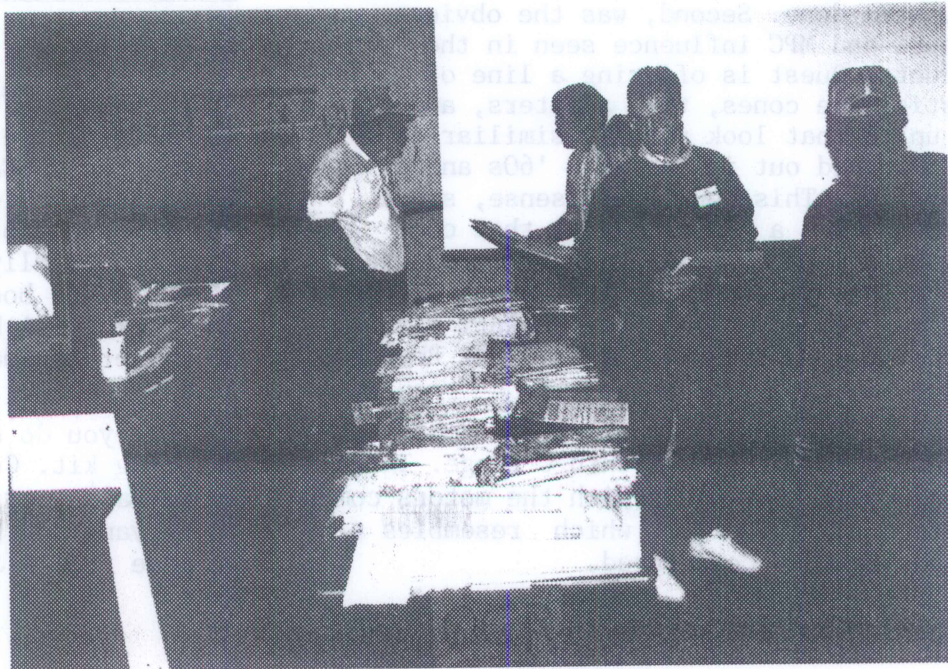
Saturday's last scheduled activity was a talk given by a NASA representative on that agency's current projects, as well as some plans for the future. The day ended with the distribution of the many door prizes. Among the door prizes were a large number of Estes kits, including the Super Vega, Titan IIIIE, and Super Big Bertha. Cox also donated some of their ready-to-fly line.

This was your editor's first rocketry convention, and it was a great time. It was good to see some old friends once again, as well as to meet some of the faces behind the names that I had been hearing about for so long, such as Ed Pearson and Alan Williams. I sincerely hope that NARHAMS has a CAPCON-92 in the works; with the convention idea catching on once again, maybe SPAAR should give some thought to hosting one sometime in the future.

PHOTOS FROM CAPCON-91



Left: SPAAR's Rita Feveryear at the building session hosted by Ed Pearson.



Right: The QCR table at the CAPCON-91 Range Store.

AND NOW, THE NEWS

A NEW COMPANY ON THE SCENE: Another rocketry company appears to be emerging in Phoenix, Arizona.

Section president Glenn Feveryear received, by mail, a packet of information sent by Quest Aerospace Education, Inc. The mailing included a catalog, which featured kits, parts, and motors, all at very reasonable prices. The emphasis appeared to be on the educational aspects of the hobby. What also appears obvious is the talent assembled behind Quest Aerospace; the group includes G. Harry Stine (co-founder of the hobby and the NAR), Ed LeCroix (Apogee Components), and Grant Boyd, late of Acme and Centuri. A day or so later, your editor was visiting the Hobby World R/C store in Shillington (Berks Co.), when the owner directed my attention to a catalog that he had picked up at the RCHTA hobby show in Chicago. This was also from Quest, but it was quite different than the one sent to Glenn. The parts were basically the same, but the kits were not the ones shown in his catalog. From the literature sent to Glenn, it appears that Quest is offering a line of products to hobby shops, and a line to schools for educational purposes.

In any event, some things really stand out when looking through the catalogs. One is the fact that the catalogs themselves are very well done. Second, was the obvious Centuri and MPC influence seen in the products. Quest is offering a line of plastic nose cones, tube adapters, and fin units that look awfully similiar to what MPC had out in the late '60s and early '70s. This would make sense, since Mr. Stine was a consultant to that company when it sold model rocketry products during that time period. The layout of the catalogs reminds one of the Centuri catalogs of the mid- to late 70s, when Grant Boyd was there.

