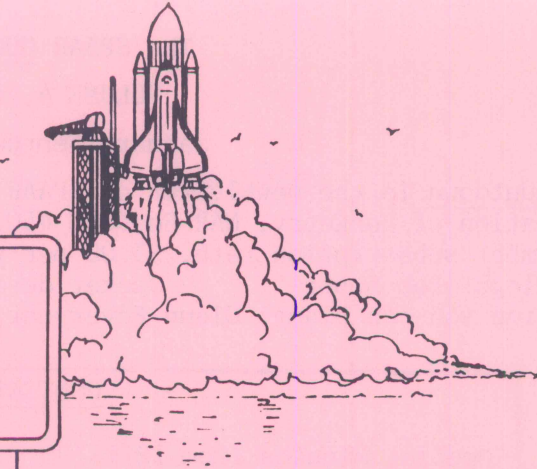


# COUNTDOWN



OFFICIAL NEWSLETTER OF  
THE SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY

## **INSIDE:**

1991 Schedule

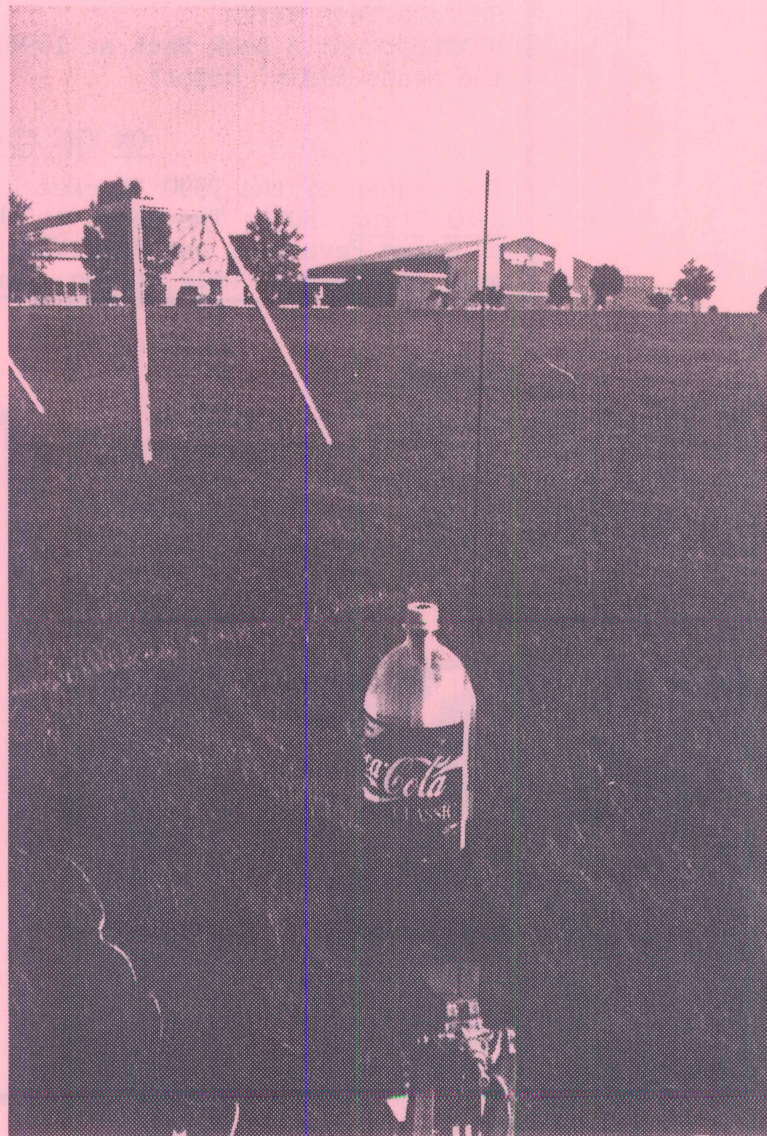
SPAAR Records

Egglofter Plans

Membership

Roster

A Look Back  
At 1990



The SPAAR COUNTDOWN

VOLUME 4, ISSUE 1

January/February, 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, \$5.00 per year, six issues.

Cover logo: Bob Stott

Jacket design: Bruce Canino

Editor: George Beever

This time you can blame: Glenn Feveryear, Mark Snyder, John Yost & J. Pat Miller.

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ON THE COVER

The winner of the 1990 "Rocket Lock Award", Ed Miller's The Real Thing. NOTE: The photo on the cover of the last issue, of Glenn Feveryear and John Yost holding the SPAAR flag, was used courtesy of Dale Greene. Sorry Dale!

SCHEDULE

The entire schedule for 1991 is on page 8 of this issue. Other events of interest: Philadelphia Area Rocketry Association, PARA, Sport Launch: Feb. 17, 1991, 10:00AM to 3:00PM, Pennfield Middle School.



**Mid-America  
Spacemodeling Convention**

**MASCON 1991**

Jackson, Michigan

Jackson Community College

Michigan Space Center

March 8 - 10



Static Scale Contest • Poster Session • Space Center Tour  
Topics in Advanced Rocketry • Scale Data/Plan Exchange  
Keynote Speakers • Kit Bash Contest • Scale Modeling Topics  
Model Rocketry Auction • Door Prizes • Other Events TBA  
On-site Meals • Low Motel Rates!!

For More Information:

Huron Valley Rocket Society  
2742 Beacon Hill  
Ann Arbor, MI 48104  
313-971-6033 or 517-548-4254

# M E E T I N G S

December 17, 1990

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

Committee Reports

Treasurer: Ed Miller reported that there are 37 members, with one new member joining at the present time (Rita Feveryear), making a total of 38; the balance in the General Fund at the end of the last meeting was \$329.08. Since then, there was an income of \$3.41 in interest, as well as the following disbursements: \$5.81 for fabric used for making the club flag; \$13.77 for a flag pole; and \$20.00 for SPAARSEC-3 supplies. This leaves a current balance of \$292.91. In regards to the interest received, Ed states that if we continue at that rate, we won't have to charge membership fees in about 500 years.

Newsletter: G. Beever did not have an accurate count of how many copies of the Nov./Dec. newsletter were sent out, although 55 were printed; also, we have initiated an exchange with HUVARS and their newsletter, "T-Minus 5".

Competition: At the time of this report, Glenn Feveryear stated that the supplies from NARTS for the planned Spring '91 contests have not been received, although the order was placed in October. In addition, no word has been received in regards to the contest sanctions for those meets.

Education: G. Beever reported that the preparations are proceeding for the Winter Workshops.

Section Advisor: John Yost stated that he had received a letter from an individual in Conn. who requested advise on how to start a club in his area.

Old Business

G. Beever made a motion, seconded by J. Yost, to have the club treasury pay the service charge and sales tax at the January 12 Family Dinner. The motion was carried by voice vote.

New Business

G. Beever read a letter received from SPAAR

member Bill Rhoat, who is offering to do some computer work in the area of altitude tracking data reduction.

G. Beever passed out copies of a survey being done by Mike Hardobey, the editor of the Pittsburgh Space Command newsletter, "Team Pittsburgh".

G. Beever passed around some product information he had requested from Cox regarding their line of model rockets.

G. Beever offered some Estes kits recently purchased at a discount rate, for use by the club as prizes for A and B Division members.

J. Yost announced the results of the 1990 elections, which determine the club officers for 1991: President, Glenn Feveryear; Vice-President, Dale Greene; Secretary/Treasurer, Ed Miller; Member-at-Large, Dick Rhoat; and Section Advisor, John Yost.

