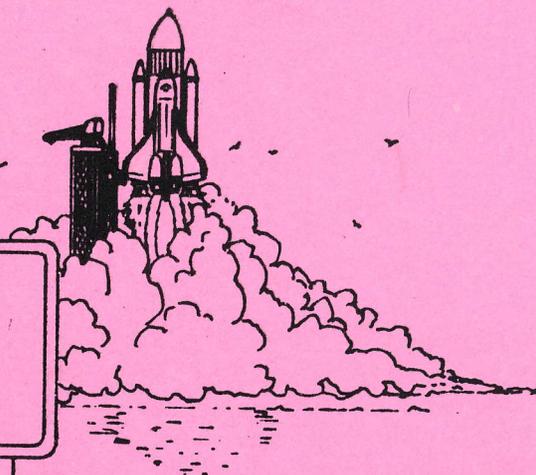


# COUNTDOWN



OFFICIAL NEWSLETTER OF  
THE SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY

VOLUME 8, ISSUE 2

MARCH/APRIL 1995

**EDITOR'S APOLOGIES:** Well, as you can see, this is May, not March or April. For that matter, you could say that this is a "condensed" version of the club newsletter. Sorry 'bout that !

**RAMTEC UPDATE:** Preparations are going forward for RAMTEC-3, to be held over the weekend of June 10-11 in Center Valley. For those members who are not familiar with RAMTEC, it is an NAR sanctioned Regional Meet, a contest which usually attracts flyers from many states on the East Coast. Sport flying is welcome, of course. So, if you want to come on up and join us at Allentown College for a weekend of rocketry and fun, contact George Beever at 717-733-4170, or Glenn Feveryear at 717-456-5570.

**HIGH POWER DOINGS:** Ed Miller and Roger Dwyer, two SPAAR members who just love those "honkin' huge rockets", attended recent high power

launches in New Jersey and Virginia. Their thoughts in RATS-1 are in this issue.

**COCALICO NEWS:** For the first time, we are now a "recognized user" of the facilities at Cocalico High School. We've had approval to fly there officially since 1989, but only at the convenience of other users. Now, we have the right to ask unorganized or "unrecognized" groups to move or leave to allow us to fly. As always, however, recognized athletic events will have first rights.

**WEATHER WOES:** Our April and May Sport Launches were both cancelled due to weather problems, or at least, the **forecast** of weather problems. Let's hope the rest of the summer is better!

The Countdown

Volume 8, Issue 2

March/April 1995

The Countdown is the newsletter of SPAAR, the Southern Pennsylvania Area Association Of Rocketry, NAR Section #503, PO Box 127, Reamstown, PA 17567, as well as of Tripoli Susquehanna/#71. Non-member subscription rate, \$6 per year, six issues. Please make all submissions to address above. Material may be used with proper credit. [as if anyone wants to]

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

Thanks This Time To:

Ed Miller, Doug Gardei & Roger Dwyer

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**SCHEDULE**

SAT/SUN JUNE 10 & 11: RAMTEC-3 REGIONAL, ALLENTOWN COLLEGE, CENTER VALLEY, PA. HOST SECTION: SPAAR. EVENTS: B B/G [M], A HD [M], A RG [M], D HD, 1/2A SD [M].

FRIDAY, JUNE 16: SPAAR SECTION MEETING, 7-9PM AT THE HOMEDCO BUILDING, HARRISBURG AVE., LANCASTER.

SUNDAY, JUNE 25: SPAAR SPORT LAUNCH, 3-7PM, COCALICO HIGH SCHOOL, DENVER, PA. CLUB DURATION RECORD DAY. NOTE THE TIME !!!

SUNDAY, JULY 9: SPAAR SPORT LAUNCH, 3-7PM, COCALICO HIGH SCHOOL, DENVER, PA. OLD ROCKET DAY.

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SPAAR    SPORT    LAUNCH

Good weather on March 19 brought out 12 flyers who made 37 flights, as well as a large number of spectators.

Bill Rhoat flew the Beta, a model that he constructed from an Estes parts assortment, as well as a Quest Evader. Both had good flights.