Quest is also offering a line of 18mm black powder motors, in the A thru C range. This includes an A6-4. Along with the motors comes a "Tiger Tail" ignitor, which resembles a refind Aerotech Copperhead.

Considering the people involved with this company, and the looks of what is being offered, Quest looks like the real thing. Hopefully, they will do better than the last "new" outfit from Phoenix, the ill-fated Enertek.

For more information, contact them at:
QUEST AEROSPACE EDUCATION, INC.,
519 West Lone Cactus Drive,
Phoenix, AZ 85027-2921
Ph# 602-582-3438
Catalog, \$1.00

HI-TECH FROM ESTES?: One of the items shown at the RCHTA show reportedly was some type of locator beacon. Your editor saw a photo of one at Hobby World R/C. It looked something like a ray gun! They also reportedly will offer new cluster kits and a high power launch pad. No word yet on availability.

AEROTECH: is phasing in one-peice, molded, castings with nozzles on their 18 and 24mm disposable motors. (DART/WARP-9). For more information, contact your local Aerotech dealer, Ed Miller.

APOGEE COMPONENTS: Apogee is reportedly ready to introduce a B SuperRoc kit designed for use with their B7 composite. No word yet on \$\$\$.

SPORT PLAN

The Astron OMEGA (next page)

The plan on the next page is of the Estes Astron OMEGA. The OMEGA was known primarily as being the launch vehicle for the Cineroc movie camera, and was available from 1970 to 1981. The model flys beautifully on either two D12's, or a D12-0 in the booster and either a B or C in the upper stage. A big thanks to Rick Hackman and Ed Miller for making the information available.

NOTES: The RA-5060 centering rings can be home made if you do not feel like canibalizing an existing kit. Cut out the rings from either plywood, balsa, or thin cardboard, stenghtened with thin cyano and baking soda. The nose block can be made from a JT-60 coupler and a wood disc.

