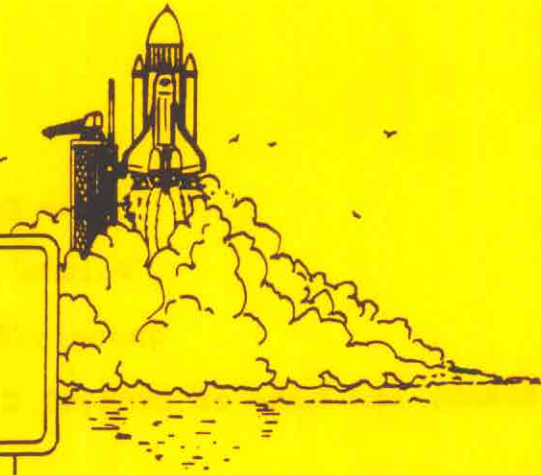


COUNTDOWN



OFFICIAL NEWSLETTER OF
THE SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY

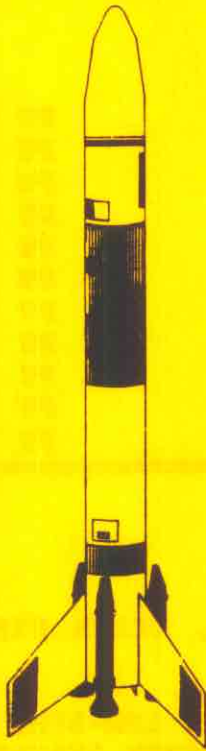
VOLUME 7, ISSUE 1 | JANUARY/FEBRUARY 1994

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1993 Launch Stats

SPAAR Winter Activities

Membership Roster



- PLUS -

The Editor's Lame Excuses For Why This Is Late

The Countdown

Volume 7, Issue 1

January/February 1994

SPAAR, the home of 1992-93 C Division champ Glenn Feveryear

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:
Kevin Funk, Glenn Feveryear, & Lawrence Bercini

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SCHEDULE

SATURDAY MARCH 26, 1994: MEETING/WORKSHOP, DELTA FIRE CO., 9AM-1PM

**SUNDAY, APRIL 10, 1994: MEETING/SPORT LAUNCH, 1PM-5PM, COCALICO HS.
**** MULTI-STAGE DAY & CLUB LAUNCH SYSTEM AVAILABLE ******

**SUNDAY, MAY 15, 1994: MEETING/SPORT LAUNCH, 1PM-5PM, COCALICO HS.
**** SOUNDING ROCKET DAY ******

**SUNDAY, MAY 29, 1994: SPAARSEC-X, 9AM-5PM, COCALICO HS.
EVENTS TO BE DETERMINED**

**SAT & SUN, JUNE 11 & 12, 1994: RAMTEC-2 REGIONAL, CENTER VALLEY
EVENTS: E HD, A RG MULTI, B ELD, C SRD, PMC.**

From the editor:

EXCUSES, EXCUSES, EXCUSES.....

Sorry folks. For the first time in about six years, this newsletter is late. But I have some good excuses. Really. You wanna hear them? Let's start with the horrific weather that we've endured around these parts during the past 6 or 7 weeks. If it wasn't snow, it was ice. And more snow. And more ice.

Then on my daughter's 1st birthday, January 15, I pulled a real klutz move by falling [yes, he said falling] off of my front porch and breaking a bone in my left foot. I hope that one doesn't show up on "America's Funniest Videos". Then, about a week later, some bizarre infection decided to visit my right leg [not the one with the broken foot, of course], which resulted in a less-than-pleasant four day stint at our local hospital.

When I finally returned to work on the last day of January, I was greeted with the news that my job assignment had changed. I've spent the last 3 weeks trying to acclimate myself to this new position. Believe me, it will take longer than 3 weeks!

The moral of this boring tale of woe is the simple fact that I haven't had a whole lot of time to put into the newsletter, or much else for

that matter. To all of our members, subscribers, and exchanges, I apologize and thank you for your patience. Now, on with the good stuff...

We recently received our copy of the minutes of the December 1993 NAR Board of Trustees meeting, held in Florence, KY. It appears that a number of key issues were discussed, including reloadable motors, \$20,000 of Sport Rocketry editor Steve Weaver's own money that he invested in the magazine [unknown to the Board until this meeting], and a \$8-9,000 loss the NAR showed for 1993.

This last issue has resulted in an NAR dues increase. Seniors will now pay \$35 per year; B and A Divisions will pay \$20 per year. Personally, as an employed adult, I'll pay the \$35, not to mention the \$21 for insurance; but the \$20 for everyone else is ridiculous. If I were not into rocketry, and my 12 year old came to me asked me to cough up \$20 for his membership dues, I would have to take a REAL hard look at it. Chances are, I would not pay the \$20; I'd simply try to spend more time with my child in his or her rocketry activities. Does the Board really think that non-NAR parents are going to shell out

\$20? Maybe some will. The majority will not, especially when the most immediate, visible benefit will be the bi-monthly magazine. To me, the fact of the matter is this: the Board must find out why we're in this financial position to begin with [and, no, it wasn't the Steve Weaver \$20,000 issue]. Second, instead of going back to the well and simply raising dues, the Board should look into some new, innovative fund raising ideas. In fact, in the minutes of this meeting, Board member Steve Lubliner "...has a fund-raising proposal from member Ralph Lemmon, a financial planner. Ralph proposes creating a program to handle and encourage will bequests and trusts from members to benefit the Association". This is the type of thing that I believe the NAR should look into.

In SPAAR, over the years we have realized that alternative sources of income, other than dues, are necessary. To date, we have conducted an auction, a kit raffle, and are in the process of running a second such raffle for 1994. All have been successful.

We have many, many good minds within the NAR. Surely we can do better than this. I believe that this new dues structure will reduce the number of new A and B Division members joining the NAR. The result will be a shrinking membership base, and we all know where that will lead us. If any of our

members have any ideas, I urge you to write to the Board and share your ideas.

 As many of our NAR members may know, the insurance rates also went up, to \$21 per calendar year. Please make note of the fact that your insurance coverage does not necessarily coincide with your membership. For example, my membership expires in September every year, but the insurance runs January through December. More information on this is supposedly going to be published in the January/February edition of Sport Rocketry.