Glenn Feveryear discussed a survey and a video received from the AMA.

The members present then discussed a possible membership drive mail-out for this winter, much like the one done during the winter of 1989/90. It was decided not to pursue this at the present time, due to the expense and small response received.

General discussion followed, and the meeting adjourned at 8:45PM.

\*\*\*\*\*



January 21, 1991

Present: Glenn, Rita, & Gary Feveryear, J. Yost, A. Babiarz, D. Greene, E. Miller, G. Beaver  
Committee Reports

Treasurer: Ed Miller reports that there are 39 members. The balance at the end of the last meeting was \$292.91. Outlays: \$21.30 for postage. Incomes: \$74.50 in dues; \$275.75 in banquet fees. Current balance is \$641.36, however \$339.37 will be owed to Ed when his VISA bill comes due, as this was used to pay for the banquet.

Newsletter: George Beaver discussed the problem of copying the newsletter. At the present time, the newsletter is copied on the copier at his place of employment, and this is getting somewhat unmanageable. Inquiries were made with two local copying services, but the cost appears prohibitive at this time. Therefore, the membership is being asked to explore the possibility of copying one or two pages of each issue of the newsletter at their respective places of employment, in order to "spread things out".

Competition: Glenn Feveryear discussed the SPAMBAM Open Meet, which will be held on April 28 at the Schuylkill Valley Middle School in Berks Co. RANGE HELP IS NEEDED!!! Contact Glenn on this.

The SPAARSEC-4 Section Meet will be held on May 26, from 9-5PM at Cocalico High School. Those present voted to fly Sport Scale instead of Giant Sport Scale.

Section Advisor: John Yost discussed the NAR License Station program, in which NAR applications will be placed in local hobby shops.

He also discussed changes in the meeting locations. Due to scheduling conflicts, the February, April, and August meetings will be held in the Bates Room of the library, which is basically across the hall from the room now used. In addition, library policy changes in regards to the use of the meeting room may change in 1992; members are urged to check out alternative meeting locations for use next year.

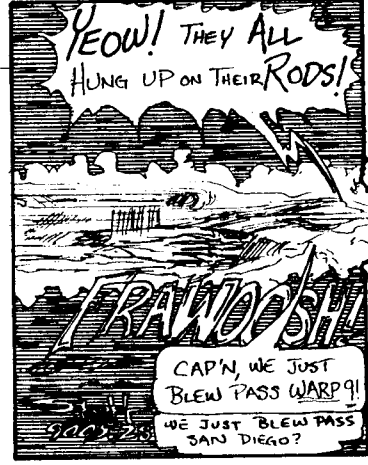
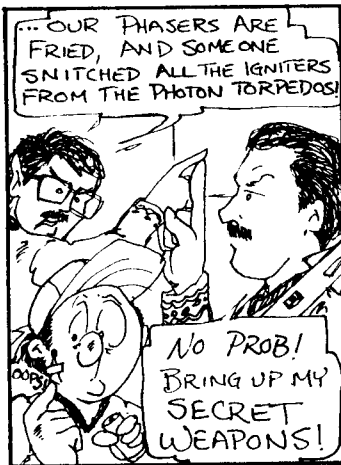
Old Business

Glenn reminded everyone of the Feb. 9 Workshop. George Beaver read a card received from Maj. Mike Roebel, US Army, serving in Operation Desert Storm. Maj. Roebel will continue to receive this newsletter.

"NARAM On A Half-shell" was discussed. The continuing insurance problem was discussed. Plans for the Feb. 3 Sport Launch were discussed, and it was decided to use the club launch equipment.

Dale Greene then gave a talk on altitude tracking.

**SPAAR TREN**



## SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY

Formed: May, 1988

Chartered: October, 1988

NAR Section #503

Membership Roster, January 1991

Michael Angell  
102 Coventry Court,  
Palmyra, PA 17078  
9/91

Art Babiarz  
148 Sleepy Hollow Dr.,  
Mohrsville, PA 19541  
926-7089 7/91

John Balmer  
109 5th St., Box 151,  
Mt. Gretna, PA 17064  
6/91

Robert Balogh Jr.  
Karla Balogh  
Christopher Balogh  
1200 Ash Lane  
Lebanon, PA 17042  
8/91

George Beever  
Teresa Beever  
Mark Beever  
129 Ashley Dr.,  
Ephrata, PA 17522  
717-733-4170 1/92

David Bender  
1819 Quarry Rd.,  
Lebanon, PA 17042  
717-865-2998 1/92

Karl W. Fehrenbach  
Erik Fehrenbach  
170 S. Spring Mill Rd.,  
Villanova, PA 19085  
215-525-6923 10/91

Glenn Feveryear  
Rita Feveryear  
RD#1 Box 1-C  
Delta, PA 17314  
717-456-5570 1/92

Gary Feveryear  
RD#3 Box 176B,  
Delta, PA 17314  
717-456-5386 7/91

Robert Fuld  
359 Oaklyn Rd.,  
Lebanon, PA 17042  
9/91

Dale Greene  
16 Knollwood Dr.,  
Akron, PA 17501  
717-859-2106 1/92

Rick Hackman  
1500 Furnace Hills Pike  
Lititz, PA 17543  
717-627-1598 1/92

Fred Hanawalt  
3230 North 4th St.,  
Harrisburg, PA 17110  
4/91

Fred Hoke  
968 Jay St.,  
Lebanon, PA 17042  
6/91

Toby Kulzer  
180 Somerset Dr.,  
Hershey, PA 17033  
2/91

James Lytle, Jr.,  
5051 West Heaps Rd.,  
Pylesville, MD 21132  
301-836-1568 4/91

Eric Marcella  
RD#2 Box 47,  
Parkesburg, PA 19365  
215-857-5226 5/91

Ed Miller  
1809 Quarry Rd.,  
Lebanon, PA 17042  
717-865-6829 1/92

Aaron Newman  
6 Russet Lane,  
Millersville, PA 17551  
6/91

Kenn Pattison  
4905 Bretney Rd.,  
Harrisburg, PA 17112  
4/91

William Rhoat  
Lehigh University  
UC#29 D077,  
Bethlehem, PA 18015  
717-733-6915 1/92

Dick Rhoat  
1509 Rothsville Rd.,  
Lititz, PA 17543  
717-627-2208 1/92

Trevor Smedley  
800 Greystone #3A  
Newark, DE 19711  
302-737-0943 8/91

Mark Snyder  
Carl Snyder  
Chris Snyder  
4610 Ballygar Rd.,  
Baltimore, MD 21236  
301-256-7499

Robert Stott  
PO Box 206  
Richboro, PA 18654  
6/91

Daniel Weinhold  
328 East Clay St.,  
Lancaster, PA 17602  
1/92

Allen Wingenroth  
Jason Wingenroth  
PO Box 217  
67 East Main St.,  
Reinholds, PA 17569  
215-267-3535 10/91

John Yost  
Daniel Yost  
Derek Yost  
4112 Millbrook Rd.,  
Mt. Joy, PA 17552  
717-684-9519 1/92

NEWSLETTER EXCHANGES

January, 1991

ASTRE  
c/o Jeff Vincent  
Box 523  
Slingerlands, NY 12159  
"Star Date"

Northern Illinois  
Rocketry Assoc. (NIRA)  
c/o Lawrence Bercini  
6033 N. Sheridan Apt. 33J  
Chicago, IL 60660  
"The Leading Edge"

