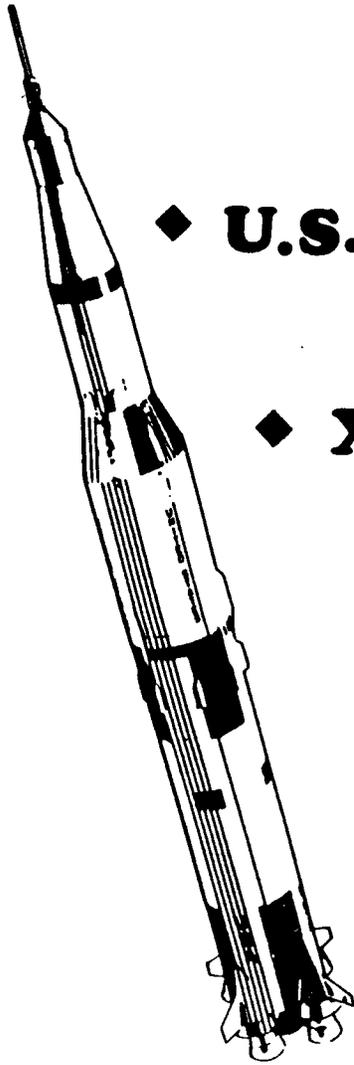


COUNTDOWN

Jan/Feb 1990

OFFICIAL NEWSLETTER OF
THE SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY

In This Issue:



◆ **U.S. & SPAAR Records**

◆ **XR 46 Sport Plan**

◆ **1990 Schedule**

& MORE!

Vol. 3 No.1

The COUNTDOWN
Volume 3, Issue 1
Jan/Feb 1990

The COUNTDOWN is the newsletter of the Southern Pennsylvania Area Association of Rocketry, NAR Section #503, PO Box 127, Reamstown, PA, 17567, and is intended for the enjoyment of it's members and subscribers. Non-member subscription rate, &5.00, per year, six issues.

CONTENTS

Section Meeting Minutes, 12/18/89 & 1/15/90...	Page 3
Section News Notes.....	Page 4
Proposed Section By-Laws Revisions.....	Page 5
Fred Hoke Gets Famous.....	Page 6
1989 SPAAR Launch Statistics.....	Page 7
The SPAAR Record Book.....	Page 8
Current U.S. Model Rocket Performance Records.	Page 9
SPORT PLAN: The XR-46, by Rick Hackman.....	Page 10
Section Schedule of Events, 1990.....	Page 11
SPAAR Membership Roster.....	Page 12
"MANUFEATURE": North Coast Rocketry.....	Page 13,14

Thanks this month to:

Glenn Feveryear, John Yost, Rick Hackman, Ed Miller, Bruce Canino, & Bob Stott.

About this month's cover:

Many of you no doubt have noticed that the cover of the Countdown has had a bit of a different twist each of the past three issues. Don't worry, you haven't been seeing things.

In the September issue, I wrote an open letter to the membership saying that I wasn't happy with the way the Countdown looked, or the way that it was produced. I asked everyone out there for help, in the way of suggestions, ideas, and constructive criticisms.

I'm happy to say that since then, all kinds of material has been coming in from our members, and from those folks who belong to Sections which we exchange newsletters with. For example, Bruce Canino of GSSS did a tremendous job, coming up with the front page mastheads and the wrapper page used in the November and December issues. Bob Stott went all out, and sent me a ton of ideas, as well as a completely "made-over" version of the September Countdown, which included the masthead used on this issue. I am going to let the members decide which one to use in the future. This is called passing the buck.

My sincere thanks to Bruce and Bob, and to all those who pitched in to help out. Please keep it coming!

SECTION MEETING MINUTES, 12/18/89

Present: G. Feveryear, R. Feveryear, W. Rhoat, John, Dan, & Derek Yost, G. Beever, D. Greene, E. Miller, R. Hackman, R. Rhoat.
The meeting began at 7 PM.

I. Competition Committee: G. Feveryear announced that the SPAARSEC-2 Section Meet will be held on 5/20/90 at Cocalico.
* The SPAAR Open Meet will be held 9/15/90 at Hershey, PA, providing that arrangements can be made.
* SPAAR will hold an NAR Record Trials 7/22/90 at Cocalico.

II. Treasurer's Report: Ed Miller reported a General Fund balance of \$164.81; since the November meeting, there has been an income of \$20 (dues), and an expenditure of \$25 (postage).

III. Section Advisor's Report: John Yost announced the results of the elections for the 1990 Board.
* Announced that the library was made available for our use in 1990.
* Discussed the "Needs Fixin'" report, received for NAR President J. Pat Miller.
* Discussed the videos available for the workshop planned fro 12/30/89.

IV. Activities: Dale Greene reported on his efforts to obtain the use of some Armstrong Co. property for launches.
* Discussed deposits for the SPAAR family dinner, planned for 1/13/90.

V. Newsletter: George Beever reported that 43 copies of the Countdown were distributed as follows: 25 to members, 12 to other sections on an exchange basis, and 6 to non-member subscribers.
* Discussed ways of making other section's newsletters available to the members.

GENERAL DISCUSSION:

* Rick Hackman proposed that sport launches during the summer months be held from 3-7PM instead of the current 1-5PM. Those present agreed, and this will be reflected on the new schedule. This should cut down on heat, breeze, and conflicts with soccer and baseball games at Cocalico.

* Discussed repairs to, and upgrading of, the club launch system for 1990.

The meeting adjourned at 9 PM.

II. Activities: Dale Greene reported that he was obtaining information on a craft show at the Park City Shopping Center, 30/31 March.

III. Newsletter: George Beever stated that the Jan/Feb issue should be out during the last week of Jan.
* Requested submissions from the membership for the newsletter.
* Passed around exchange newsletters.

IV. Competition: Glenn Feveryear stated that names were needed for the Record Trial and Open Meet; SPART-1 and SPAAROW-1 were chosen, respectively.
* practice events for the sport launches were chosen, and are listed elsewhere.