We have already run into a bit of a problem with this, as our Section Charter renewal is being held up due to the fact that we currently only have one insured member, as opposed to the required five. We hope to have this situation rectified by the time you read this, however if you wish to obtain NAR insurance, simply write to NAR HQ, PO Box 177, Altoona, WI, 54720. Enclose your check or money order for \$21, your name, address, NAR number, and Section [SPAAR, #503].

As Section Advisor, I will try to make copies of all minutes of NAR Board meetings available to our members. If I forget you, just give me a reminder. Remember, be nice to your Section Advisor. He's usually right on the edge.....

SECTION NEWS NOTES

New Members: Welcome to our newest members! They are:

Don Dunkle
205 Ridgeview Rd.
New Cumberland, PA 17070

Doug Gardei
RR 2
Mohnton, PA 19540

Doug has already made it to a Sport Launch, and we hope to see Don soon. Glad to have you with us!

RAMTEC - 2: Plans are proceeding for our second Regional, RAMTEC-2. This 5-event contest will be held at Allentown College on June 11 & 12, with the following events: C SuperRoc Duration, B Eggloft Duration, A Rocket Glider Multi-Round, E Helicopter Duration, and Plastic Model Conversion.

As always, whether you are a contest flyer or not, we ask that as many SPAAR members help out with running the contest. If you can spare some time, call club President Glenn Feveryear at 717-456-5570. Thanks!

Club Officials For 1994: The election results are in, tabulated at the Family Dinner on January 15. The club officers for this year are: President, Glenn Feveryear;

Vice-President, Dale Greene; Secretary/Treasurer, Ed Miller; Member-at-Large, Rick Hackman; Section Advisor, George Beever.

On The Road Again?: We are looking into holding our April Sport Launch at the flying field in Belair, MD. If this change takes place, the launch would be on Saturday, April 9, starting at 9AM, as opposed to Sunday, April 10. The use of this large field at that time of year may help avoid the softball and soccer problems at Cocalico. All active members will be notified as soon as permission is granted by the land owner.

FAA Waiver To Be Sought: Ed Miller will attempt to obtain an FAA waiver for the August 7 Sport Launch at Cocalico. More news will be forwarded as it becomes available.

West Hempfield Twp. Launch Site: John Yost is looking into our possible use of a field in West Hempfield Twp. [northwest of Lancaster city]. This field was used to grow potatoes for a potato chip factory that went out of business recently. Again, more news as it becomes available. Keep in mind that we are still seeking a new location for our monthly meetings.

DESPITE THE WEATHER WE DIDN'T HIBERNATE

It's official. the winter of '94 is the worst on record for this area. I doubt that most of you had to be told this. Not exactly a news flash.

In spite of this, SPAAR still managed to stay pretty active, indoors as well as out.

On January 15, about 25 of us got together for our annual Family Dinner, despite sub-freezing temperatures and the oh-by-the-way earthquake in the Reading area.

The Family Dinner, of course, is the setting for the presentation of the annual SPAAR Rocket Lock Award. Past winners have included Ed Miller for his soda bottle conversions, and Aaron Newman for his RAF Vulcan Bomber that chased the RSO [me] around the check-in table. Last year, Rick Hackman took the honors, so this year's award was awaited great anticipation. Who would it be? Would it be Ed, for still not finding luck with his ASAT? Glenn, for that ever-popular "Up Close And Personal" look at the staging of a Grumpy Dog? George, for forgetting to use wadding in his Maxi-Force [oops]? NO! It was Rick, becoming the first two-time winner! Rick won hands down, for his "Kit Bag Rocket". Taking note that rocketeers were among the first recyclers, the award mentions "...This year Rick has pushed the limits

of design and, in the age of environmental correctness, has expanded recycled rocketry to include the kit bag. On the recorded day of 25 October 1993, the Estes Kit Bag attempted it's maiden voyage. After laboring through countless misfires, several SPAAR members were witness to it's first attempts at, welll, near rocket flight.... It will be duly noted in the annals of SPAAR that Rick Hackman produced the first rocket to provide it's own carrying bag for it's remains in case of a prang." Rick, of course, took the award in the spirit of fun in which it was given. Will 1994 lead to 3 in a row for Rick? Stay tuned.....

The 1993 Kit Raffle winners were picked, also. Bruce Canino of GSSS won the Astrocams 110 and Mars Snooper Classic kits; Dale Greene won the Quest Navaho; Derek Yost won the Estes Solar Sailor II; and Dr. Bob! won the Estes Super Nova. Thanks to all who purchased tickets!

There were Door Prizes, too. Daniel Feveryear won an Astrocams; his father Glenn won a Lancer kit; Bill Rhoat took home a Custom Rockets Sport kit; and Derek Yost won a second time, an Estes Thunderhawk. Dave Bender won an Estes Launch Controller, and Rick Hackman won an Estes 1/8" launch rod.

THIS WINTER'S ONLY NICE DAY

Yes, there really was one nice day, weather-wise this winter. It was Sunday, February 6 to be exact, and, wouldn't you know, SPAAR had a Sport Launch scheduled for that day. Sometimes you just luck out. Anyway, the ground was covered with at least a foot of snow, but the layer of ice on the snow allowed you to actually walk on top. The sun was bright, there was almost no breeze, and the temps were in the mid-thirties. The only obstacles were the huge mountains of snow on the perimeter of the school parking lot.

Only five flyers showed up to take advantage of the respite in the weather. Our newest member, Doug Gardei, was there with some family and friends and made 14 flights himself. His friend Joe Engle made two flights. [No, not the astronaut Joe Engle] Doug's first flight was an Estes Comanche on a D12/B6/A8 combination, that landed within easy walking distance from the launcher. His other flights included an Aerotech Mustang on an Estes D12-3 and then again on an Aerotech D13-4RMS; an Arreaux on an E15-4WL; and an Initiator on an Estes E15-4. The Estes motor had an almost non-existent delay, but the model wasn't damaged. Doug also flew some Estes models, including the Trident II, Hercules [a perfectly straight flight],

Super Vega, Pegasus, Skywinder, Phoenix, and Alien Space Probe. This last was Doug's only bad flight of the day. The 10 second delay in the D21 was too long for the model.