Cumberland Area  
Rocket Society (CARS)  
c/o Paul Comfort  
33 Hardwood St.,  
Cumberland, MD 21502  
"Ignition"

DART  
c/o Neil Krey  
7554 Acama St.,  
San Diego, CA 92126  
"Warp-9"

Fox Valley Rocketry  
c/o Dan Pasholk  
1026 Dean St., Apt. A  
St. Charles, IL 60174  
"High Impulse"

Garden State Spacemodeling  
Society (GSSS)  
c/o Jack Sarhage  
875 River Rd.,  
Piscataway, NJ 08854  
"The Launch Rack"

Huntsville Area  
Rocketry Assoc., (HARA)  
c/o Vince Huegle  
11108 Argent Dr.,  
Huntsville, AL 35803  
"MAX-Q"

Kansas Organization for  
Spacemodeling (KOSMO)  
c/o Duane Lanterman  
RT. 4 Box 4123  
Great Bend, KS 67530  
"The KOSMOnaut"

Monroe Area Rocket  
Society (MARS)  
c/o Dan Wolf  
235 Kislisbury St.,  
Rochester, NY 14613  
"The Upstate Rocketeer"

Miami Valley Rocketry  
Society (MIVARS)  
c/o Fred Williams  
PO Box 664  
Franklin, OH 45005  
"Apogee"

National Assoc. of Rocketry  
Headquarters Astromodeling  
Section (NARHAMS)  
PO Box 70932  
Washington, DC 20024  
"ZOG-43"

Northern Virginia Area  
Association of Rocketry (NOVAAR)  
c/o Ken Brown  
7021 Forest View Drive  
Springfield, VA 22150  
"The NOVAAR Free Press"

Philadelphia Area  
Rocketry Assoc., (PARA)  
c/o Bob Stott  
PO Box 206  
Richboro, PA 18654  
"The Delaware Valley Rocketeer"

Pittsburgh Space Command  
c/o Art Nestor  
230 Arthur St.,  
Zelienople, PA 16063  
"Team Pittsburgh"

American Spacemodeling  
c/o Kathleen Harrington  
426B Longwood Ct.,  
Baton Rouge, LA 70806

SUBSCRIBERS

Lawrence Bercini  
6033 N. Sheridan Apt. 33J  
Chicago, IL 60660  
2/92

Bruce Canino  
934 Alexander Dr.,  
Vineland, NJ 08360  
7/91

Dan Domina  
6 Meadow Lane  
East Windsor, NJ 08520  
2/92

Raymond Horn  
7015 Filbert Lane  
Tampa, FL 33637  
7/91

Craig Houser  
8671 Garo Lane  
Garden Grove, CA 92644  
8/92

Bob Sanford  
5150 East Sahara Ave.,  
Las Vegas, NV 89122  
10/92

HONORARY MEMBER

(Whether he likes it or not)

Kevin Funk  
24922 Kaywood CT.,  
Escondido, CA 92026

## A L O O K B A C K A T 1 9 9 0 . . .

## A L O O K A H E A D A T 1 9 9 1 . . .

As it always is with this time of the year, it's natural to take a look back at the year 1990, and to try to look ahead to the year coming up.

1990, in general, was another very good year for our club. Many of the goals set out were attained; some, unfortunately were not. But by and large, the credits far outweighed the debits.

During 1990, fourteen new members came on board, with only two or three people not renewing. Not only did new members join up, but many, many of them contributed time, effort, and thought to the club. As with any organization, it's this influx of fresh ideas that keeps things moving forward.

Our Sport Launches seemed to attract more and more attention; in particular, during the warmer months, it was a common sight to see almost as many spectators in folding chairs as there were people flying.

The diversity shown by our members this past year insured that something new could always be seen at a club function. We show a wide range of interests: there are those that fly competition only; others fly only sport models; many fly a little bit of both. Some prefer the larger, higher powered models; some stick with the "standard" size kit models. Some fly only their own designs, while others prefer to stay with the proven commercially available kits. And then we have those very important folks who don't do a whole lot of flying at all, but are always around, ready to pitch in and help work the range, do some timing, or just enjoy the comradship that the club offers. Once again, in 1990 we showed that our club has room for all of those folks. I believe that it is one of our strengths, that will go a long way to help insure that SPAAR will be around for a long time.

During 1990 we held 12 Sport Launches, 2 NAR Sanctioned Section Meets, and one sanctioned

Records Trial. During these launches, a total of 876 flights were made, with an average of 15 flyers participating. During the latter part of the year, attendance at club meetings appeared to pick up also; this hopefully is a trend that will continue.

During the winter of 1990, three Winter Workshops were held, and even though attendance was disappointing, that program is being continued and even expanded in 1991.

Thankfully, the negatives encountered during 1990 were few. An Open Meet was planned and despite a lot of work invested, had to be canceled for reasons beyond our control. The never-ending problem of range help appeared again, but as with the meetings, that situation was improving as the year ended.

At the risk of coining a phrase, the bottom line is that 1990 was better than 1989, just as '89 was better than '88. Will 1991 build on the year just finished?

We have a full slate of Sport Launches scheduled, with a couple of added attractions. To help alleviate "cabin fever", we're holding a "Ground Hog Day Plus One" Sport Launch on February 3, from 1 to 3PM, after which one of our many local pizza shops may be the scene of an after-launch thaw out. Our Open Meet for 1991, SPAMBAM (Spacemodeling Blowout After March) is scheduled for April 28, at a launch sight in Berks County off of Rt.61. This sight, the Schuylkill Valley Middle School, also may be the sight of a special day-long Sport Launch on July 21. Two Section Meets, SPAARSEC 4 and 5, will be held on May 26 and in late September, respectively. And of course, SPAARSPAM-3 will round out the flying year in the fall. But before any of this, of course, comes the Winter Workshops, which will feature three 3-hour long presentations, as well as smaller presentations during the second hour of the business meetings in January, February, and March. Let's make 1991 a good year for all!

SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY  
NATIONAL ASSOCIATION OF ROCKETRY, SECTION 503  
SCHEDULE OF EVENTS

FEBRUARY:

SUN 3 GROUND HOG PLUS ONE SPORT LAUNCH 1:00PM - 3:00PM  
SAT 9 WORKSHOP: MOD-ROC HISTORY 9:00AM - 12:00 NOON  
MON 17 SECTION MEETING 7:00PM - 9:00PM

MARCH:

SAT 9 WORKSHOP: SCALE MODELING 9:00AM - 12:00 NOON  
MON 18 SECTION MEETING 7:00PM - 9:00PM

APRIL:

SUN 14 SECTION LAUNCH: "FUTURISTIC DAY" 1:00PM - 5:00PM  
MON 15 SECTION MEETING 7:00PM - 9:00PM  
SUN 28 \*\* SPAMBAM-1 OPEN MEET (SPAAR)\*\*  
9:00AM - 5:00PM; 1/2A R/G, B ELD, BSRD, 1/2A SD MULTI  
C HD, A B/G

MAY:

SUN 5 SECTION LAUNCH 1:00PM - 5:00PM  
MON 20 SECTION MEETING 7:00PM - 9:00PM  
SUN 26 \*\*SPAARSEC-4 SECTION MEET, DENVER, PA.\*\*  
9:00AM - 5:00PM; 1/2A R/G B ELD, B HD, SpS

JUNE:

SUN 9 SECTION LAUNCH "MILITARY DAY"-- BRING YOUR PATRIOTS  
AND SCUDS 3:00PM -7:00PM  
SAT 15 & SUN 16 \*\*WUBBA-14, CENTER VALLEY, PA.\*\*  
MON 17 SECTION MEETING 7:00PM -9:00PM  
SUN 30 SECTION LAUNCH 3:00PM - 7:00PM

JULY:

MON 15 SECTION MEETING 7:00PM - 9:00PM  
SUN 21 SECTION LAUNCH 9:00AM - 5:00PM

AUGUST:

SUN 11 SECTION LAUNCH "MANNED VEH DAY" 3:00PM - 7:00PM  
MON 19 SECTION MEETING 7:00PM - 9:00PM

SEPTEMBER:

SUN 1 SECTION LAUNCH "SOUNDING ROCKET DAY: 3:00PM - 7:00PM  
MON 16 SECTION MEETING 7:00PM - 9:00PM  
SUN 22 \*\*SPAARSEC-5 SECTION MEET DENVER, PA.\*\*  
9:00AM - 5:00PM

OCTOBER:

SUN 13 SECTION LAUNCH 1:00PM - 5:00PM  
MON 21 SECTION MEETING 7:00PM - 9:00PM

NOVEMBER:

SUN 3 SECTION LAUNCH 1:00PM - 5:00PM  
MON 18 SECTION MEETING 7:00PM - 9:00PM

DECEMBER:

MON 16 SECTION MEETING 7:00PM - 9:00PM



THE SPAAR RECORD BOOK  
Club Performance Records

January, 1991

<u>Age Div.</u>	<u>Event</u>	<u>Name</u>	<u>Model</u>	<u>Motor</u>	<u>Date</u>	<u>Time/Points</u>
A	½A SD	Derek Yost			7/3/88	14.19
A	A SD	Dave Bender			10/9/88	42.60
A	B SD	Jason Wingenroth	Viking	B6-4	10/14/90	40.00
A	C SD	Dave Bender	Excalibur	C6-7	12/18/88	39.50
A	½A PD	Dave Bender			10/9/88	32.30
A	A PD	Eric Marcella			7/23/89	18.06
A	B PD	Aaron Newman	Sizzler	B6-4	5/27/90	157.60
A	C PD	Eric Marcella			9/3/89	66.44
A	D PD	Dave Bender	Gone	D12-7	10/14/90	94.60
A	B HD	Derek Yost	Tazmanian Devil	B4-4	8/12/90	5.70
A	C BG	Aaron Newman		C6-3	10/14/90	93.26
B	½A SD	Bill Rhoat			7/23/89	38.90
B	A SD	Bill Rhoat		A3-4	7/22/90	85.70
B	B SD	Bill Rhoat			7/23/89	50.90
B	½A PD	Bill Rhoat			7/23/89	36.50
B	A PD	Bill Rhoat			8/14/88	27.60
B	B PD	Bill Rhoat			4/16/89	79.00
B	C PD	Dave Wenrich			8/14/88	33.90
B	D PD	Bill Rhoat			4/16/89	31.10
B	E PD	Bill Rhoat	LOC Onyx	E60-4	11/5/89	22.10
B	B ELD	Bill Rhoat		B6-2	5/27/90	10.73
B	B SRD	Bill rhoat			7/23/89	832.50
B	C ELD	Bill Rhoat			7/2/89	67.20
B	C HD	Bill Rhoat	RotaRoc	C6-3	5/27/90	61.30
C	½A SD	Glenn Feveryear		½A3-4	9/24/89	94.80
C	A SD	Glenn Feveryear	Perihelion	A3-4	4/16/89	120.00
C	B SD	Glenn Feveryear		B4-6	8/12/90	168.53
C	C SD	Robert Balogh		C6-7	7/22/90	208.00
C	D SD	Dale Greene		D12-7	8/13/89	52.35
C	E SD	Ed Miller		E25-10	7/22/90	106.00
C	F SD	Ed Miller		F25-12	7/22/90	138.50
C	G SD	Ed Miller		G25-10	7/22/90	181.60
C	½A PD	Glenn Feveryear	Perihelion	½A3-4	7/2/89	258.00
C	A PD	George Beever		A3-4	9/2/90	125.00
C	B PD	Dale Greene		B4-6	7/2/89	184.90
C	C PD	Dale Greene		C6-7	8/13/89	125.50
C	D PD	Ed Miller		D12-5	7/2/89	120.07
C	E PD	Robert Balogh	V-2	E6-4	9/3/89	104.75
C	F PD	George Beever	Aerobee Hi-Test	F25-6	8/12/90	83.10
C	G PD	Robert Balogh		G40-7	8/13/89	138.42
C	½A BG	Glenn Feveryear	Honeybee	½A3-2	7/23/89	71.50
C	A BG	Glenn Feveryear	Vulture	A3-2	7/2/89	84.30
C	B BG	Glenn Feveryear	Fly Baby	B4-2	9/2/90	112.30
C	C BG	Fred Hoke	HXP-1	C6-3	5/27/90	83.70
C	D BG	John Yost	D-Light	D12-3	9/2/90	67.38
C	½A RG	George Beever	Easy Slide I	½A3-2	10/14/90	36.40
C	A RG	George Beever	Easy Slide I	A3-2	10/14/90	28.00
C	B RG	Glenn Feveryear	Gull	B4-2	10/30/88	154.00
C	½A HD	John Yost	Mini RotaRoc	½A3-2	12/4/88	42.70
C	A HD	John Yost	Mini RotaRoc	A3-2	7/22/90	74.00
C	B HD	Glenn Feveryear	RotaRoc	B4-2	9/3/89	61.87
C	C HD	Glenn Feveryear	RotaRoc	C6-3	4/22/90	138.00
C	D HD	Glenn Feveryear		D12-5	9/2/90	66.66
C	E HD	John Yost	RotaRoc	E15-4	8/12/90	115.00
C	B ELD	Mark Snyder		B6-2	9/3/89	69.22
C	C ELD	Glenn Feveryear	Aero-Owl	C6-3	10/9/88	156.00
C	½A SRD	Glenn Feveryear		½A3-2	7/22/90	233.00p
C	A SRD	George Beever		A10-3	5/27/90	415.00p
C	B SRD	Glenn Feveryear		B4-4	7/23/89	486.00p
C	C SRD	Dick Rhoat		C6-3	9/3/89	533.42p