Bill Schafer [Designex Corp.] came up from Baltimore to fly his always interesting and unique designs and modifications. One thing everyone has to admit, Bill is always thinking up something new!

Ed Miller got a real nice flight from his North Coast Eliminator on an Aerotech F25. That model just keeps on going, and going, and going...

Mark Kamide continued to confound a lot of people by getting some beautiful flights with his Cox Saturn 1B and Saturn V. How come mine always turned into landsharks ??

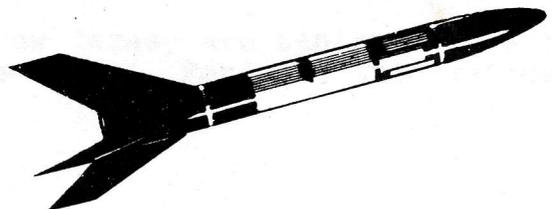
Glenn Feveryear practiced for an upcoming contest, trying out a new 1/2A Altitude design. he also flew an old standby, the Vulture, an A Boost/Glider, for a good 69-second flight.

Dale Greene had another one of those good day/bad day things going. A parachute problem on a Quest Delta Clipper [common for this kit]; a great flight

on an ex-Ed Miller Estes Magnum; an even better flight on another Ex-Ed model, the Skinny Pink Thing; and an incredible flight on one he called Name Pending, powered by an Estes E15 that did not CATO! But then, oooppps. A G80 CATO did big time damage to the motor mount on his Das Now Blue Max. If Dale can't fix it, what will we do for a mascot ?? First, Dale's Big Brute went ballistic, then Glenn's Grumpy Dog got fried, now this !! But not to worry; We're sure, with enough masking tape, Dale can fix anything.

George Beever CATO'ed an F24 reload in an Aerotech ARCAS, and had chute problems in his Maxi-Alpha [no damage]. To make up for them, he got nice flights with an Aerotech Strong ARM on an F40 and an Estes Strike Fighter with a B4-4.

Prospective member David Redcay was there, with some of his Estes models. After some coaxing, Dave got in on the fun by making a few flights himself. He was impressed with the larger, more powerful models, as well as the competition birds that were flown. Hope you join up, Dave.



FLIGHT LOG

March 19, 1995

<u>#</u>	<u>FLYER</u>	<u>MODEL</u>	<u>MANUF</u>	<u>MOTOR[S]</u>	<u>RESULT</u>
1	Ryan Schafer	Photon	?	E C6-5	Good Flight
2	Tim Rickenbach	America	Estes	E C6-5	Good Flight
3	Tim Rickenback	America	Estes	E A8-3	Good Flight
4	Tim Rickenback	America	Estes	E C6-5	Good Flight
5	Tim Rickenback	Apollo	Quest	E B6-4	Good Flight
6	Mark Beever	Alpha III	Estes	E A8-3	Good Flight
7	Mark Beever	TurboCopter	Estes	E A8-3	Good Flight
8	Bill Rhoat	Beta	Estes	E A8-3	Good Flight
9	Bill Rhoat	Evader	Quest	E B6-4	Good Flight
10	Dale Greene	Delta Clipper	Quest	E C6-3	Good Flight
11	Dale Greene	Magnum	Estes	E D12-0/B4-6	Good Flight
12	Dale Greene	Skinny Pink Thing	SB	E D12-0/D12-5	Good Flight
13	Dale Greene	Name Pending	SB	E E15-6	Good Flight
14	Dale Greene	Das Blue Max	ORI	AT G80-4T	CATO
15	Gary Feveryear	Nike-Apache	Estes	E B6-4	Good Flight
16	Bill Schafer	M84	SB	E D12-5	Good Flight
17	Bill Schafer	Sentinel	Estes	E C6-5	GF/30" Chute
18	Bill Schafer	Mod. Shadow	Estes	AT F24-7RMS	Good Flight
19	Bill Schafer	A-7	SB	E D12-7[2]	Good Flight
20	Bill Schafer	Miami Spice	SB	E D12-5	Good Flight
21	Bill Schafer	Gabriel	Designex	E D12-5	Good Flight
22	Ed Miller	Explorer Aquar.	Estes	AT D24-4RMS	Good Flight
23	Ed Miller	Eliminator	NCR	AT F25-4WL	Good Flight
24	Ed Miller	Patriot	Estes	E C6-5	Good Flight
25	Ed Miller	UFO 10-24	SB	AT E15-7WL	Good Flight
26	Mark Kamide	HL-20	Quest	E C6-3	Good Flight
27	Mark Kamide	HL-20	Quest	E C6-3	Good Flight
28	Mark Kamide	Saturn V	Cox	E D12-3[2]	Good Flight
29	Mark Kamide	Saturn 1B	Cox	E D12-3	Good Flight
30	Glenn Feveryear	1/2A Alt	SB	E 1/2A3-4	Good Flight
31	Glenn Feveryear	1/2A Alt	SB	E 1/2A3-4	Good Flight
32	Glenn Feveryear	Vulture A B/G	SB	Ap A3-2	GF/69s
33	George Beever	Strike Fighter	Estes	E B4-4	Good Flight
34	George Beever	Maxi-Alpha	SB	E D12-5	No Chute
35	George Beever	Strong ARM	Aerotech	AT F40-7RMS	Good Flight
36	George Beever	ARCAS HV	Aerotech	AT F24-4RMS	CATO
37	Dave Redcay	Firestreak	Estes	E C6-5	Good Flight