V. Section Advisor: John Yost reported that he had not received the charter renewal as of yet.
* Reminded the members to submit any problems to him, so he can include them in the "Need's Fixin" report.

VI. Old Business

G. Beever reported that he has written to four companys requesting info on patches.

Dale Greene stated that he would check sales for a heavy-duty battery for the launch system.

VII. New Business

G. Beever passed out some hand outs to those present.
G. Feveryear discussed proposed By-laws revisions.

The committees were revised for 1990, with the following changes and chairmen:

Newsletter, G. Beever; Competition, G. Feveryear; Operations, D. Greene; Education, G. Beever, with the Activities Committee being dropped.

General discussion followed.
The meeting adjourned at 9 PM.

SECTION NEWS NOTES

On January 13th, 23 members of the SPAAR family got together for dinner at the Bonanza Restaurant in Lancaster.

A good time was had by all, and it is hoped that this will become an annual highlight to the month of January.

A personal note: At the above mentioned dinner, I was presented with a very beautiful plaque by John Yost on behalf of the members of SPAAR. Thank you all!
-George Beever

SECTION MEETING MINUTES, 1/15/90

Present: G. Feveryear, D. Greene, J. Yost, D. Rhoat, R. Hackman, E. Miller, G. Beever.
The meeting began at 7 PM.

I. Treasurer's Report: Ed Miller reported an income of \$82 in dues, \$10 in newsletter subscriptions, & \$7.08 for photos; expenditures of \$4 for a plaque & \$102 for 20 Ken Brown kits, leaving a balance of \$157.89.

SECTION NEWS NOTES

NEW MEMBER: SPAAR's newest member is Toby Kulzer, age 12, from Hershey, PA. Toby indicates that he has been flying model rockets for 1 year. Welcome aboard!!

WHAT, NO WUBBA?: Rumor has it that there will be no WUBBA this June, due to Art Rose's prior commitments with the US International Team, which is going to the USSR in "late Spring, 1990".

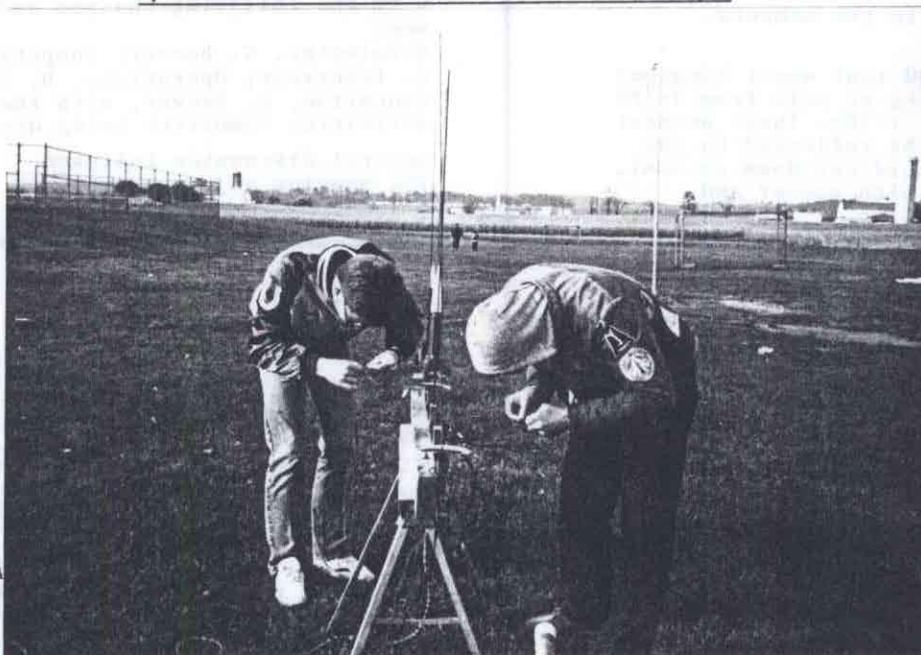
To make up for the lost 3 Contest Factors, NOVAAR is planning "LMR-1", or Last Minute Regional, set to take place on June 30. This will be a one day Regional. Events listed are: D Boost/Glide, C Helicopter Duration, B Rocket/Glide, C Eggloft Duration, B Streamer Duration, and (eeek!) B Flex-Wing, Multi. It appears that SPAAR will attend.....

SPAARSEC-2: The SPAARSEC-2 Section Meet will be held on Sunday, May 20, at Cocalico High School. The events will be: Streamer Spot Landing, B Eggloft Duration, C Helicopter Duration, A Superroc Duration, and B Rocket/Glide. The Meet will be from 9 AM to 5 PM, and Glenn Feveryear is Contest Director.

SPAAROW-1 OPEN MEET: SPAAR plans to hold an Open Meet on September 15, which is a Saturday, with the sight to be Hershey, PA. Events: C Eggloft Duration, B Streamer Duration, $\frac{1}{2}$ A Parachute Duration, B Rocket/Glide, A Boost/Glide, and B Helicopter, Multi. More information in upcoming issues.

SECTION OFFICERS FOR 1990: At the December meeting, the results of the elections for the 1990 Board were announced. The officers for 1990 are: Section Advisor, John Yost; President, Glenn Feveryear; Vice-President, George Beever; Secretary/Treasurer, Ed Miller; and Member-at-Large, Dale Greene.

Question: What these men doing?



Answer: Mark Snyder and John Yost paying homage to their micro-clips at SPAARSPAM-1, November, 1989.

THE FOLLOWING ARE THE PROPOSED REVISIONS TO THE SECTION BYLAWS WHICH WILL BE VOTED ON AT THE REGULAR MEETING ON 19 FEBRUARY 1990. ONLY THE AFFECTED SECTIONS ARE BEING SHOWN. REVISIONS APPEAR IN BOLD FACE TYPE.