Mark Beever made his first flight of the year on a Quest Tracer for a good flight. Daniel Feveryear [another of the "SPAAR: The Next Generation" group] flew his Alpha III and Ed Miller-designed Flying Saucer. His father Glenn made a sport flight on his Custom Rockets Serval, a model that uses body tube sections for stability, like the old Centuri Groove Tube. He also tested out his new design for a D powered Dual Egglofter for NAR competition. We think this was the model he had planned to fly last year at NARAM-35, but that event was rained out. Too bad, because on an Aerotech D21, the model flew perfectly straight to a surprisingly high altitude. [OK, surprisingly high for the writer, anyway!]

Mark's father George got in five sport flights, including an Estes Bandit, HelioCopter, Der V-3, and D-Region Tomahawk. These last mentioned D-powered models were easily recovered, leading to a lot of grumbling like "....geez, if I'd have known it was going to be this nice, I'da brought out some big stuff...." Oh well, maybe next time!

FLIGHT LOG

FEBRUARY 6, 1994

<u>#</u>	<u>FLYER</u>	<u>MODEL</u>	<u>MANUF</u>	<u>MOTOR[S]</u>	<u>RESULT</u>
1	Mark B	Tracer	Quest	Q B6-4	Good Flight
2	Daniel F	Alpha III	Estes	E B4-2	Good Flight
3	Daniel F	Flying Saucer	EM	E D12-5	Good Flight
4	Daniel F	Flying Saucer	EM	E D12-5	Good Flight
5	Glenn F	D Dual Eggloft	SB	AT D21-7	Good Flight
6	Glenn F	Serval	Custom	E C5-3	Good Flight
7	Joe Engle	Scout II	Estes	E A3-4	Good Flight
8	Joe Engle	Space Racer	Estes	E B6-4	Good Flight
9	Doug G	Comanche III	Estes	D12-0/B6-0/A8-5	Good Flight
10	Doug G	Arreaux	Aerotech	E E15-4	Good Flight
11	Doug G	Alien Space Probe	Estes	E C6-3	Good Flight
12	Doug G	Alien Space Probe	Estes	AT D21-10	PRANG!!
13	Doug G	Skywinder	Estes	E B6-4	Good Flight
14	Doug G	Skywinder	Estes	E C6-5	Good Flight
15	Doug G	Mustang	Aerotech	E D12-3	Good Flight
16	Doug G	Mustang	Aerotech	AT D13-4RMS	Good Flight
17	Doug G	Super Vega	Estes	E D12-3	Good Flight
18	Doug G	Phoenix	Estes	E D12-5	Good Flight
19	Doug G	Hercules	Estes	E B6-0/A8-5	Good Flight
20	Doug G	Pegasus	Estes	E A8-3	Good Flight
21	Doug G	Trident II	Estes	E B6-4	Good Flight
22	Doug G	Initiator	Aerotech	E E15-4	Short delay
23	George B	Bandit	Estes	E B6-4	Good Flight
24	George B	HelioCopter	Estes	E C6-5	Good Flight
25	George B	Mini Rotaroc	SB	E A3-4	No Rotation
26	George B	Der V-3	Estes	E D12-5	Good Flight
27	George B	D-Region	Estes	E D12-5	Good Flight

FLIGHT STATISTICS:

Types of models flown:

Estes - 15
 Quest - 1
 Custom - 1
 Aerotech - 3
 Ed Miller - 1

Motor Usage:

Estes - 26
 Quest - 1
 Aerotech - 3

Black powder, single use: 27
 Composite, single use: 2
 Composite, RMS: 1

Total number of motors fired: 30
 Motor Failures: 0

THE SPAAR ALMANAC

- OR -

THE DEPARTMENT OF USELESS STATISTICS

1993 Cumulative Flight Log

Type of Models Flown

<u>Date</u>	<u># of flights</u>	<u>Manuf.</u>	<u>#</u>	<u>%</u>
4/18/93	30	Estes	104	41.4%
5/16/93	27	MRC	4	*
5/30/93	14*	QCR	1	*
6/20/93	36	Quest	6	2.3%
7/18/93	18	Custom	2	*
8/15/93	42	Ed Miller	15	5.9%
9/5/93	102	LOC	4	*
9/19/93	18	Aerotech	13	5.1%
10/25/93	33	North Coast	3	*
11/4/93	21	Centuri	5	1.9%
Total	341	ORI	2	*
		Glencoe	1	*
		FSI	2	*
		Cox	2	*
		AAA	1	*
		LARS	1	*
		Scratchbuilt	85	33.8%
		* Others		9.1%

* Sport Flights only

Flights by Member - 1993

Daniel Feveryear	13
Rene Feveryear	2
Glenn Feveryear	35
Dale Greene	19
Rick Hackman	64
Bill Rhoat	13
George Beever	51
John Yost	11
Ed Miller	47
Dave Bender	5
Gary Feveryear	5
Alan Rubright	6
Art Babiarz	7
Patrick Boyle	21
Dan Yost	9
Bruce Canino@	9
FWD Team	9
Guests	15

@ - OK, so Bruce isn't an official member, but what the heck.....

Motor Usage

<u>Manuf.</u>	<u>Number</u>
Estes	315
FSI	5
Quest	1
Apogee	5
MRC	1
Aerotech SU	28
Aerotech RMS	32
Total	387

Black Powder = 327 [84.5%]
Composite = 60 [15.5%]

Motor Failures = 3 CATOs, .78% failure rate overall, .92% blackpowder only.

THIS 'N THAT

THE ALMANAC: Ah yes, once again you are treated to an entire page worth of information that makes you say, "...oh yea? ...no kidding...well, I'll be..." and stuff like that.

Anyway, the total number of flights for 1993, 341, is lower than the 370 for 1992. **However**, there were actually more than 341; you see, the Flight Cards from the Ground Hog Day launch in '93 uh, er, well, kinda got lost. In addition, we did not have the best of luck with weather again in '93, which kept the turnout at some of the Sport Launches down.