**Launch Statistics:****Models flown:**

9 Scratchbuilt  
 11 Estes  
 4 Quest  
 1 ORI  
 2 Aerotech  
 1 Designex  
 1 North Coast  
 2 Cox

**Motor Usage:**

32 Estes  
 3 Aerotech Single Use  
 4 Aerotech RMS  
 1 Apogee

**Motor Failures:**

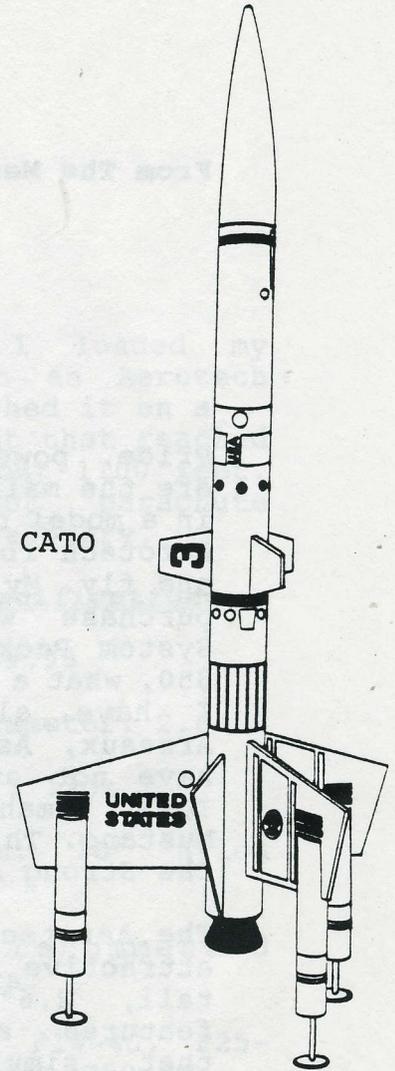
1 AT G80 CATO; 1 AT F24RMS CATO

**Flights by flyer:**

2 Mark Beever  
 2 Bill Rhoat  
 3 Glenn Feveryear  
 4 George Beever  
 5 Dale Greene  
 4 Mark Kamide  
 6 Bill Schafer  
 1 Gary Feveryear  
 4 Ed Miller  
 1 Ryan Schafer  
 4 Tim Rickenback  
 1 David Redcay

**Motor Types:**

2 1/2A  
 5 A  
 5 B  
 8 C  
 13 D  
 2 E  
 4 F  
 1 G

**High Power Report**

by Ed Miller

Two companies, Aerotech and Hypertech, are set to release their versions of a hybrid motor very soon. In New Jersey at Roar At The Shore, Ken Mizoi showed us a promotional video from Hypertech. Their system looks good but has a few drawbacks. The consumer will have to buy all new motor hardware, a special launcher, and fuel the rocket with Nitrous Oxide on the pad. It looks very complicated. Aerotech's version uses existing RMS hardware, can be fueled off the pad, and uses existing launch systems.