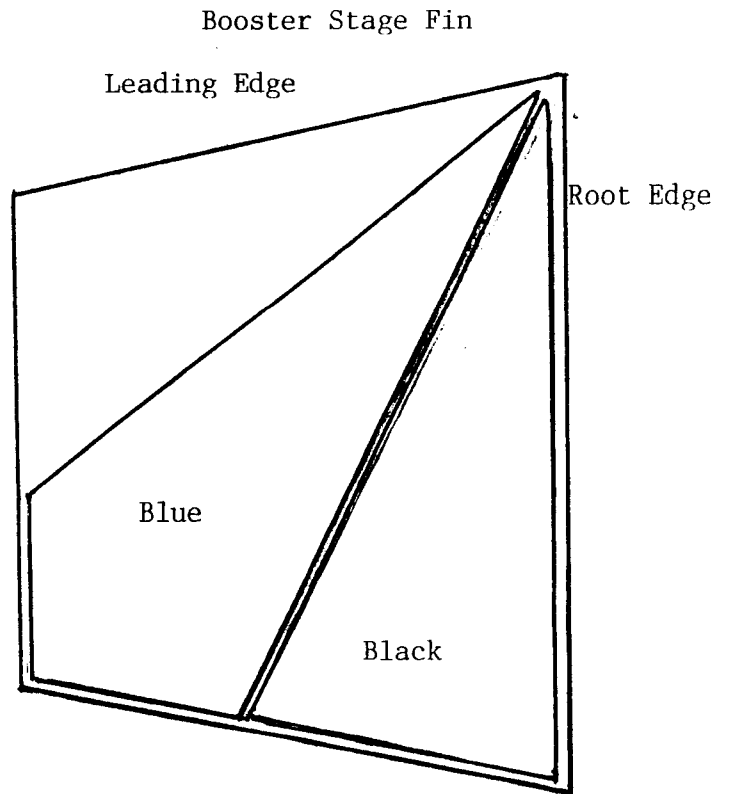
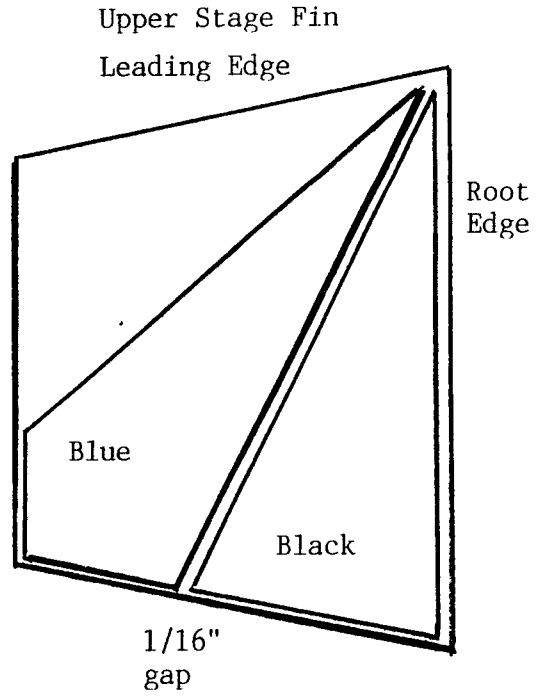
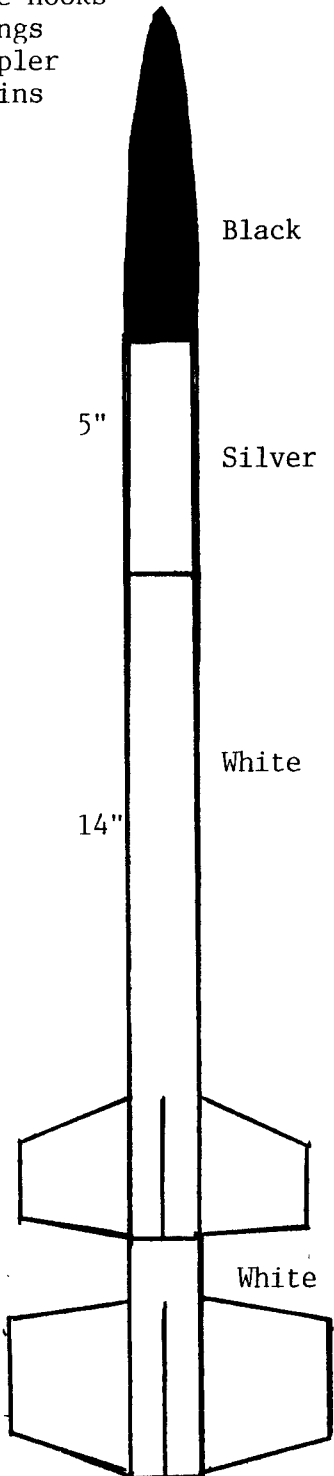
The Estes Astron OMEGA

PARTS LIST

- | | |
|---|----------------------------|
| # | Item |
| 1 | 14" BT-60 |
| 2 | 5" BT-60 |
| 1 | PNC-60AH Nose Cone |
| 2 | 4" BT-50 Motor Mount Tubes |
| 4 | RA-5060 Centering Rings* |
| 2 | EH-1 Engine Hooks |
| 2 | AE-2050 Rings |
| 1 | JT-60C Coupler |
| | 1/8" balsa for fins |
| | shock cord |
| | screw eye |
| | 2 3/16"X2" lugs |
| | 18" 'chute |
| | 1 Nose Block* |

*=See Notes

All Parts Listed
Are From Estes



...AND NOW, MORE NEWS

[Editor's Note: Just prior to printing this issue, several exchange newsletters were received that contained more news from the world of rocketry. Here goes:]

.... Most of this month's manufacturer's news comes from last week's Radio Control Hobby Trade Association (RCHTA) show in Chicago. Leading off with news from Estes: The market leader made good on the rumours of introducing a line of high power products. Among the new products are three kits powered by D12 clusters including a 1/6 scale Patriot powered by a cluster of 4 D's, and an R/C BG kit called the "Astro-Blaster". Also new is the Transroc II transmitter that serves as a recovery beacon. The D12 kits are called the Pro Line series, and range in price from \$40 to \$60. Other new items include a large launch pad and a companion controller, as well as a series of almost ready to fly kits. Rumors still persist that Estes will be introducing a line of composite motors in sizes of E and above in the future.

Speaking of engines, Estes also has plans to discontinue several engines popular for NAR competition. Gone are the A10-3, B4-2, C6-3, and possibly a few more. As usual, several kits have been discontinued as well, including the Astro, Blazer, Blue Star, Cajun, Dark Star, Javelin, Jammin, Laser, Liberty, Meteor, Micron, Raven, Stinger and Surveyor. Although it is too early to tell, the possibility exists for the discontinued engines to be offered via another company like the A3-2T and A3-6T were offered initially by HO Sales and later by Apogee.