With apologies to Ripley's Believe It Or Not, get a load of this: in 1992, 84.5% of the motors used were blackpowder, and 15.5% were composites. The figures for 1993? The same - 84.5% and 15.5%.

Hey, let's go for three in a row! Somebody keep track of what motors we fly, and sometime around October we'll..... ah, forget it.

'94 ESTES CATALOG: The new Estes catalog arrived recently. It looks much the same as the '93 version. Some new kits are included, such as the Maniac, a quickie kit designed for D and E motors; the Shadow and Broadsword, which are remakes

of the Optima and Super Big Bertha, respectively, with lower prices [!]. Making a reappearance after many years is a technical section, a nice touch. Also available are a new fin alignment guide, as well as three decal assortments. Oddly enough, several things are not listed, such as the heavy duty tubing, nose cones, and other components used in the Pro Series kits, as well as the longer "E" motor hook.

AEROTECH: seems to be rebounding from last year's production slump. Shipments of backordered items are increasing and the company hopes to reprint it's catalog sometime this spring...**NORTH COAST ROCKETRY** hopes to have all required DOT motor shipping certifications in hand by the end of February. F30 and G50 motors will then be shipped to NAR Standards & Testing for certification. Look for wide distribution of NCR products once motors begin to ship...**APOGEE** president Ed Lacroix will be introducing a 24mm RMS for R/C use. Reloads for the \$49.95 casing will come in packs of three and initially include the D7 [\$6.95], a 30ns E6 [\$8.50] and a 40ns E6 [\$9.95].

[Thanks to Kevin Funk & WARP-9 for the Aerotech, NCR, and Apogee news, Volume 7, Issue 1]

MEMBERSHIP LIST

01/21/94

Members:

Babiarz	Art	570 Sleepy Hollow Dr.	Mohrsville PA	19541
Babiarz,	Art III			
Balmer	John	34 Birch Ave.	Mt. Gretna PA	17064
Beever	George	129 Ashley Dr.	Ephrata PA	17522
Beever	Teresa			
Beever	Mark			
Beever	Erin			
Bender	David	1819 Quarry Rd.	Lebanon PA	17046
Boyle	Patrick	33 Whispering Pines	Birdsboro PA	19508
Dunkle	Donald	205 Ridgeview Rd	New Cumberland, PA	17070
Dwyer	Roger	120 Judd Lane	Culpeper VA	22701
Dwyer	Roger Jr.			
Fehrenbach	Karl	170 S Spring Mill Rd	Villanova PA	19085
Feveryear	Glenn	RD#1 Box 1C	Delta PA	17314
Feveryear	Rita			
Feveryear	Renee			
Feveryear	Gary	RD#3 Box 176B	Delta PA	17314
Funk	Kevin	24944 Kaywood CT	Escondido CA	92026
Gardei	Douglas	RR2 Box 2313	Mohnton, PA	19540
Greene	Dale	244 Conoy Ave.	ElizabethtownPA	17022
Hackman	Rick	1500 Furnace Hills Pike	Lititz PA	17543
Miller	Ed	1809 Quarry Rd.	Lebanon PA	17046
Musselman	Matthew*	355 Primrose Lane	Mountville PA	17554
Rhoat	William	797-A Academy Hts. Ave	Ephrata PA	17522
Rhoat	Dick	216 Spring Garden St.	Ephrata PA	17522
Rubright	Alan	336 Wyndgate Ct.	Millersville PA	17551
Snyder	Mark	4610 Ballygar Rd.	Baltimore MD	21236
Snyder	Karl			
Snyder	Chris			
Stott	Robert	PO Box 206	Richboro PA	18954
Weinhold	Dan	240 E. Fredrick St #3	Lancaster PA	17601
Yost	John	4112 Millbrook Rd.	Mt. Joy PA	17552
Yost	Dan			

* = Prospective member

RAMTEC-2

**AEROSPACE MEET TO ENCOURAGE
COMPETITION**

HOSTED BY SPAAR SECTION 503

JUNE 11 & 12, 1994

**ALLEN TOWN COLLEGE
CENTER VALLEY, PA**

EVENTS:

C Super Roc Duration

B Eggloft Duration

E Helicopter Duration

A Rocket Glider Duration Multi

Plastic Model Conversion

Trophies will be awarded for 1st place in each event for each division.

Ribbons will be awarded for 2nd thru 3rd.

Last year RAMTEC-2 hosted many of the top flyers on the East Coast.

We invite you to participate in RAMTEC-2 and make this an annual tradition.

*** CONTACT: GLENN FEVEYER**

RD 1 BOX 1-C

DELTA, PA 17314

PHONE: 717-456-5570

REGISTRATION FORMS AND INFO ON FEES AND ROOM RATES WILL BE AVAILABLE IN APRIL.

AREA EVENTS CALENDAR

ECRM-21 REGIONAL

Middletown, MD
April 23 & 24, 1994
Host: NARHAMS #139

Events:

- 1/4A Parachute Duration Multi
- A Helicopter Duration
- C Rocket Glider Multi
- E Dual Eggloft Altitude
- Sport Scale

Call: Tom Lyon, 301-855-9457

NICE-16 OPEN

Manassas, VA
May 1, 1994
Host: NOVAAR #205

Events:

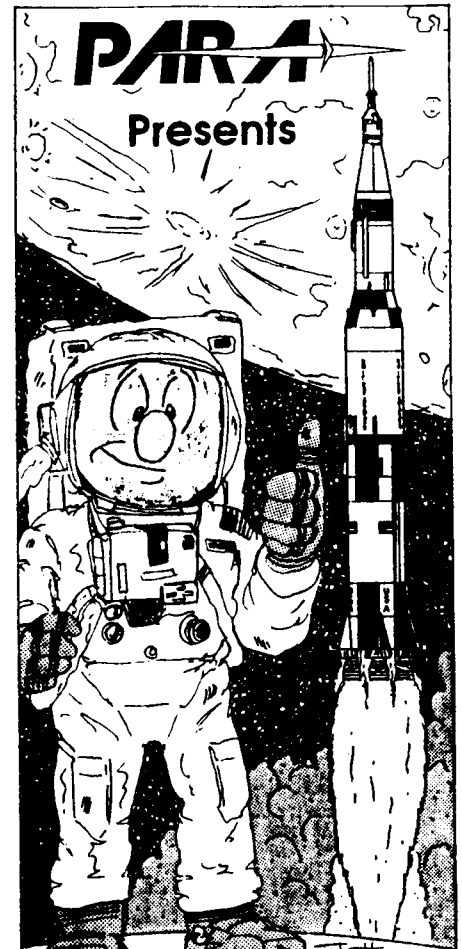
- 1/2A Helicopter Duration
- C Eggloft Altitude
- 1/2A Altitude
- B Rocket Glider Multi
- 1/2A Rocket Glider Multi