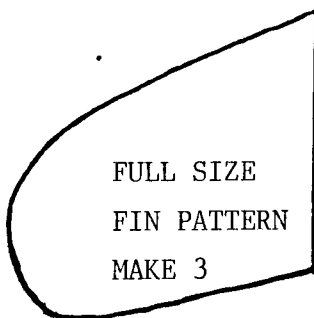
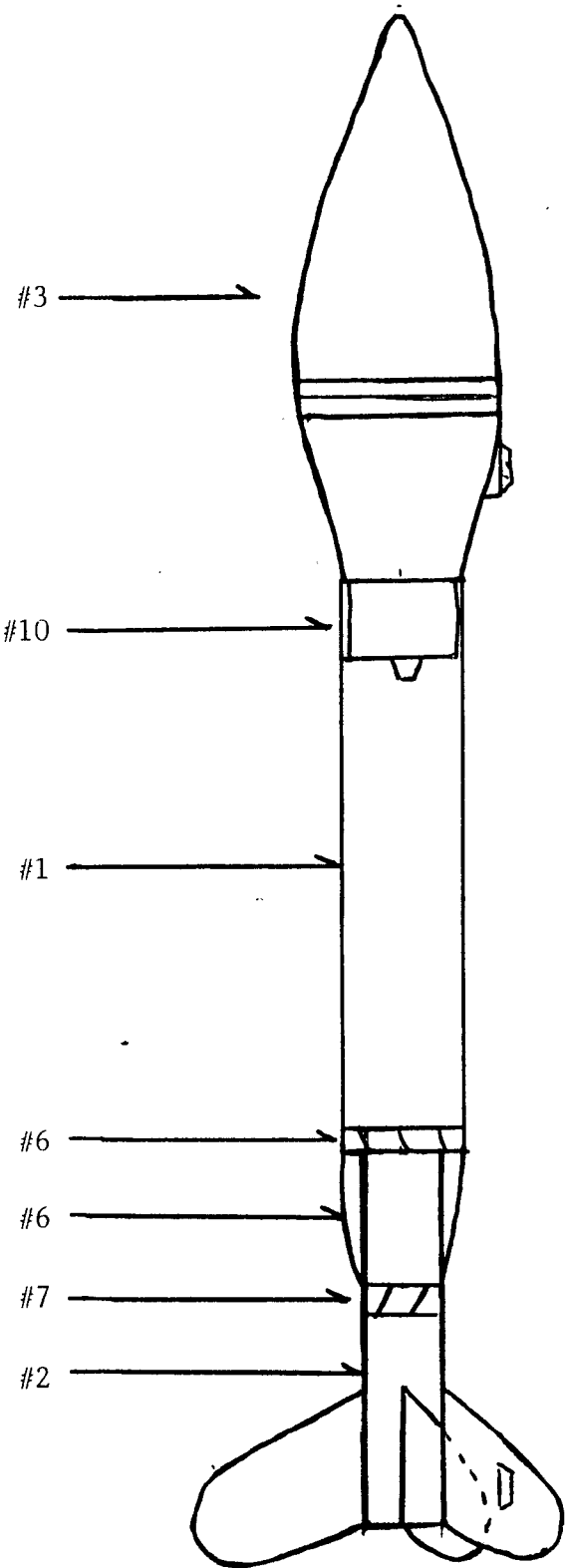
MARK SNYDER'S B/C EGGLOFTER

PARTS (All from Apogee)

<u>Part #</u>	<u>Quantity</u>	<u>Description</u>
1	1	6" piece of PT-24 Tubing
2	1	4" piece of PT-18 Tubing
3	1	Nova Eggcone
4	3	Fins from GBS-20 fin stock
5	2	Pieces LL-3 Launch Lug
6	1	AT-1824 Airframe Transition with 18/24 ring.
7	1	EB-18 Engine Block
8	1	Shock line, at least 2' of KSL-100 Kevlar
9	1	Strip of mylar tape
10	1	Shoulder portion of NC-24 Nose Cone
11	1	Parachute. Used at least a 24" reinforced dry cleaner bag chute, 1/4mil thickness.

NOTES:

1. The shock line is epoxied into one of the fin fillets, and runs externally up the side of the model. It is secured with the mylar tape at the rear-most portion of the PT-24 tube.
2. The shoulder portion of the NC-24 nose cone is used to properly seat the eggcone into the 24mm tube, however an alternate method can be used.
3. The upper launch lug is mounted on a stand-off; on the original model this was made from a section of body tube, but a wedge of balsa can be used; however, be certain that the lower fin-mounted launch lug lines up directly with the upper one.
4. The motor protrudes from the bottom of the 18mm tube by 1/4".
5. Use cyano (super glue) throughout for construction, with epoxy fin fillets.
6. Mount fins 120° apart.



PERFORMANCE

<u>Date</u>	<u>Motor</u>	<u>Misc</u>
9/3/89	B6-2	Set club record in B ELD at 69.22 seconds
6/30/90	C6-3	Flew to 225 secs in C ELD at LMR-1 Regional, however model thermal away.

(Drawing Not To Scale)

Friends, during the week of August 5-9, 1991, the National Association of Rocketry will hold it's 33rd Annual Meet, known as NARAM-33. This year, this bash will be held in the Chicago area, hosted by the Northern Illinois Rocketry Association.

So, Bunky, ya say that you'd love to go, but can't afford the travel expense? Ya say that ya just can't convince your wife/husband/mother/father/second cousin twice removed by marriage that this really is the place that they would like to spend their summer vacation? Ya say that you're afraid that being exposed to a week's worth of concentrated rocket exhaust fumes may affect generations of unborn children, and that you fear that you'll never get that wonderful odor out of your clothing if you launch rockets until ya can't see straight?

NO PROBLEM!

For those of you who have any or all of the above concerns, we humbly present:

**NARAM**  
**on a**  
**HALF SHELL**  
**(? !)**

WHAT DOES IT MEAN? We haven't the slightest idea. The editor's wife came up with it, and so insure domestic tranquility, we'll use it.

NO,NO, I MEAN HOW DOES THIS WORK? Oh, sorry. In years past, SPAAR had run a series of "Practice Events" at our Sport Launches, which followed NAR rules for the event. This year, we are running a year long, on-going contest. The events will be, with a couple of exceptions, the same events to be flown at NARAM-33 in Illinois.

WELL, ARE YOU GOING TO TELL US WHAT THE EVENTS ARE OR NOT? OK, OK! Yeeesh.

The events are:  $\frac{1}{2}$ A Parachute Duration, A Streamer Duration, A Rocket Glider, C Helicopter Duration, A Payload Altitude, B Eggloft Altitude, B Boost/Glider, Open Spot Landing, and 120 Second Precision Duration.

WHEN CAN THESE EVENTS BE FLOWN? A Payload, B Eggloft Altitude, and Open Spot Landing can only be flown at a special day-long Sport Launch, July 21. This is due to the problems of altitude tracking. (Like, we've never done it before) All other events can be flown during the course of the year at any SPAAR Sport Launch. However, all events will be governed by the NAR rules concerning each particular event. For example, you cannot fly one of your allowed 2  $\frac{1}{2}$ A PD flights in May and the second in August; they both must be flown the same day.

ARE THERE PRIZES OR AN ENTRY FEE? Of course! The entry fee for C Division members, those of us who are 18 or older, is a rocketry related item worth at least \$5. This item must be given to the keeper of such things, Glenn Feveryear, before you fly. At the end of the year, after everything is totaled up, the prize(s) will be awarded in a way the we haven't figured out yet. (But we're working on it)

There will not be an entry fee for A and B Division members. All A and B Division members who participate will receive an award or prize. You can't lose!

DO I HAVE TO BE AN NAR MEMBER TO COMPETE? No. However, if you are not an NAR member, and need some help with the rules and requirements, please ask! The idea here is to have fun, and the more people who compete, the more fun for all.

## S E C T I O N   N E W S   N O T E S

SPAMBAM-1: On April 28, SPAAR will host an NAR sanctioned Open Meet, the Spacemodeling Blow-out After March, or SPAMBAM. The events are ½A RG, A B/G, B ELD, C HD, B SRD, and ½A SD (M). The location will be the Schuylkill Valley Middle School, just off of Rt. 61 in Berks Co., PA. The field was suggested by Art Babiarez, who lives nearby and flies sailplanes and rockets from the grounds. More information, including directions, are forthcoming.

A lot of range help will be needed to ensure smooth range operation. Any and all help from the membership is requested. Since this is a club activity, please consider helping out even if you don't plan to fly in the meet.