Finally, Estes plans to come out with a series of their long since discontinued kits as a limited collector's edition. The first out will be the original Mars Snooper for \$24.99.....

Strictly opinion on the developments at the RCHTA show. First, in light of announcements in recent years regarding new rocketry companies, I will believe this one when I see it. [In regards to Quest Inc., see p 7] What happened to the companies that debuted at

last year's RCHTA show? (SMI with it's low cost composite A,B, and C engines and QED, the company with kits made from LOC parts) Then there is Cox with the re-release of it's old plastic almost ready to fly line of rockets (which rumor has it is about to be discontinued by Cox) Also, there is MRC with it's shaky initial introduction and subsequent improved product line at perhaps too high a price. Last but not least, the Eneretek vaporware (although some of it did materialize thanks to Aerotech). Although most of the above mentioned companies are still around, none of them have had a major impact on the hobby except for Aerotech and none of them have been able to challenge Estes directly. This is what Quest appears to be attempting to do, especially in the schools, scouts, and other youth group markets, an area of the market that Estes has total control of today. It remains to be seen how Quest will be able to do what others have not, that is, make the mass model rocketry a two horse race again.

Second, the Quest announcement raises other questions that will effect the hobby and possibly NAR competition. First, it would appear that Bill Stine's involvement with MRC has ended. Will this mean that MRC will pull out of the model rocketry market? If they do stick it out, who will be doing their product development in the future? Second, how will Ed LeCroix's involvement with Quest affect Estes' relationship with Apogee as the manufacturer of the black powder portion of the Apogee "Medalist" engines? Or will Apogee be switching to Quest as a supplier of it's engines in the future? Note: Some of the above information was provided from messages on Modelnet (and those in attendance at the RCHTA show) including Bob Sanford and others.

[I wish to thank Dan Wolf, editor of The Upstate Rocketeer, the newsletter of MARS, NAR Section #136, for the use of the entire article above. This appears in Volume 4, No. 5, November, 1991-Editor]

DALE GREENE'S TRIP TO NARAM-33, PART 2:

"HOW I WON ½A PARACHUTE DURATION"

-OR-

"I HAVE LEARNED THE VALUE OF A BRICK"

To give you a brief explanation of how I won ½A PD, like I said, the wind was bad, real bad, and it was blowing towards the railroad tracks and the woods beyond. So, it appeared that everyone was losing their first flight into the woods. A theory evolved among the competitors: fly one and let it thermal away - despite the wind there were some great thermals - and for your second flight, fly a brick.* Herein lies my problem: I didn't bring a brick with me. I had 4 little Perihelions [small 13mm dia. streamer or parachute duration design-ED.] So, true to form, my first flight thermalized away. On the second flight, I took my 18" 'chute and cut about a 9" spill hole in it. I didn't make a nice, neat fold, either. I just wadded it all up and wrapped the shock cord and shroud lines around it. I did this in the hope that upon ejection it wouldn't unfold right away. I also angled the model way to the wind.

I had hoped it would lose about half of its altitude before the 'chute opened, which it did. I got 2 minutes and six seconds out of the flight. It caught a thermal, went over the railroad tracks, just missed the power lines, and just missed the woods. It landed in a small clearing, surrounded by high reeds. A woman pointed it out to me, because I did not see it. So I got a return on this flight, my second. It qualified my first flight, which was over five minutes. This gave me the win. So, that's the reason I won - I didn't have a brick with me.

* - A "Brick": term used to describe large, heavy, generally uncompetitive contest models; like the kind your editor flies.

As far as streamer duration goes, I had some bad luck there; well, I did have one good flight. This was A Streamer Duration, and my first flight thermalized away, and on the second flight, I had a "No Deploy" DQ. I don't think the ejection charge went off in the motor, but I didn't get the rocket back, so I couldn't prove that.

Well, that was pretty much the highlight of my competition. It went downhill from then on. Part of my problem was the old rule of thumb: Always Have At Least Two Models For Each Event. Well, along comes A Rocket/Glide, and I only had one model completed. Well, I power pranged that one on my first flight, so I had nothing else to fly. I did have a Ken Brown kit, and parts for another, so I could have built them the night before A R/G was flown, but I didn't; there were too many activities going on!