Aerotech is scheduled to demonstrate it's hybrid motor at an upcoming Culpeper launch. In both systems the motor itself is very long, up to 32 inches on an Aerotech J-class hybrid. A special rocket will have to be built to handle the extra long motor.

**Upcoming Launches:** High Power launches in New Jersey are tentatively scheduled for: June 25, July 30, August 27, and September 24. For more information, give me a call at 717-865-5240.

## From The Messy Workbench:

### Product Review:

#### Aerotech Strong ARM

by Douglas Gardei

Price, power, size and looks are the main things I look for in a model rocket. I have found Aerotech rockets fun to build and fly. My first Aerotech kit purchase was the Initiator System Package [I got it for \$50, what a deal!]. Since then, I have also collected the Arreaux, Astrobee D [which I have not started], HV ARCAS, IQSY Tomahawk, Mirage, and Mustang. This article is about the Strong ARM.

The Aerotech Strong ARM is an attractive model. This 41" tall, 2.6" diameter rocket features scale-like flights that simulate the Navy's Standard ARM missile. This 13-ounce bird [without motor] can fly on a variety of disposable and reloadable motors from E to G range. It's retail price is about \$50, which I believe is a fair price.

Looking over the parts, I discovered everything was in good shape except one of the fin lock rings. I called up Aerotech [hey, what happened to the 1-800 number?], and they sent me a free replacement. After reading the well written instructions, I gathered all the tools I needed. I chose five-minute epoxy for assembly.

I started with the 24mm motor adaptor and motor mount assembly. I didn't forget to

stretch the Labyrinth cooling mesh to the recommended 6". The motor mount assembly ended with the tying of the shock cord to the screw eye on the plastic baffle. The next step was the installation of the motor mount into the body tube and the attachment of the four Tomahawk fins. While doing this, I broke the replacement fin lock ring that I had gotten.

The next step was the joining of the two body tubes and the shaping of the plastic strakes. This proved easier than I thought it would be. All I did was measure, mark, cut [using a sharp knife and a metal ruler] and sand the edges to the proper shape. Finally, after spending an hour or two, I finished all four strakes and then I epoxied them onto the rocket. The last assembly steps were to epoxy the last centering ring into the tail of the rocket and the attachment of the launch lugs.

To finish the model, I first sprayed the vehicle several times with Rust-Oleum Rusty Metal Primer, sanding between coats. Then I painted the vehicle gloss white. For the nose cone, I lightly sanded it with 400-grit sandpaper and sprayed a light coat of primer on it. After it dried, I sprayed on two more thicker coats. After that, I painted

the nose cone Smoke Grey.

After I attached the shock cord and the 30" fabric 'chute to the nose cone, I did the long process of applying the decals. There were a lot of them. I decided to do it in an organized fashion.: first the stripes, then the panels, then the letters. I spent two hours, with no breaks, making sure everything was perfect. Tiny mistakes bother me. Unfortunately, the roll pattern is off a bit.

For the first four flights, I used the new Estes E15-4's. The Strong ARM rose slowly off the pad and reached an Apogee of about 250 feet, and the parachute ejected at about 60 feet. I don't recommend this motor because it doesn't have enough thrust. A Flight Systems E60-4 might have been better.

The first recommended Aerotech composite motor that I used was the E18-4W. These flights were much better. The rocket roared off the pad with it's breath-taking white flame and smoke billowing out of the motor. The rocket reached an apogee of about 400 feet, and ejected it's parachute at about 380 feet. Amazing what a lighter motor with higher thrust and eight more newtons of total impulse than an Estes E15 could do!

When August 7, 1994 came around, I attended SPAAR's

Sport Launch. I loaded my Strong ARM with an Aerotech F40-7W and launched it on a high speed flight that reached an apogee of about 1100 feet, with a perfect parachute deployment and recovery.

### Strong ARM Specifications

Retail Price: \$49.95

Length: 41" Diameter: 2.6"

Weight w/o motor: 13oz

Recovery System: 30" nylon parachute.

Aerotech's recommended disposable motors:

E15-4W, E30-4T, F14-4J, F25-6W, F50-6T, G40-7W, G80-7T.