\*\*\*\*\*

FAMILY DINNER & THE "ROCKET LOCK" AWARD: On Jan: 12, over 30 SPAAR members and their families enjoyed dinner together at the Quality Inn on Centerville Rd., Lancaster. Our Maryland contingent, the Snyders and the Lytles, both made the trip. Ed Miller provided five of his well-finished models for use as center pieces (on short notice, no less.)

After dinner, Ed was presented with the 1990 SPAAR "Rocket Lock Award", which read in part: "...for unsuccessfully launching an object that was impersonating a model rocket...Thus, in the true spirit of the "Rocket Lock", flying model rockets without them leaving the pad, "The Real Thing" is recognized as one of those unfortunate model rockets that might be better enjoyed "locked" on the pad". Ed accepted the "award" in the spirit in which it was given (in fun), and hopes not to repeat next year. The inspiration for the "Rocket Lock" award will be discussed in the next issue. Hmmm...  
\*\*\*\*\*

FEB. 9 WORKSHOP: Don't forget to bring your old "rocket junk" to the Winter Workshop in Delta, PA. on Feb. 9 from 9-Noon. Members are asked to bring some of their memorabilia to display and share with others.

SPAARphotos:

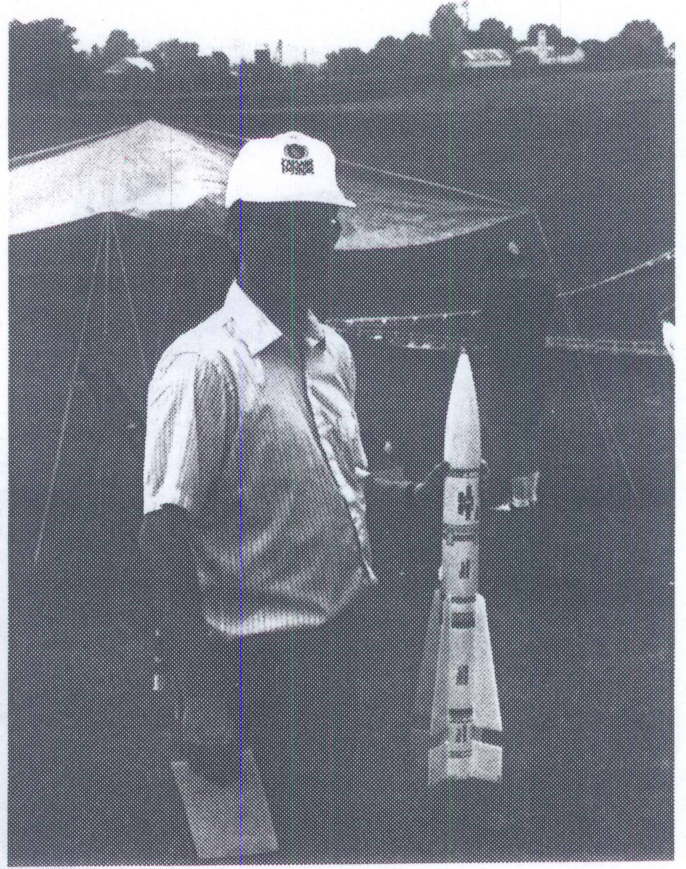
A LOOK BACK AT 1990

A guide to the photos on the next three pages:

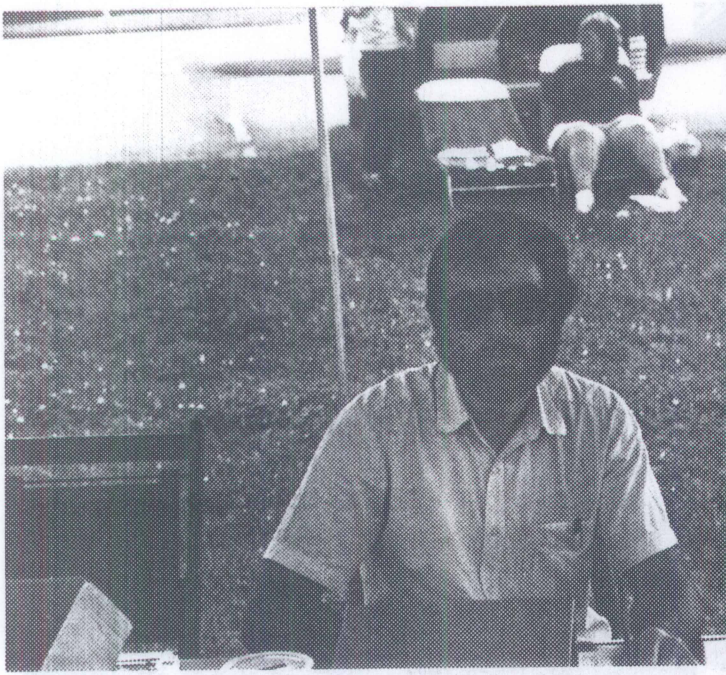
1. April 1: As part of his geology studies at Franklin & Marshall College, Rick Hackman flew this core sampling mission with his model, the "China Syndrome Express".
2. Our own Dr. Bob? with his "Uprated" Phoenix, July 22.
3. August 12: Dan Weinhold handles Launch Control duties, and he means business!
4. Ed Miller's NCR Mini-Katana takes off powered by who-knows-what, Oct. 14.
5. Ed Miller shows the effects of too many cyano or epoxy fumes, Sept. 23. This unsightly growth, which resembles a North Coast Spoil-sport, was later successfully removed.
6. Gary Feveryear's Estes GEO SAT LV. The spacecraft was placed in an elliptical orbit.
7. Jason, Jody, and Allen Wingenroth prep an Estes Athena, Sept. 23.
8. Art Babiarez shows his 1/100 scale Saturn 1B, Sept. 16. This model was scratch built; it is not the Estes kit. It flew in July, prior to the release of the Estes kit. When asked how he felt about the timing, Art stated, "Oh well, someone had to do the work."
9. Jim Lytle's Sabre powered by an F25 White Lightning.
10. Art Babiarez with his vintage Estes Mercury Redstone. If you look real close, you can just barely make out Art speaking with the tiny little astronaut in his tiny little capsule.
11. Trevor Smedley and the famous "Super Chicken".
12. Carl and Mark Snyder prep a model, Nov. 4. In the background, Karla Balogh checks the sky for one of Dr. Bob?'s models (or low flying cows)