Call: Ken Brown, 703-451-2808

TRIPOLI HIGH POWER LAUNCH

Culpeper, VA
May 21 & 22, 1994
Host: Central VA/Tripoli #25

Call:
Mike Showalter, 703-547-2539



MARFF-1
MID-ATLANTIC
REGIONAL FUN FLY

OPERATION:
PARA-MOON SHOT

- ⊛ Scale Launches
- ⊛ Fun Contests
- ⊛ Celebrate the
25th Anniversary of
Apollo 11
- ⊛ Waivers!
- July 16-17, 1994**
- Hatfield, Pa.**

For More Information, write:
PHILADELPHIA AREA ROCKETRY
ASSOCIATION
 Information Services
 P.O. Box 206, Richboro, PA 18954

SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY
SECTION 503
SECTION PERFORMANCE RECORDS
ESTABLISHED SINCE JANUARY 1, 1993

NAME	ROCKET NAME	ENGINE	DATE	TIME ALTITUDE POINTS
** AGE DIVISION A				
* EVENT 1/2AHD DANIEL YOST		1/2A3-2T	09/05/93	26.00
* EVENT AHD DANIEL YOST		A3-2T	09/05/93	33.00
* EVENT BHD DANIEL YOST		B4-2	09/05/93	71.00
** AGE DIVISION C				
* EVENT 1/2AHD GLENN FEVEYER		1/2A3-4T	09/05/93	61.00
* EVENT 1/2ARG GLENN FEVEYER		1/2A3-2T	05/30/93	55.00
* EVENT 1/2ASRA GLENN FEVEYER		1/2A3-4T	05/30/93	426.00
* EVENT AHD GLENN FEVEYER		A3-4T	05/30/93	123.00
GLENN FEVEYER		A3-4T	09/05/93	166.00
* EVENT BELA FLIRTIN WITH DISASTER		B6-4	05/30/93	68.00M
* EVENT BHD JOHN YOST	ROSE-A-ROC	B4-4	08/15/93	73.20
GLENN FEVEYER		B4-4	09/05/93	139.00

A complete SPAAR Record Book, listing the current status of all club records, will be included in the March/April edition of The Countdown.

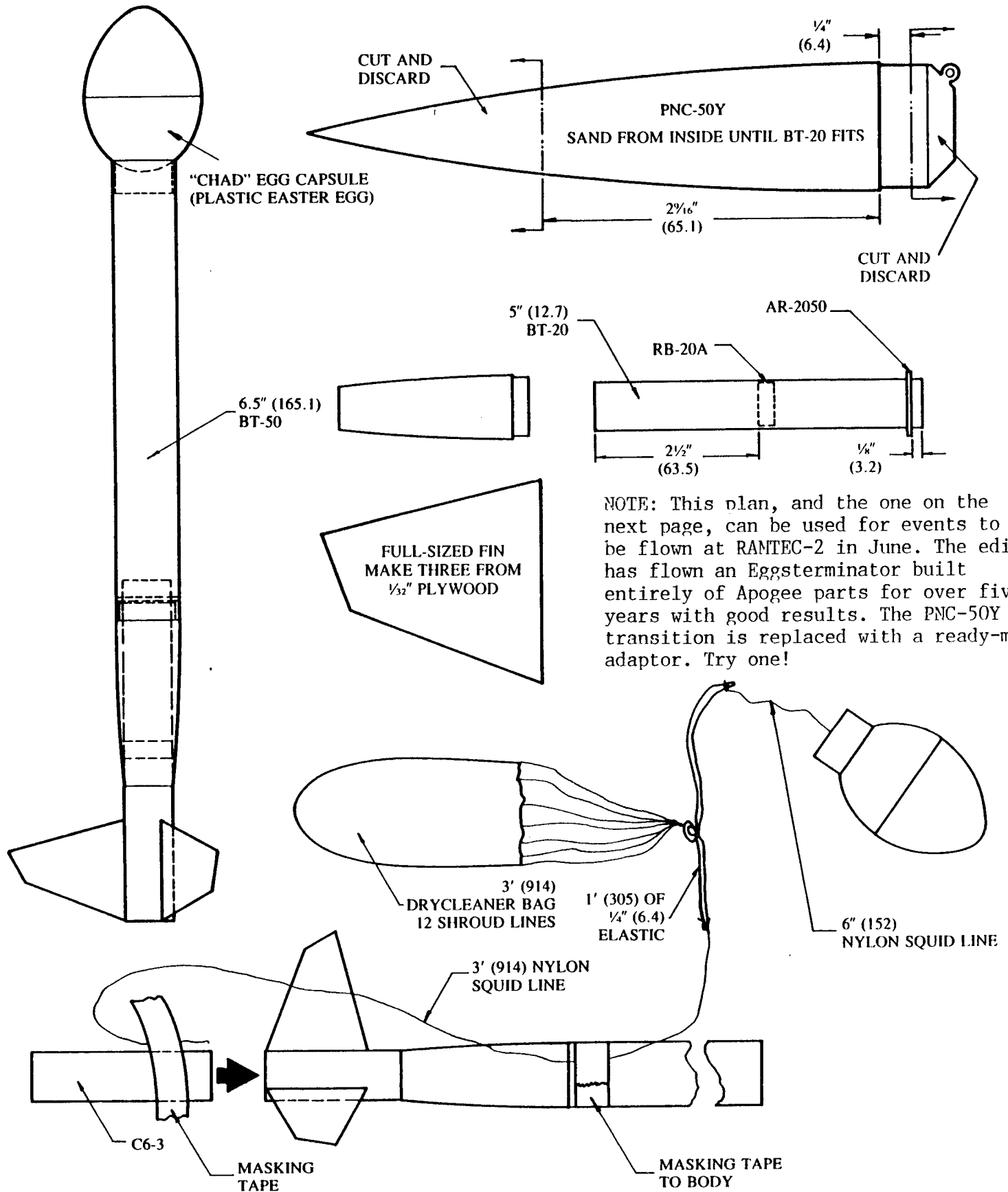
As always, if you wish to file for a club record, you must bring it to the attention of a club official. In the case of duration event record attempts, the model must be returned.