Then comes C Helicopter. I had one, it was also a Ken Brown kit. On its first flight, it spit the engine, so I DQ'd there. It ended up in the woods, however, so I couldn't return it. And, as it was the only one I had, I couldn't get a second flight in. I did have parts for a second helicopter in my hotel room, but I didn't build it, so.....

As for B Eggloft Altitude, I did bring two models with me, but I didn't use either one. I bought one of Ed LeCroix's "B-Liners", and built that during a rainstorm on Wednesday. Because of the weather, I only got in one flight in that event. Just about everyone was flying a B-Liner!

NARAM-33 was fun; I guess I'll just start saving my pennies for NARAM-34 next August.....

Left: "Git dat camera outta mah face!"



Right: "How comes I got this engine in, but I can't get it out?"



Left: "Are we having fun yet, Mom?"



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

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_____ PLEASE CONTACT ME WITH MORE INFORMATION

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STREET ADDRESS _____

CITY _____ STATE _____ ZIP _____

PHONE: AREA CODE () _____ AGE _____

DATE OF BIRTH _____

_____ I HAVE NEVER FLOWN ROCKETS. _____ I HAVE BEEN FLYING
MODEL ROCKETS FOR _____ MONTHS/YEARS.

_____ I AM A MEMBER OF THE NAR. MY NAR NUMBER IS _____
_____ I AM NOT YET AN NAR MEMBER.

DUES: _____ 14 YEARS OF AGE OR YOUNGER, \$5.00
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 _____ FAMILY PLAN: OLDER MEMBER JOINS AT THE FULL RATE
 THEN ALL YOUNGER MEMBERS JOIN AT HALF PRICE.
 (FAMILY PLAN PROVIDES ONLY ONE COPY OF THE
 NEWSLETTER PER FAMILY.)

DUES ARE PAYABLE FOR 12 MONTHS. RETURN THIS FORM TO:
 SPAAR, PO BOX 127, REAMSTOWN, PENNSYLVANIA 17567

Membership Application

NATIONAL ASSOCIATION OF ROCKETRY
 1311 EDGEWOOD DRIVE, DEPT M
 ALTOONA, WI 54720

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

DATE OF BIRTH: Month _____ Day _____ Year _____

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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- JUNIOR MEMBERSHIP (Under 16 as of January 1)..... \$15.00
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- SURFACE POSTAGE (Required)..... \$ 6.75
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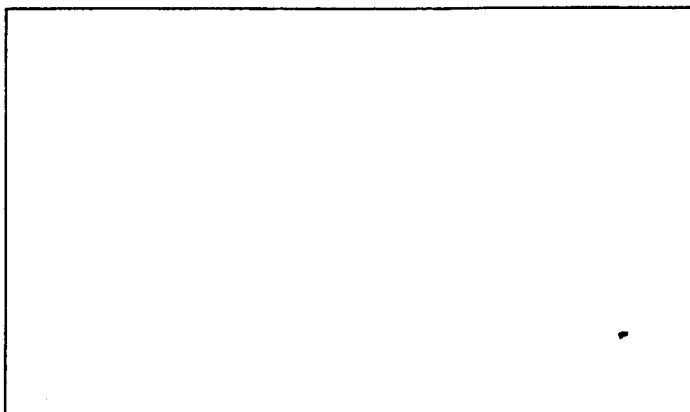
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- RENEWAL (NAR # _____ Section # _____); Deduct \$1... \$ _____
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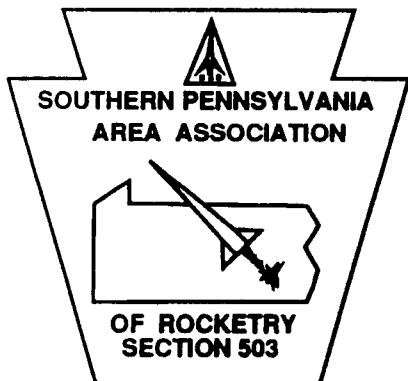
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**SOUTHERN PENNSYLVANIA
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PROMOTING SAFE MODEL ROCKETRY
IN SOUTHERN PENNSYLVANIA
AND NORTHERN MARYLAND



*The Southern Pennsylvania Area
Association of Rocketry*

COUNTDOWN

Volume 4 No. 6

NOVEMBER/DECEMBER 1991