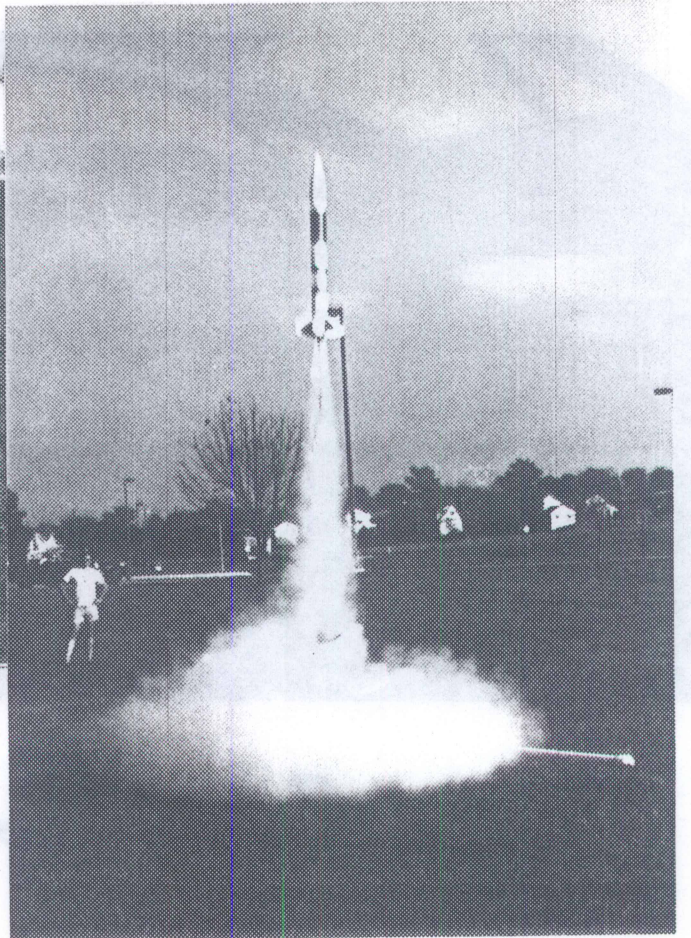
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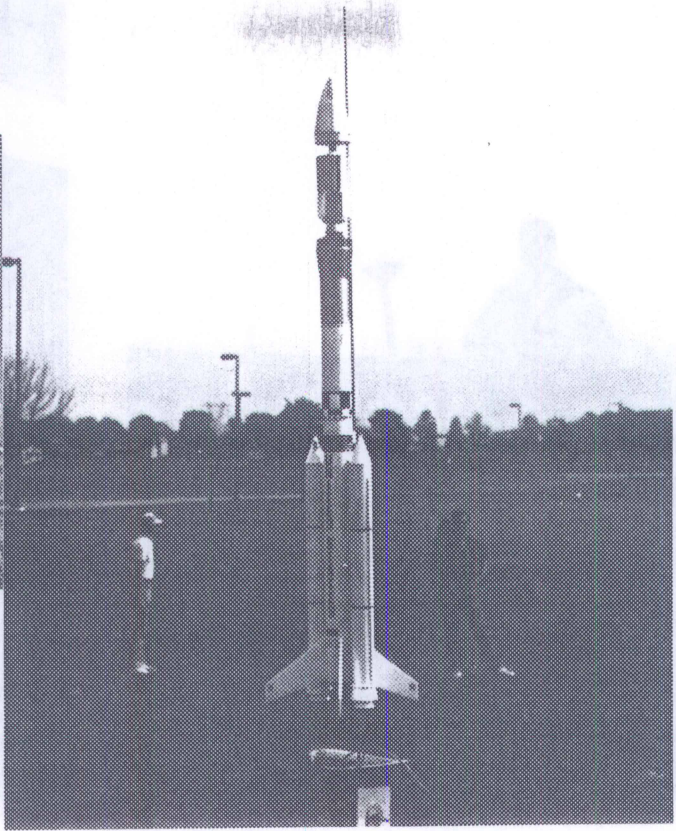
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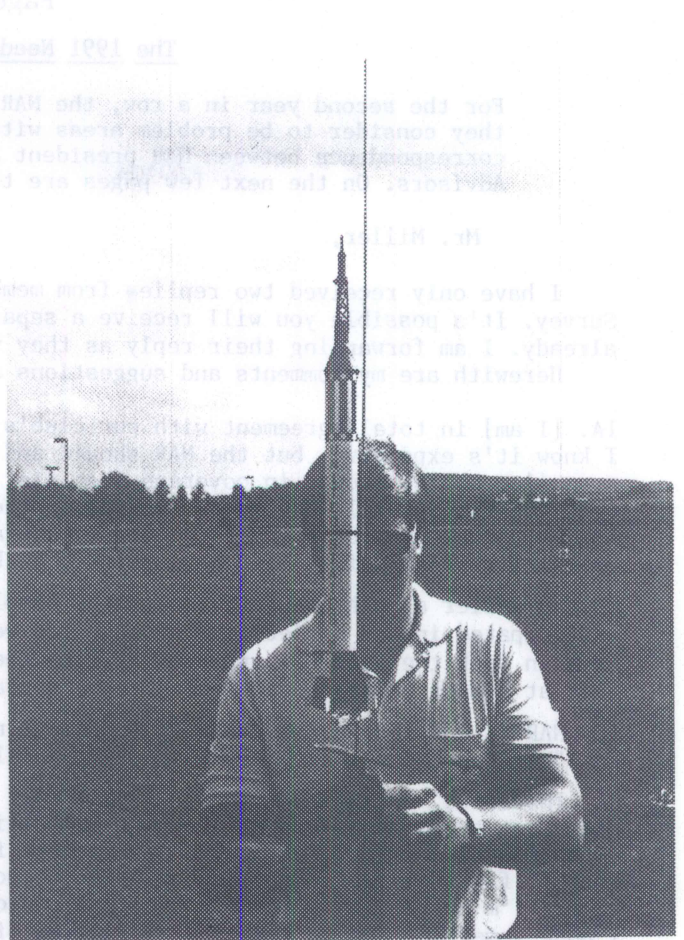
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The 1991 Needs Fixin' Survey

For the second year in a row, the NAR requested input from it's members on what they consider to be problem areas within the Association. This was done through correspondence between NAR president J. Patrick Miller and the various Section Advisors. On the next few pages are the texts of those letters.

Mr. Miller,

I have only received two replies from members of our section regarding the Needs Fixin' Survey. It's possible you will receive a separate reply from our section President if you haven't already. I am forwarding their reply as they were given to me at our last meeting.

Herewith are my comments and suggestions as asked for by number:

1A. [I am] in total agreement with our club's V.P. George Beever about the insurance debacle. I know it's expensive, but the NAR should and must stand on it's own. Even if it means having a smaller dollar amount in coverage that [is] currently with the AMA. Although no other members submitted complaints about insurance, there was not a section launch where someone didn't ask me, "What are you going to do about insurance?" As much as I enjoy the hobby, I'm not going to be blackmailed into paying forty bucks for "insurance" by the AMA.

1B. Ed Miller also has a very legitimate complaint. At our last Section Meet, only five members participated in the competition events, yet we had a record turnout for the launch itself. Ed even took the Meet! I particularly like the idea of an FAA waiver. You don't usually see that at a meet unless a particular event warrants it.

1C. NARTS. Our last contest supply order has not been filled as of December. The excuse given was "NARAM burnout". Also, it took a phone call to secure a reply.

2A. Insurance: As stated before, the NAR must provide members coverage by itself. If need be, different types of coverage for sport, competition, and AHPR, with premiums set up according to engine class. You don't pay the same rate for a Chevy as you do for a Cadillac. One costs more to fix than the other. In our case the potential for damage is greater should a mishap occur. I'm not in the insurance business and don't pretend to even understand it. However, I hope something can be arranged. I'm tired of being jerked around by the AMA. I'm not impressed with any correspondence I've had with them. But that's another story.

2B. Sport flying/Competition. I see nothing wrong with competition and sport flying together as we always have. I don't understand those who are against competing. You can still fly sport. I don't think the Soviets and Polish modelers would come here just to fly sport with us.

2C. I know the NARAMs are supposed to skip around the country but doesn't the attendance tell us that most of the modelers who compete are in the east? [Ooooooh...ED.] I don't think a site should be chosen just because it's in another section of the country, although I must admit it seems the fair thing to do.

3A. I like the new AMSPAM format so far. It really feels and looks like a magazine now.

3B. The Needs Fixin' Survey. Great way to express one's opinions and ideas with encouragement. Thanks.