ARTICLE 3, MEMBERSHIP: THE MEMBERSHIP OF THIS ORGANIZATION SHALL CONSIST OF ALL INTERESTED PERSONS, REGARDLESS OF AGE, SEX, RACE OR CREED WHO EXPRESS A DESIRE TO JOIN, PLEDGE TO FOLLOW THE NAR/HIAA MODEL ROCKET SAFETY CODE AND WHO PAY PROMPTLY ALL DUES MONIES AS ASSESSED BY THE SECTION. ALL MEMBERS OR PROSPECTIVE MEMBERS ARE ENCOURAGED TO JOIN THE NAR.

ARTICLE 4, MEETINGS: MEETINGS OF THE SECTION SHALL BE HELD AT LEAST 12 TIMES PER YEAR, ON THE THIRD MONDAY OF EVERY MONTH, AT TIMES AND PLACES DESIGNATED BY THE SECTION BOARD OF DIRECTORS. CLUB LAUNCH ACTIVITIES, WORKSHOPS ETC, SHALL NOT BE CONSIDERED A MEETING. ****DELETE THIS SENTENCE**** (A QUORUM OF 50% OF THE MEMBERSHIP SHALL BE NECESSARY FOR THE TRANSACTION OF ANY NEW BUSINESS.) MEMBERS ARE ENCOURAGED TO ATTEND ALL MONTHLY MEETINGS.

ARTICLE 5, DUES:

****DELETE THE FOLLOWING**** (DUES ARE PAYABLE IN JANUARY OF EACH YEAR OR IN THE CASE OF NEW MEMBERS, PRIOR TO THE END OF THE FIRST MONTH OF MEMBERSHIP.) ****ADD THE FOLLOWING**** DUES COLLECTED ARE FOR A TWELVE MONTH PERIOD FROM THE MONTH OF APPLICATION ACCEPTANCE.

ARTICLE 8, ELECTIONS: THE NOMINATION OF OFFICERS AND BOARD OF DIRECTORS MEMBERS SHALL BE RECEIVED AT THE MONTHLY MEETING HELD IN NOVEMBER OF EACH CALENDAR YEAR. THE ELECTION OF OFFICERS AND BOARD MEMBERS SHALL TAKE PLACE BY MEANS OF A SECRET BALLOT AT THE MEETING IN DECEMBER. THE RESULTS WILL BE ANNOUNCED AND THE DUTIES OF THE NEW OFFICERS AND MEMBERS OF THE BOARD SHALL BEGIN IMMEDIATELY. ALL OFFICERS AND MEMBERS OF THE BOARD SHALL SERVE A TERM OF ONE YEAR. VACANCIES IN OFFICES AND ON THE BOARD SHALL BE FILLED BY NOMINATION AND ELECTION OF A SECTION MEMBER TO FILL THE UNEXPIRED TERM OF OFFICE AND SHALL TAKE PLACE AT THE SECTION MEETING AT WHICH THE VACANCY IS ANNOUNCED, WITH THE EXCEPTION OF THE PRESIDENT.

ARTICLE 9, COMMITTEES:

****DELETE THE ACTIVITIES COMMITTEE IN IT'S ENTIRETY. ADD THE EDUCATION COMMITTEE AS FOLLOWS****

(C) THE EDUCATION COMMITTEE SHALL BE IN CHARGE OF MAKING ALL ARRANGEMENTS FOR SECTION EDUCATIONAL ACTIVITIES. THE COMMITTEE SHALL PLAN AND ADMINISTER SUCH ACTIVITIES AS THE NARTREK PROGRAM, WORKSHOPS OR OTHER LEARNING EXPERIENCES TO FURTHER THE "PURPOSE" OF THE SECTION.

ARTICLE 10, AMENDMENTS: THESE BYLAWS MAY BE AMENDED BY A TWO-THIRDS VOTE OF THOSE SECTION MEMBERS PRESENT AND VOTING AT ANY MEETING OF THE SECTION, PROVIDING WRITTEN NOTICE OF THE PENDING AMENDMENT HAS BEEN SENT TO THE MEMBERSHIP OF THE SECTION AT LEAST FIVE DAYS IN ADVANCE OF SUCH A MEETING. NO AMENDMENT OF THESE BYLAWS SHALL BE IN FORCE UNTIL SUBMITTED TO NAR HEADQUARTERS.

Blast-off



Jim Zengerle / The Daily News

Fred Hoke, Lebanon, a member of the Southern Pennsylvania Area Association of Rocketry and a custodian at Henry Houck Elementary School in Lebanon, explains some of the basics of rocketry to a group of schoolchildren in Beth Jordan's second-grade classroom Thursday: (from left) Ryan Mong, Luke Bartal,

Allison Mishoe, Julie Santana, Heather Gutekunst and Jennifer Fern. As part of lessons in estimation and the metric system, the students calculated how high the rocket would go, then tested their predictions by using an altitude checker during an actual launch (below).