EGGSTERMINATOR

by Lawrence Bercini
from the Tarheel Rocketeer

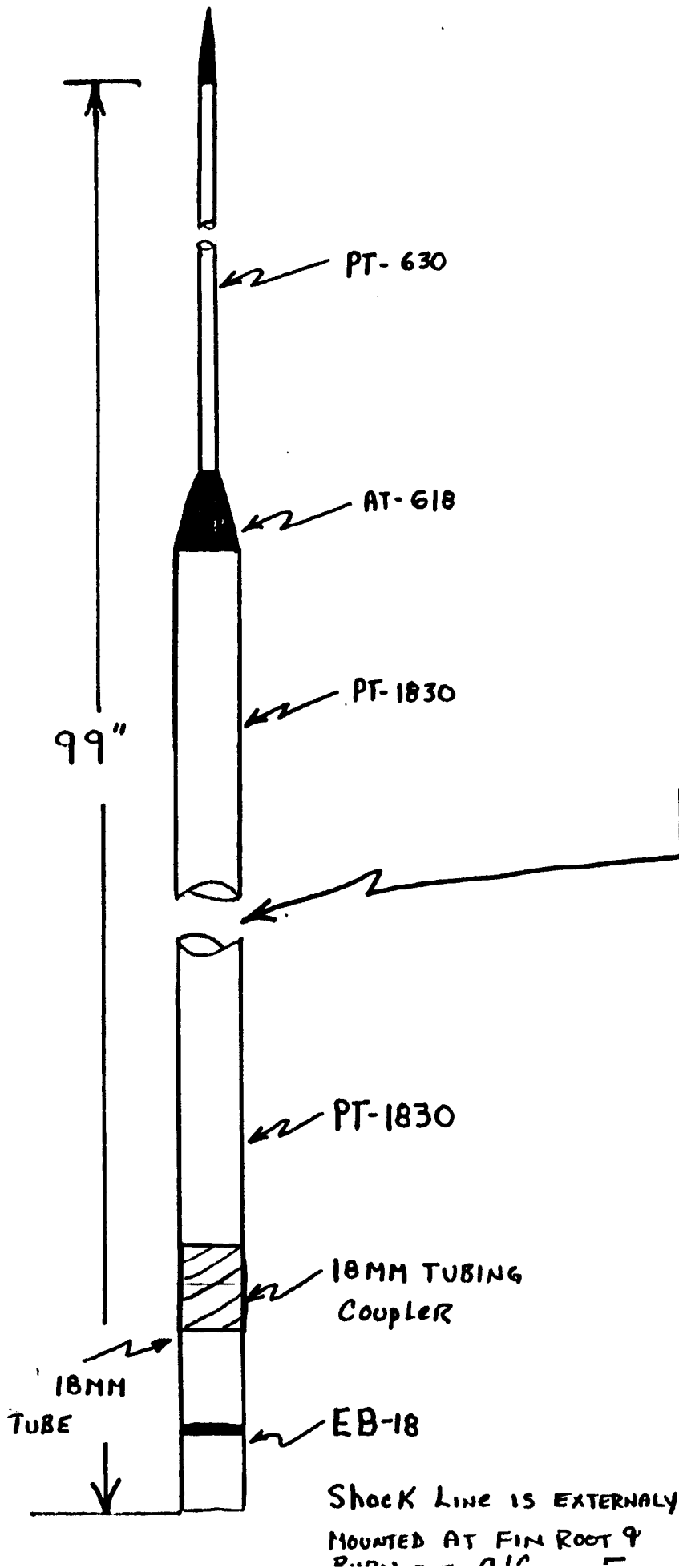
Competition Plan

B- AND C-ENGINE EGGLOFT DURATION MODEL



The "UGLY STICK-C" SUPERROC DESIGN

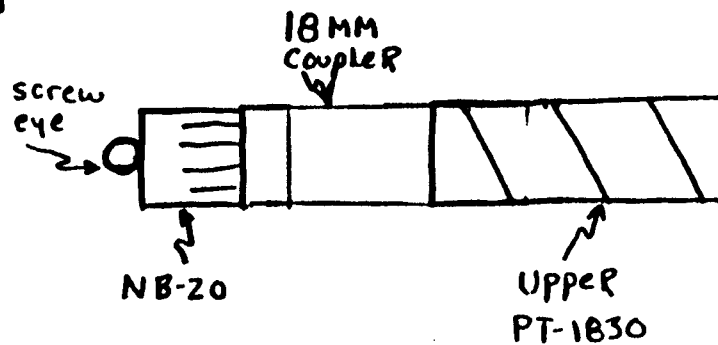
by George Beever
NAR 44391



PARTS LIST:

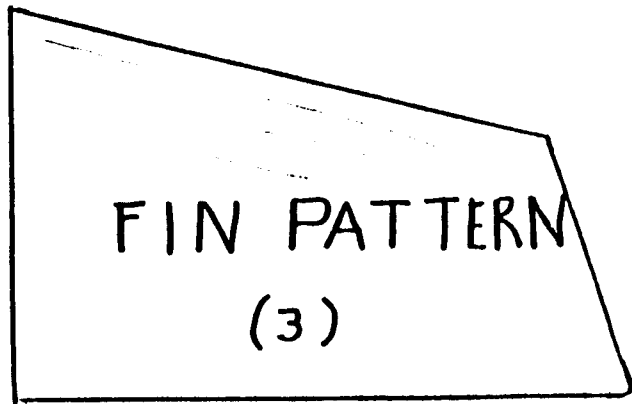
QUAN.	DESC.	MANU.
1	9" 18MM (BT-20)	you pick
2	PT-1830	Apogee
1	PT-630	Apogee
1	AT-618	Apogee
1	EB-18 Engine block	Apogee
3	FINs	you pick
6'	SHOCK LINE	you pick
AT LEAST 30LB TEST		
1	SMALL SCREW EYE	you pick
2	18MM TUBING	you pick
	Couplers	
1	NB-20	ESTES
	NOSE BLOCK	
1	NOSE CONE	you <u>MAKE!</u>