4A. Update of the Competition Notebook. Include plans for [a] proven design for EVERY event with at least two designs each. (PD & SD and other similar event models could be combined to save space if needed.)

4B. Wouldn't it be nice to have a large permanent range to fly NARAMs? It could then be used for Regionals or by anyone who shows up to fly anytime of the year. Donations could be used for the purchase. Some place like an abandoned airstrip would be ideal.

5A. Thought I remember reading an idea about holding regional meetings. I think it would be very beneficial to exchange ideas and solve local problems.

5B. Possibly hold seminars on altitude tracking, data reduction, running efficient contests, do's & don'ts of running public demos, displays, etc.

5C. Establishing a mailing list for hot or important news about the NAR within one or two weeks of development for those of us who don't have access to MODELNET [or Compuserve-ED] and may not have frequent telephone conversations with those "in the know" about such news. Possibly explore several avenues which may be available to individuals besides the mail. For example, FAX units at their place of business, telephone call lists, whatever can be arranged.

Sincerely,

John Yost  
Section Advisor





# National Association of Rocketry

1311 Edgewood Drive  
Altoona, Wisconsin 54720

12 January 1991

John Yost, Senior Advisor  
NAR #31472 Sr.  
4112 Millbrook Road, #3  
Mount Joy, PA 17552

Dear John,

Thank you for the input into the "Needs Fixin' Report." I've already distributed the report to the Board and Committee Chairmen but will be sure to include your added comments in the expanded report which I'll give the Board at its 15-17 February 1991 meeting in Dallas.

I've asked the Board and Committee Chairmen to do a homework exercise prior to the meeting. They'll examine the report committee by committee to determine patterns of problems within the individual committees. Then I've asked them to examine problems across the committees (i.e. global problems within the NAR).

At the February meeting I'll give each Trustee and Committee Chairmen five minutes of uninterrupted time to present their analyses for everyone to hear. We'll then divide up into two smaller work groups, appoint captains, and concentrate on devising solutions to these problems. The two groups will meet with reports from the captains and spend additional time fine tuning the proposed solutions.

One way or the other, John, the Board and Chairmen will work these problems out. It may take us a few months to get everything in place (e.g. insurance woes) but we'll be working long and hard on this effort.

Let me comment on George's and Ed's individual inputs into the survey. If you will, pass these along to them - and if you like to the whole Section.

George is absolutely correct that the bi-monthly format of American Spacemodeling has hampered the communication link with the NAR members. This is part of the reason I've begun to send more letters to the Senior Advisors and Section Presidents.

The insurance announcement which ran in the Nov/Dec issue of the magazine would have been timely if the magazine had arrived at the end of October or first of November instead

an affiliate of the National Aeronautic Association

of the end of December. The production schedule of the magazine is being worked on and more communication about insurance is underway (e.g. I've asked the NAR Insurance Committee to prepare a special document outlining the specifics of coverage...this will go out in all member and Section packets).

George also comments about an interim newsletter to provide more timely information to ALL members (not just those folks who call me up or write or happen to be on CompuServe). This was planned from the start of the bi-monthly format of American Spacemodeling.

It is merely a question of funding. The NAR in this time of recession does not have sufficient funds or volunteer staff to support this effort. I think, however, we might solve the volunteer problem if we can find a Section willing to undertake this project and coordinate it with the American Spacemodeling Committee. Interested?

Ed's comments about the focus on competition is a theme I've heard for a long time. It took me awhile to really understand what the problem is here since I look out over the organization and see that competition is one small part of the service programs. I think the problem is one of perception coupled with the fact that the NAR does not have dynamic programs for the non-competitor.

It is working on these. You'll note the re-introduction of the National Convention (April 1991; Huntsville, AL). This will rotate among the Sections just like NARAM. You'll also note the introduction of the National Sport Launch at last year's NARAM-32. This will continue at NARAM-33 and I've asked its organizer to look at expanding this effort to the regional level complete with FAA waivers.

The NAR is introducing the Volunteer Project. You've probably received a letter from John Dyer on this and there'll be a notice in the Jan/Feb issue of the magazine. Ed proposes that Sections be asked to host a regional sport launch once a year. One of the things we're thinking about asking these participants of the Volunteer Project to do is along this line (i.e. host public demo launches or a regional sport launch).

In looking over the rest of your report, John, please accept my apologies for the excessive delay in the receipt of your NARTS order. I'll let Nettie Hunsicker know about this as soon as I complete typing this letter.

On insurance the NAR is looking for alternative coverage. In fact, I was supposed to have been called yesterday by the insurance agent with two quotes. I expect to have this information in hand momentarily. I can't promise it'll be good news. If it's not then the NAR will go back to the AMA and try to work out a more favorable arrangement (e.g. subsidize some of the Section's cost of insuring with the AMA).

I hope I've addressed your group's concerns. I will add your comments to the expanded version of the "Needs Fixin' Report" and let the Board and Committee Chairmen read

through them as they work on solutions. In the meanwhile I wish you and your group a Happy New Year and hope to see you at NARAM-33 next summer!

Cordially,

*Pat Miller*

J. Patrick Miller, President  
National Association of Rocketry

**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 18 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**

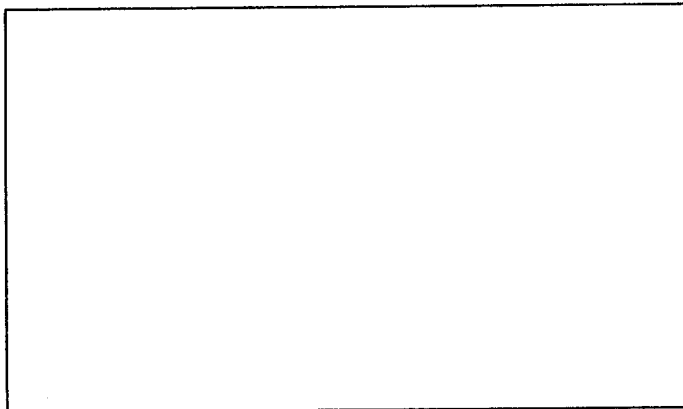
- FAI STAMP for US Team eligibility and world records \$10.00
- FIRST-CLASS POSTAGE (U.S. & Canada only)..... \$10.50

**DISCOUNTS (Select only one)**

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

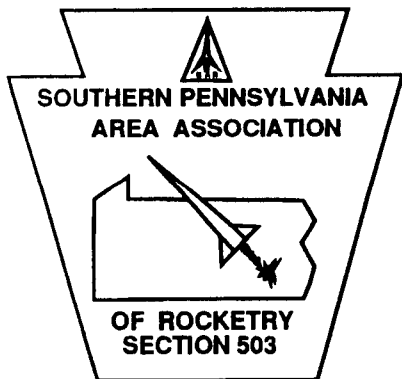
Family Plan: Full rate for one family member, others at \$8 discount — one American Spacemodelling per family.  
 NAR Membership dues include \$8.88 for a subscription to American Spacemodelling.

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 Spacemodelling.



**TO:**

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



**SOUTHERN PENNSYLVANIA  
AREA ASSOCIATION  
OF ROCKETRY**

PROMOTING SAFE MODEL ROCKETRY  
IN SOUTHERN PENNSYLVANIA  
AND NORTHERN MARYLAND



*The Southern Pennsylvania Area  
Association of Rocketry*

# COUNTDOWN

**Volume 4 No. 1**

JANUARY/FEBRUARY 1991