1989 SPAAR CLUB MEMBER LAUNCH STATISTICS

MEMBER	3/12	4/16	5/7	5/28	6/11	7/2	7/23	8/13	9/3	9/24	10/8	11/5	TOTAL
R. Hackman	2	10	10	0	12	0	16	11	0	11	10	7	89
W. Rhoat	0	5	2	3	4	5	11	3	4	0	0	4	41
E. Miller	0	5	6	12	2	8	10	8	6	9	7	5	78
G. Feveryear	0	6	3	5	4	5	14	0	5	3	6	3	54
D. Bender	0	3	0	0	5	3	0	6	4	0	3	3	27
D. Greene	0	3	3	5	8	6	12	5	3	8	5	3	61
R. Rhoat	0	5	0	1	4	2	11	0	4	0	0	3	30
J. Yost	0	1	1	3	4	2	0	0	2	2	0	5	20
J. Lytle	0	1	0	0	0	0	0	0	8	0	0	3	12
D. Wenrich	0	1	0	0	0	0	0	0	0	0	0	0	1
J. Wenrich	0	1	0	0	0	0	0	0	0	0	0	0	1
M. Snyder	0	0	7	7	0	4	12	0	7	0	3	3	43
Dan Yost	0	0	1	0	0	1	0	0	0	0	0	0	2
Derek Yost	0	0	1	0	0	1	0	0	1	0	0	0	3
A. Newman	0	0	0	8	0	0	0	0	0	0	9	8	25
G. Beaver	0	6	4	7	3	8	15	7	10	6	4	4	74
R. Stott	0	0	0	0	0	9	0	0	0	0	0	0	9
F. Hoke	0	0	0	0	0	3	5	6	3	6	2	4	29
E. Marcella	0	0	0	0	0	0	3	0	6	0	0	5	14
R. Clark	0	0	0	0	0	0	2	0	0	0	0	0	2
R. Balogh	0	0	0	0	0	0	0	11	7	3	0	0	21
R. Fuld	0	0	0	0	0	0	0	0	4	6	0	5	15
M. Angell	0	0	0	0	0	0	0	0	2	0	0	0	2
B. Lefever*	0	3	0	0	0	0	0	0	0	0	0	0	3
C. McCann*	0	0	0	0	0	0	0	5	0	0	0	0	5
TOTALS	2	50	38	51	46	57	111	62	76	54	49	65	661

*--Non-member

THE SPAAR RECORD BOOK

Below is a listing of all SPAAR club performance records, as of January, 1990.

EVENT: PARACHUTE DURATION

<u>Class</u>	<u>Name</u>	<u>Date</u>	<u>Time</u>
½A	Glenn Feveryear	7-2-89	258.0
A	Dale Greene	7-2-89	71.90
B	Dale Greene	7-2-89	184.90
C	Dale Greene	8-13-89	125.25
D	Ed Miller	7-2-89	120.07
E	Robert Balogh	9-3-89	104.75
F	Robert Balogh	9-3-89	59.59
G	Robert Balogh	8-13-89	138.42

EVENT: STREAMER DURATION

½A	Glenn Feveryear	9-24-89	94.80
A	Glenn Feveryear	4-16-89	120.00
B	Glenn Feveryear	7-23-89	131.72
C	Dick Rhoat	7-2-89	145.35
D	Dale Greene	8-13-89	52.35
E	Robert Balogh	8-13-89	41.84
F	Ed Miller	11-5-89	64.50

EVENT: HELICOPTER DURATION

½A	John Yost	12-4-88	42.70
A	George Beever	8-13-89	42.62
B	Glenn Feveryear	9-3-89	61.87
C	Glenn Feveryear	10-4-89	91.00

EVENT: SUPERROC DURATION

A	Glenn Feveryear	10-8-89	337.70 pts
B	Glenn Feveryear	7-23-89	486.00 pts
C	Dick Rhoat	9-3-89	533.42 pts

EVENT: EGGLOFT DURATION

B	Mark Snyder	9-3-89	69.22
C	Glenn Feveryear	10-9-88	156.00

EVENT: BOOST/GLIDE

½A	Glenn Feveryear	7-23-89	71.50
A	Glenn Feveryear	7-2-89	84.30
B	Fred Hoke	7-23-89	13.75
C	Fred Hoke	9-3-89	34.91

EVENT: ROCKET/GLIDE

½A	George Beever	9-24-89	13.22
B	Glenn Feveryear	10-30-88	154.00

* All other categories not listed are open. In order to qualify for a club record, the flight must take place at a scheduled SPAAR launch, must be returned, and the record attempt indicated on the flight card.

CONTEST POINTS, AS OF JAN., 1990

<u>NAME</u>	<u>POINTS</u>	<u>CONTEST FACTORS</u>
Glenn Feveryear	1396	6
George Beever	589	6
Dale Greene	450	6
Mark Snyder	134	1
Dick Rhoat	108	1
Ed Miller	39	1
Bill Rhoat	29	1
Rick Hackman	11	1
TOTAL	2756	

NAR Records
November 3, 1989

A division		
A Alt	295 m	05/12/86
B Alt	510 m	08/11/81
C Alt	202 m	05/31/81
F Alt	1820 m	09/27/81
*C FL Alt	489 m	08/09/89
1/2A BG	41 s	05/31/86
A BG	247 s	06/26/82
*B BG	84 s	08/07/89
D EL Alt	415 m	10/23/88
B EL Dur	180 s	08/09/88
C EL Dur	78 s	10/09/88
D EL Dur	126 s	02/28/88
A RG	49 s	09/30/79
B RG	138 s	08/11/88
1/2A SD	67 s	03/16/82
A SD	650 s	10/13/85
B SD	165 s	08/08/88
*C SD	217 s	08/07/89
*1/2A PD	49 s	10/21/89
A PD	76 s	08/14/87
A SR Dur	375 p	10/30/88
A HD	141 s	08/09/88
*C SR Dur	563 p	10/21/89

- J Lyon
- H Rose
- C Ramos
- F Craven
- J Marsh IV
- E Glembocki
- M Beyers
- J Marsh IV
- J Marsh IV
- A Linder
- J Marsh IV
- V Bernatchez
- J Whitehead
- J Kmetz Jr.
- R Freeman
- T White
- J Kmetz Jr.
- J Marsh IV
- M Whymark
- D Lanterman
- J Marsh IV
- M Bias
- M Whymark

B Division		
F Alt	1430 m	08/11/88
1/2A Flex BG	383 s	08/12/81
D EL Alt	316 m	07/04/81
B EL Dur	74 s	12/10/88
A RG	78 s	09/24/88
*B BG	132 s	08/08/89
A RG	418 s	08/14/81
B RG	134 s	08/11/88
1/2A SD	80 s	09/24/88
B SD	73 s	12/10/88
1/2A PD	63 s	06/25/88
C SR Dur	532 p	09/24/88
*B HD	90 s	08/09/89

- K Kmetz
- M Sykos
- C King
- K Frazier
- E Glembocki
- M Bias
- N Rivieccio
- L Olyniec
- E Glembocki
- K Frazier
- E Glembocki
- E Glembocki
- M Bias