NOSE BLOCK DETAIL:



FIN PATTERN

(3)



Houston...
The Eagle
Has Returned



National Association of Rocketry

NARAM-XXXVI

Monday, July 25 - Thursday, July 28

1994 NARAM Sport Launch: Sunday, July 24, 1994

Spaceweek Demo Launch: Saturday, July 23, 1994

Plus... Sport Flying all week long!!!

Join the Spaceweek celebration and be a part of the fun. Your NARAM-XXXVI entry entitles you to participate in all three official NARAM-week activities. The NSL Sport Range will remain open during NARAM-XXXVI for those who want to continue sport flying.

WHERE: Clear Lake, Texas (22 miles south of downtown Houston)

TRAVEL: By car: Interstate 45 southbound out of Houston, take NASA Road 1 exit, go east 2 miles to Ramada Inn.

BY AIR: Hobby Airport (15 miles north of JSC), Intercontinental Airport (40 miles north of JSC), Ellington Field (5 miles north of JSC) Continental Airlines now offers scheduled service to Ellington.

VAN SERVICE: Ramada has a free shuttle van to and from Hobby and Ellington - call 713-488-0220 on arrival for pickup.

HOTEL: Ramada Inn/NASA Hotel and Conference Center (1301 NASA Road 1; 713-488-0220)

Participants must call the Ramada Inn/NASA directly to make a reservation and identify yourself as part of the National Assn of Rocketry group. NARAM rate: \$55 per night and includes 2 buffet breakfasts per day. A block of 75 rooms is being held for NARAM participants until June 25, 1994. After that date, any rooms not yet reserved will be released to the general public.

Alternate Motel: Motel 6 - Clear Lake (1101 W. NASA Road 1; 713-332-4581 or 1-800-255-7345)

FIELD: Johnson Space Center (site of NARAMs 12,21,25,27). Both competition and sport ranges are about 1/2 mile NW of the Saturn V vehicle (same site as NARAM 27). Field is about 1 mile square and has large recovery area to the north and west.

There is plenty of parking near the rangehead and permanent restroom facilities at the field.

JSC is now closed to the public. Registered participants will be issued an ID card when they check-in at the Ramada.

You will not be allowed past the guard station without your ID (Spaceweek Demo Launch is open to public).

WEATHER: Expect highs in mid 90's, lows in mid 70's and high humidity. Bring sunscreen and a hat.

There will be water available at the field, but no concessions (NASA rules).

FOOD: There are dozens of good restaurants in all price ranges within three miles of JSC. We are negotiating with the Ramada for a NARAM-week discount in their King Arthur Room.

SPORT FLYING: Continuous sport flying will be available on the Sport range daily from Monday through Thursday. All models must pass a pre-flight safety inspection. RSO safety rulings cannot be overridden.

FAA WAIVER: 3,500 ft AGL for July 23-24 Sport Launches. It is likely that 2-3 hour windows will be available Monday through Thursday pending FAA approval.

EVENTS

Monday, July 25: **1/2A Parachute** (Multi-Round; 120 sec max), **F Streamer**
Tuesday, July 26: **C Rocket Glide** (Multi-Round; 240 sec max), **A Helicopter**

Wednesday, July 27: **E Dual Eggloft Altitude**, **D Altitude**

Thursday, July 28: **Scale, Research & Development**

SPECIAL EVENTS:

Mon: **V-2 Contest**
Tue: **Duration Records Trials**
Advanced Rocketry Competition
Wed: **Altitude Records Trials**

SPACE CENTER HOUSTON: Located on the JSC Complex, the Space Center Houston is a whole new way to experience man's exploration of space. Explore the Moon's surface, land the shuttle or retrieve a satellite by simulation.

NARAM has arranged for **20% discount coupons** for all NARAM and NSL participants and families.

With the coupons, adult admission will be about \$9.75; kids 3-11 will be about \$6.80 (under 3 is free).

The Center is open 10AM-6PM weekdays and 9-7 Weekends (don't miss it !)

AWARDS CEREMONY

Forget that rubber chicken! Grab your friends and choose your own place to eat dinner. There are many fine dining establishments to fit all tastes and budgets within walking distance. Then, at 8:00 PM, join us for a memorable evening including awards, door prizes, dessert and unexpected fun. Don't be left out! Seating is limited to 200.

1994 NARAM SPORT LAUNCH / NARAM-XXXVI APPLICATION

Return by 6/25/94 (postmarked) to: Terry White, NARAM-XXXVI, 5807 Bermuda Dunes, Houston, TX 77069-1805

Name: _____

Address _____

City _____ Zip _____ State _____

Phone (_____) _____ Birthdate _____

NAR Number _____ Division: A B C Team

Section#: _____ Section Name _____

Team#: _____ Team Name _____

Fees: NARAM contestant (inc Sport Launch) \$40 ea \$ _____

NARAM team (regardless of size) \$60 \$ _____

NARAM Family (up to 4) \$70 \$ _____

Add'l Family participants (above 4) \$10 ea \$ _____

Sport Launch participant (covers full week) \$15 ea \$ _____

Observer / Other Non-Contestant \$10 ea \$ _____

NARAM Awards Ceremony (limited to 200) \$ 2 ea \$ _____ (Dessert only - No dinner)

Late fee (after 6/25/94) \$15 \$ _____

Total Fees Due: \$ _____

Make checks payable to: NARAM-36 MASTERCARD VISA

Card Number: _____ Exp Date: _____ Name on Card: _____

Range Assignments: Please volunteer where your skills are best suited:

Check-in Officer Duration Timer R&D Judge Magazine Coverage Range Safety

Altitude Tracker Returns Officer Launch Control Scale Judge Range Store

Data Reduction Record Keeping General Assistance NAR President

CB - 1 - 70 Information Signatures

I am familiar with the standards of the National Association of Rocketry and with the Safety Code of the NAR and I agree to abide by them. I further agree to abide by the orders of the presiding Range Safety and Control Officer. I further agree that the ruling of the judges shall be final.