C Division		
1/2A Alt	219 m	09/17/88
A Alt	414 m	05/11/86
B Alt	535 m	08/11/81
D Alt	860 m	08/30/81
E Alt	1387 m	05/11/85
F Alt	1741 m	09/27/81
1/2A BG	447 s	09/22/85
B BG	159 s	08/07/89
F BG	217 s	05/17/81
A Flex BG	1476 s	04/26/87
B Flex BG	237 s	02/20/82
C Flex BG	427 s	07/03/82
D Flex BG	224 s	10/11/85
B EL Alt	133 m	06/21/86
C EL Alt	289 m	08/11/82
D EL Alt	526 m	05/11/86
E EL Alt	932 m	08/10/83
B EL Dur	308 s	08/11/88
C EL Dur	622 s	09/06/81
D EL Dur	760 s	07/01/84
F DEL Alt	978 m	03/05/89
A HD	498 s	08/09/88
B HD	157 s	04/04/87
D HD	161 s	01/11/86
*E HD	95 s	10/11/89
F HD	75 s	06/29/88
1/2A PD	1052 s	09/27/87
A PD	1039 s	04/25/82
B PD	618 s	03/31/85
C PD	388 s	02/26/89
A FL Alt	50 m	08/14/81
B FL Alt	199 m	05/30/81
*C FL Alt	440 m	05/17/89
1/2A RG	230 s	05/17/81
A RG	750 s	10/10/81
B RG	259 s	08/11/88
C RG	198 s	07/05/81
D RG	361 s	08/06/87
1/2A SD	183 s	05/07/89
A SD	249 s	05/17/87
B SD	227 s	07/22/85
C SD	231 s	12/27/86
D SD	335 s	12/03/88
E SD	303 s	04/27/85
1/2A SR Dur	266 p	10/09/88
F SR Alt	1694 p	04/22/89
*C SR Dur	558 p	10/21/89

- Neutron Tm
- Odd Couple Tm
- A Rose
- Lou Dick Tm
- Lou Dick Tm
- D Frost
- L Fuke
- R Zabriskie
- T Lee
- R Lambert
- Lou Dick Tm
- J Zingler
- T White
- J Warnock
- D Cook
- Omega Alpha Tm
- J Zingler
- S Maxwell III
- A Nienast
- Dual Egglofters Tm
- W Roush
- Robyn & Randy Tm
- D Domina
- Lou Dick Tm
- K Brown
- Jankov Pavlov Tm
- Jankov Pavlov Tm
- Lou Dick Tm
- Lou Dick Tm
- D Cook
- R Kaplow
- R Kaplow
- R Nelson
- L Bercini
- M Huber
- J Kmetz Sr
- A Nienast
- D Domina
- D Saukerson
- D Domina
- Dual Egglofters Tm
- R Santella
- T White
- M Steeple
- J Marsh III
- H Holzgreffe Jr.
- G Feveryear

RECORD TRIAL TO BE HELD

On Sunday, July 22, 1990, SPAAR plans to hold an NAR Record Trial, pending the acquisition of the required NAR sanction.

The location of the trials is tentatively planned for Cocalico High School in Denver.

A listing of known NAR performance records, as of 11/3/89, is shown at left. A surprising number of event classes have no current US records, leaving many of the classes wide open.

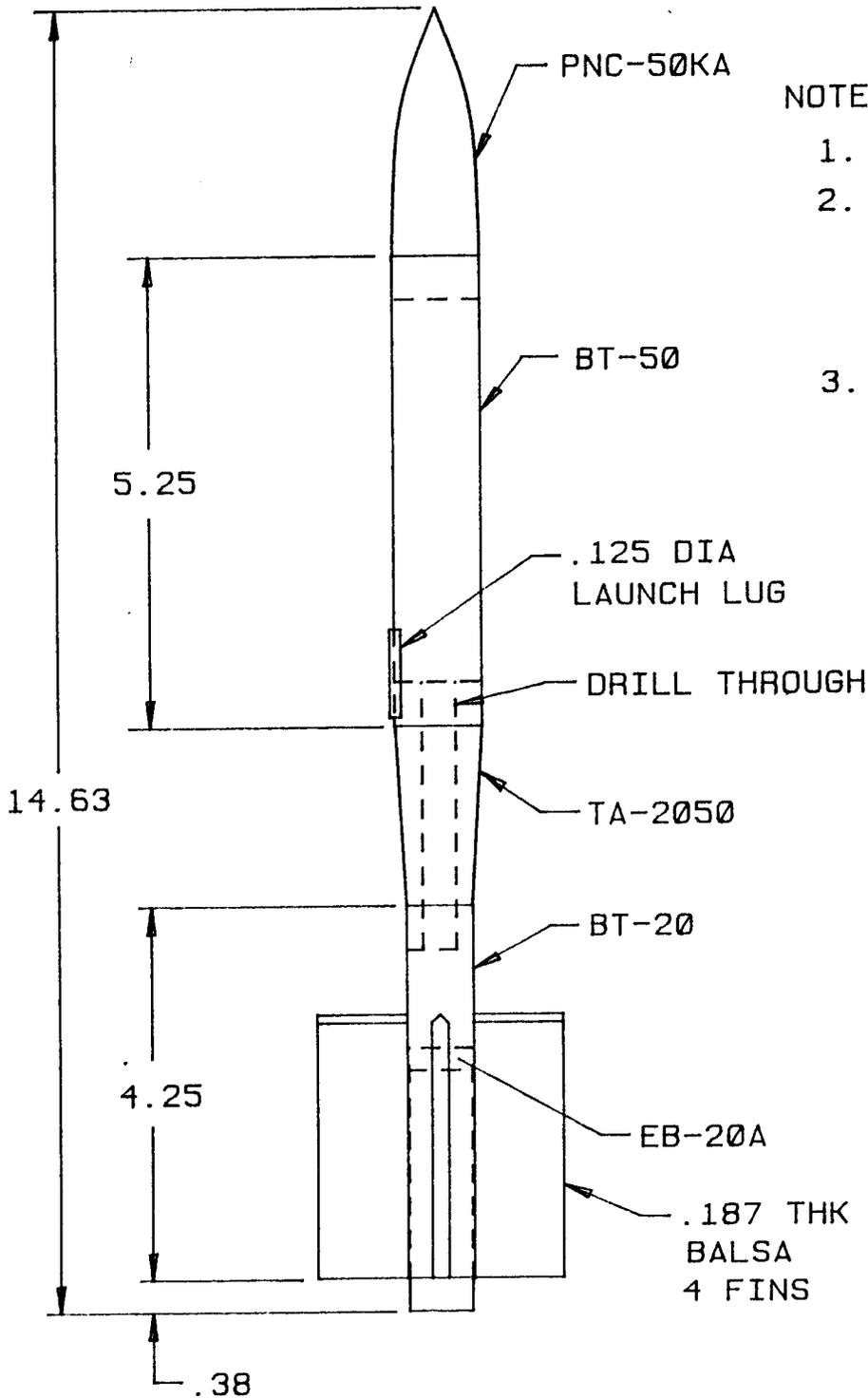
More details of this event will be forthcoming in future issues of the Countdown, so start planning now!



"GEE, I WONDER WHATEVER HAPPENED TO THAT DUAL EGGLOFTER THAT I LOST BACK IN AUGUST?????....."

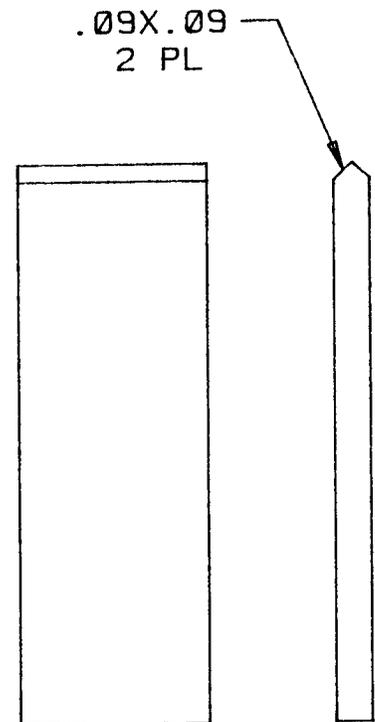
*Indicates pending records

XR-46



NOTES:

1. ALL PARTS FROM ESTES.
2. THE FOLLOWING PARTS ARE NOT SHOWN:
12.00 DIA PARACHUTE
.125 WIDE SHOCK CORD
3. RECOMMENDED ENGINE:
B6-4



FULL SIZE FIN

SCALE: 1/2

RICK HACKMAN
NAR 47559

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

JANUARY:

MON 15 SECTION MEETING 7:00PM - 9:00PM
 SAT 27 SECTION WORKSHOP: HELICOPTER DURATION

FEBRUARY:

SAT 17 SECTION WORKSHOP: BOOST GLIDER DURATION
 MON 19 SECTION MEETING 7:00PM - 9:00PM

MARCH:

SAT 10 SECTION WORKSHOP: HIGH POWER ROCKETRY
 MON 19 SECTION MEETING 7:00PM - 9:00PM

APRIL:

SUN 1 SECTION LAUNCH 1:00PM - 5:00PM
 MON 16 SECTION MEETING 7:00PM - 9:00PM
 SUN 22 SECTION LAUNCH 1:00PM - 5:00PM
 SUN 29 **NICE-10 OPEN MEET, MANNASSAS, VA (NOVAAR)**
 B PAYLOAD, B R/G, B B/G, 1/2A HD, B SRA, C ALT

MAY:

SUN 20 **SPAARSEC-2 SECTION MEET, DENVER, PA (SPAAR)**
 9:00AM - 5:00PM; C HD, B R/G, B ELD, A SRD, SSL
 MON 21 SECTION MEETING 7:00PM - 9:00PM

JUNE:

SUN 10 SECTION LAUNCH 3:00PM - 7:00PM
 MON 18 SECTION MEETING 7:00PM - 9:00PM

JULY:

SUN 1 SECTION LAUNCH 3:00PM - 7:00PM
 MON 16 SECTION MEETING 7:00PM - 9:00PM
 SUN 22 RECORD TRIAL AND SECTION LAUNCH 9:00AM - 5:00PM

AUGUST:

SUN 12 SECTION LAUNCH 3:00PM - 7:00PM
 MON 20 SECTION MEETING 7:00PM - 9:00PM

SEPTEMBER:

SUN 2 SECTION LAUNCH 3:00PM - 7:00PM
 SAT 15 **SPARROW-1 OPEN MEET, HERSHEY, PA (SPAAR)**
 9:00AM - 6:00PM; C ELD, B SD MULTI, 1/2 A PD,
 B HD MULTI, B R/G, A B/G
 MON 17 SECTION MEETING 7:00PM - 9:00PM
 SAT 22 & SUN 23 **JOISSEE-VI, NORTH BRANCH PARK, NJ (GSSS)**
 SUN 23 SECTION LAUNCH 1:00PM - 5:00PM

OCTOBER:

SUN 14 SECTION LAUNCH 1:00PM - 5:00PM
 MON 15 SECTION MEETING 7:00PM - 9:00PM

NOVEMBER:

SUN 4 SECTION LAUNCH, **SPAARSPAM-2** 1:00PM - 5:00PM
 MON 19 SECTION MEETING 7:00PM - 9:00PM

DECEMBER:

MON 17 SECTION MEETING 7:00PM - 9:00PM

SPAAR MEMBERSHIP, JANUARY, 1990"A" Division: 14 years of age and younger

Daniel Yost
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Mt. Joy, PA 17552
717-684-9519