Date _____ Signed _____

PARENT'S CONSENT, (Must be signed before entry of any contestant under 21 years of age can be accepted.)

As parent or legal guardian of _____, a minor, I hereby give my full and unqualified consent to his/her participation in NARAM-XXXVI, and to his/her accepting any and all awards whatsoever that he/she may win, whether it involves travel or otherwise.

Date _____ Signed _____

Safety

Due to the fact that our flying area is on a NASA facility, strict safety considerations will be in effect at all times. We will exercise our right to deny flight for any reason of safety as we see fit at the time. Expect that your model will be inspected carefully at any point during or after check in. Please understand that you may be asked to make certain changes in your model (such as recovery system, engine mounting, engine selection, etc.) in order to satisfy our concerns for safety.

Models over 1 pound must have a flight envelope which will not take them outside the perimeter of the flying field during boost or coast. (The flying site is situated 1500 feet from the south and east boundaries of a 5000 X 8000 foot flying field.) Particularly complicated models, staged models, clusters, unusually configured models, models with non-parachute recovery systems will receive special attention with respect to safety. In general parachutes will be required on models over 1 pound and it must be of adequate size to assure the safety of persons and property in the area that the model is recovered. Please bear in mind that simply because a certain parachute is included in a kit this does not mean that it will be acceptable for use at Johnson Space Center.

Due to the potential for extremely dry conditions of the field we may limit or prohibit the use of motors which have special exhaust effects.

We will be especially attentive to dual eggloft models with respect to recovery systems and engine selection. Certain low thrust motors such as E6 types will specifically not be allowed. Also, flight conditions such as high winds may make others unsuitable. We encourage you to be sure your thrust-to-weight ratio in dual egglofters and all heavy models is adequate to assure straight flight.

Photocopies of this form are acceptable.

**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
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
 _____ 15, 16 OR 17 YEARS OF AGE, \$7.00
 _____ 18 YEARS OF AGE OR OLDER, \$10.00
 _____ 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: _____

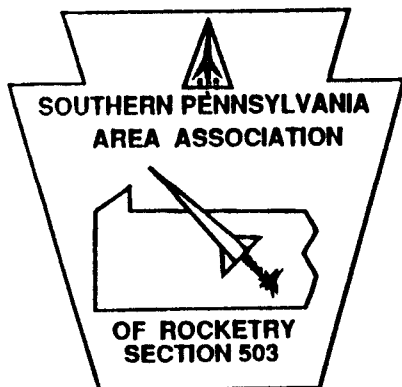
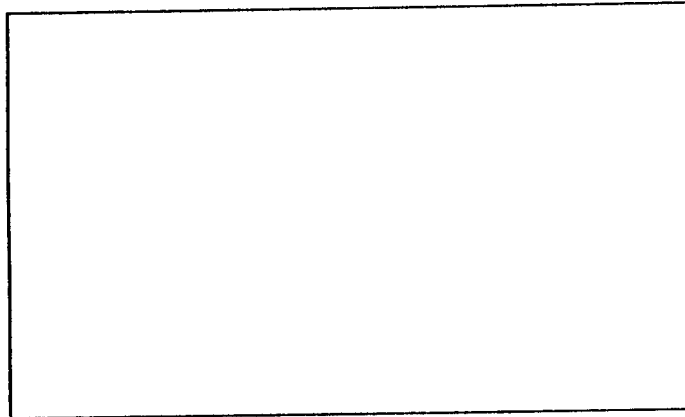
- MEMBERSHIP CATEGORY (Check one only):
- JUNIOR MEMBERSHIP (Under 16 as of January 1)..... \$15.00
 - LEADER MEMBERSHIP (Under 21 as of January 1)..... \$15.00
 - SENIOR MEMBERSHIP (21 or over as of January 1)..... \$25.00
- FOR OVERSEAS MEMBERS ONLY
- SURFACE POSTAGE (Required)..... \$ 6.75
 - OPTIONAL AIRMAIL POSTAGE (Replaces surface)..... \$33.00
- OPTIONAL MEMBERSHIP SERVICES
- FAI STAMP for US Team eligibility and world records \$10.00
 - FIRST-CLASS POSTAGE (U.S. & Canada only)..... \$10.50
- DISCOUNTS (Select only one)
- RENEWAL (NAR # _____ Section # _____); Deduct \$1. _____
 - FAMILY PLAN (Details below); Deduct \$8. _____
- Amount Enclosed..... \$ _____

Family Plan: Full rate for one family member, others at \$8 discount — one American Spacemodeling per family.
 NAR Membership dues include \$8.88 for a subscription to American Spacemodeling.

Canadian Modelers: Write to the Canadian Association of Rocketry, P.O. Box 1031, Postal Station B, Mississauga, Ontario, Canada L4Y 3W3.
 Rights, privileges, and responsibilities of membership begin upon acceptance of this application by the NAR. All memberships are for twelve months
 from the date of acceptance. Rates and services subject to change without notice. Please allow 6-8 weeks for delivery of of American Spacemodeling.

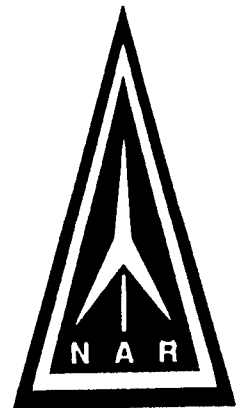
SPAAR
P.O. Box 127
Reamstown, PA. 17567

TO:



**SOUTHERN PENNSYLVANIA
AREA ASSOCIATION
OF ROCKETRY**

PROMOTING SAFE MODEL ROCKETRY
IN SOUTHERN PENNSYLVANIA
AND NORTHERN MARYLAND



*The Southern Pennsylvania Area
Association of Rocketry*

COUNTDOWN