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Lebanon, PA 17042

Carl Snyder
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Baltimore, MD 21236
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Jimmy Lausch
434 Surrey Dr.,
Lancaster, PA 17601
717-569-7160

Aaron Newman
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Millersville, PA 17551
717-872-4917

Mark Beever
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Ephrata, PA 17522
717-733-4170

Derek Yost
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Mt. Joy, PA 17552
717-684-9519

Jess Wenrich
35 Sandra Circle,
Denver, PA 17517
215-267-4130

Chris Snyder
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Baltimore, MD 21236
301-256-7499

Eric Marcella
RD#2 Box 47
Parkesburg, PA 19365
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John Musser
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Lancaster, PA 17601
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Toby Kulzer
180 Somerset Dr.,
Hershey, PA 17033

"B" Division: 15, 16, & 17 years of age

William Rhoat
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Ephrata, PA 17522
717-733-6915

Dave Wenrich
35 Sandra Circle,
Denver, PA 17517
215-267-4130

"C" Division: 18 years of age and older

Robert Fuld
359 Oaklyn Dr.,
Lebanon, PA 17042
717-274-5564

Michael Angell
102 Coventry Ct.,
Palmyra, PA 17078
717-838-0238

Robert J. Balogh Jr.
1200 Ash Lane,
Lebanon, PA 17042
717-273-7320 UNLISTED

Roger Clark
4 Robert Lane,
Carlisle, PA 17013
717-245-2399

Robert A. Stott
PO Box 206
Richboro, PA 18954

Fred Hoke
968 Jay St.,
Lebanon, PA 17042

James Lytle
5051 West Heaps Rd.,
Pylesville, MD 21132

Dale Greene
16 Knollwood Dr.,
Akron, PA 17501

"MANUFACTURE:"

NORTH COAST ROCKETRY

North Coast Rocketry, or NCR, was founded in 1984 by long-time NAR competitors Matt Steele and Chris Pearson. Surprisingly, the market that Steele and Pearson went after was not competition, but the growing high power one.

North Coast sells a large number of kits, all of which are powered by D through J motors, singly or in clusters; a number of kits do, however, utilize clusters of A through C class motors. Steele and Pearson clearly wished to produce kits to take advantage of the then new Aerotech and Vulcan Systems composite propellant rocket motors that were just beginning to hit the market in the early eighties.

A typical North Coast kit uses heavy-duty paper tubing, die-cut plywood fins, and nylon pre-assembled parachutes. Motor mounts are kept simple, to allow for a wide range of motors to be flown. As with all high power kits, epoxy is used throughout during construction.

North Coast offers the complete line of Aerotech composite motors to go with their kits. The motors that are NAR legal are available to anyone; the motors which have not received an NAR Safety Certificate or exceed NAR power limits are available only to members of Tripoli Rocketry, Inc.

In 1989, NCR introduced their first new catalog in two years, and it introduced many new items and features not available previously. They include a line of competition oriented kits such as helicopter models, streamer and parachute duration models, and kits suited for boost- and rocket-glide. A line of parts is also offered, however supply problems have held up delivery of orders as much as five months in one case. Orders that are for long offered items usually take only 2 to 3 weeks to process.

THE MINI-KATANA.....

- Ed Miller & George Beaver

If you like fire and smoke, this is the kit for you!

This kit uses a cluster of one 24mm motor in a center mounting, surrounded by 7 18mm motors. This allows for the use of Estes D motors in the center, and A, B, or C motors on the outside.

In my opinion, however, this arrangement is not very versatile. I converted mine to use only six 18mm motors; with this set up, I can use 2, 3, 4, or 6 motors to fly the Mini-Katana. If you wish to fly with only the center 24mm mount, an Estes D12 won't do the trick; use at least an E15-4.

Again, heavy-duty parts are used throughout in the Mini-Katana, and construction was very easy. If you like to sand and seal fins, there are six of them on this rocket. Be careful with the C/G on this model, however; I had to bore two holes, ½" X 1", in the foam nose cone, and add two two 240 grain bullets as nose weight.

The Mini-Katana is really a fun kit to fly, and if you like to wire up flashbulb ignitors, this kit will make your day! I recommend this kit for anyone who is experienced with cluster ignition.

- Ed Miller

THE SPOILSPORT.....

Fellow SPAAR member Kevin Reichert and I built a North Coast Rocketry "Spoilsport", which utilizes four 24mm motor mounts. This allows for the use of Estes "D" motors or Aerotech "E" or "F" motors.

This kit is the most rugged that we have ever put together. It featured die-cut ¼" plywood centering rings, die-cut plywood fins, and very strong, thick walled airframe tubing. Also included was a nylon pre-assembled parachute, and 6' of 3/8" elastic shock cord. A hard foam nose cone, which is standard for NCR, is included in the kit. We used epoxy throughout the construction of the Spoilsport, as recommended.

We have flown the Spoilsport at SPAAR sport launches, powered by 4 Estes D12's. Each flight has been perfect, and this rocket is a real crowd pleaser!

- Ed Miller

THE AEROBEE HIGH-TEST....

After having spent a couple of evenings sanding airfoil onto the wings of some BG's and RG's that I was building for the upcoming contests scheduled for this spring, I found myself in dire need to build something a little bit different. I then remembered the Aerobee High-Test kit from NCR that I have gotten sometime ago, and decided that this was as good a time as any to put it together. It was a real pleasure!

As with all NCR high power kits, and those of most of the high power manufacturers, for that matter, the Aerobee High-Test features heavy duty components throughout. Three pre-cut plywood fins, two plywood centering rings, and three basswood conduit covers round out the wooded parts; a hard foam nose cone, the recovery system, the motor mount tube, and the main airframe tube round out the parts list. The construction was very easy; I assembled the motor mount and installed it in the main body one evening, and finished up the construction the next. This is Estes "Skill Level 1" stuff! Just don't spare the epoxy, use as much as you want! Therein lies the neat thing about building a kit like the Aerobee High-Test: even though you should pay attention to your building and modeling skills, making sure that a rocket powered by 29mm motors in the E, F and G range will stay together, you really don't have to worry so much about things that require attention in competition type models.

At \$24, the High-Test is reasonably priced as far as high power rocketry is concerned. If you are looking for a kit to get started in single engine high power, the NCR Aerobee High-Test is a good choice.

- George Beaver

THE ASAT-21X....

This kit is big. It is heavy. D12 motors won't move it. Don't let the size intimidate you, however. The ASAT-21X was very easy to assemble, witnessed by the fact that I put mine together in the course of one evening. In a sense, this kit is as easy to put together as an Estes Alpha, with one difference.... lots of epoxy!

The ASAT is rugged and is made up of high quality parts, which included a plastic nose cone, heavy wall tubing, a 48" nylon parachute, a 3/4" X 6' elastic shock cord, and plywood centering rings and fins. If there is a weak point to this kit, it is that there are no "through-the-wall" fins; this can be corrected by the modeler, if he or she so wishes. Painting is also a chore, but this is to be expected with very large rockets.

Another large feature of this rocket kit is it's price: \$49.00. This is enough to break the budgets of the average modeler!

- Ed Miller

THE ROTAROC-A....

The NCR Rotaroc-A is one of the new competition kits that were introduced for 1989. This is the mini-motor version of the original Rotaroc designed by George Gassaway, now a designer for NCR. The full size version, fro 18mm motors, is also available in kit form from NCR.

The Rotaroc-A went together easy enough, although with a model of this nature, attention must be paid to detail. This is especially true in working with cyano and the nylon hinges for the rotors.

One minus were the kit instructions; they were a bit hard to follow. They are not of the "Step 1, Step 2, Step 3..." variety. One nice feature that I found, however, was the method described on how to add the dihedral to the rotors. Instead of the standard "cut and flip", the modeler is told to shape or form the balsa into the desired angle of attack; the thing is, you are not told just how to do this. I warped mine over steam. We'll see how I did! All in all, this is a nice kit, and I'm happy to see a manufacturer producing competition oriented kits. Was it worth \$8? ... No.

- George Beaver

(Continued from Page 12)

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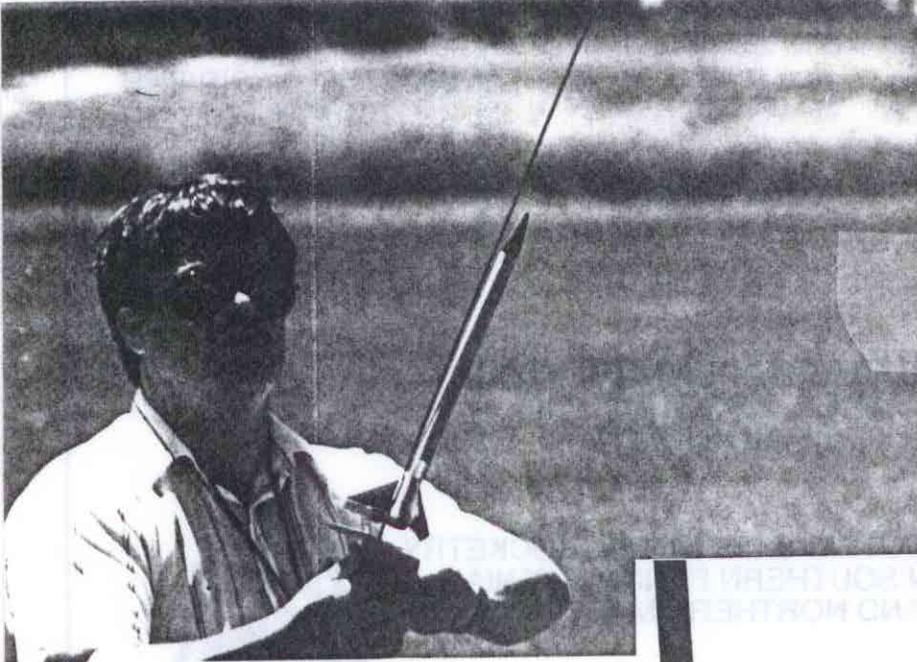
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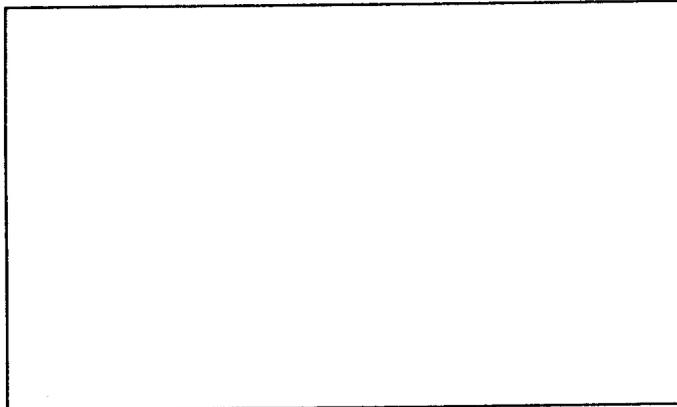
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Left: Our prez, Glenn Feveryear, June, '89. Dig the shades, man.

Right: The boys come back from NARAM-31, August, '89. R to L: John & Dan Yost, Dale Greene, Ed Miller.





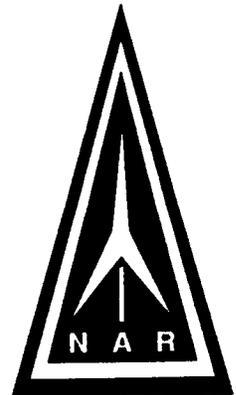
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**SOUTHERN PENNSYLVANIA
AREA ASSOCIATION
OF ROCKETRY**

PROMOTING SAFE MODEL ROCKETRY
IN SOUTHERN PENNSYLVANIA
AND NORTHERN MARYLAND



*The Southern Pennsylvania Area
Association of Rocketry*

COUNTDOWN

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