Aerotech's recommended reloadable motors:

E16-4W, E18-4W, E23-5T, E28-4T, F24-4W, F39-6T, F22-5J, F40-7W, F52-6T, G33-7J, G64-7W.

Additional motors that can be used:

Aerotech/ISP: F37-SW, F62-ST, G54-SW, G104-ST.

Flight Systems: E60-4, F100-6

North Coast: F30-6, G50-7.

## Two Views of a Recent HPR Launch:

### Roar At The Shore - 1

April 8th & 9th

by Roger Dwyer

This was the first High Power Launch that I attended for 1995. It was a good weekend for a lot of people. On Saturday the wind was real strong, so there was a lot of lower powered flying. There were a lot of rockets lost due to the wind. My friend Ed Miller was there, and he flew a rocket that managed to get lost. Another flyer then lost a model in the same general area; sure enough, he found Ed's while looking for his own.

The launch site was very nice and flat, with tree lines a good distance away.

The flying ended at about 5:00PM on Saturday. There was a lot of fog on Sunday morning due to Saturday night's rain. However, by about 8:30AM the sun was out and the wind was only at about 2 1/2 miles per hour. The day was good for launching.

The first flight of the day was a model powered by an **M2000-30**. [! - editor] Let me tell you, it was a nice flight, but I don't know if the flyer got the rocket back. I think it went to the waiver ceiling, which was 15,000 feet. I flew about four rockets on Sunday. I flew my 1/1 scale Super-Loki Dart on an I161-M. It was a good flight, but I lost my 38mm reload casing [\$\$ouch!!]. But,

that's rocketry: a little costly sometimes!

This was a real nice weekend and a well run launch. If you'd like more information, contact me. Happy flying!

---

and....

### Roar At The Shore - 1

[R.A.T.S. - 1]

April 8-9, 1995  
Cedarville, NJ

by Ed Miller

This first RATS launch was sponsored by Garden State Tripoli. About 50 flyers from the Northeast attended. Garden State Tripoli was represented by Damian Russo, Bill Davidson, and Larry Zupnik. PARA was represented by Scott Tyrell, Justin and Donald Gleiter and Scott Gizz. Tripoli Susquehanna/SPAAR was represented by Roger Dwyer and Ed Miller. Flyers also came from as far away as Vermont.

Saturday's weather was uncooperative. The sky was partly cloudy with a 20mph wind. Despite the weather most flyers made an attempt to fly. Many rockets were lost in the swamp and woods about a half a mile to the north. My THOY

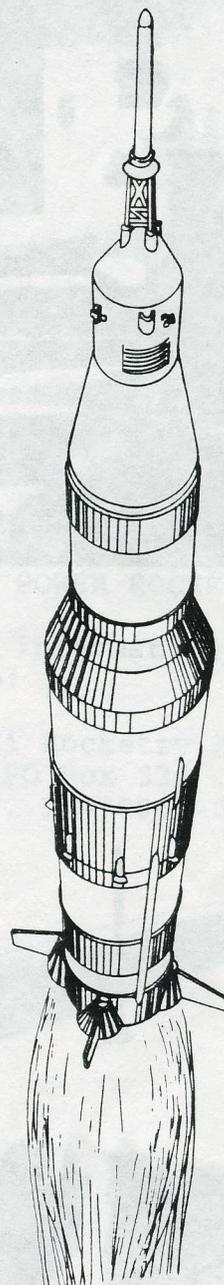
Falcon, flown on an I283 with a Doug Pratt radio aboard was one of those lost. Most of the really big flights were saved for Sunday. Roger Dwyer was interviewed by a reporter an Atlantic City newspaper, The Press.

Saturday night was highlighted by a Garden State Tripoli meeting. Damian Russo led the discussion. Hybrid motors and general club business were discussed. All of those attending were in for a special treat. Damian Russo and Bill Davidson showed off their latest project in preparation for LDRS. Believe it or not, they are building a full scale WAC Corporal, to be powered by three 98mm M class RMS motors in the first stage and a fourth 98mm M in the second stage. I wish them the best of luck.

The highlight of the meeting for me was when Justin Gleiter asked me if I was interested in a slightly used Falcon. He found my rocket while searching for his. Incredible!!

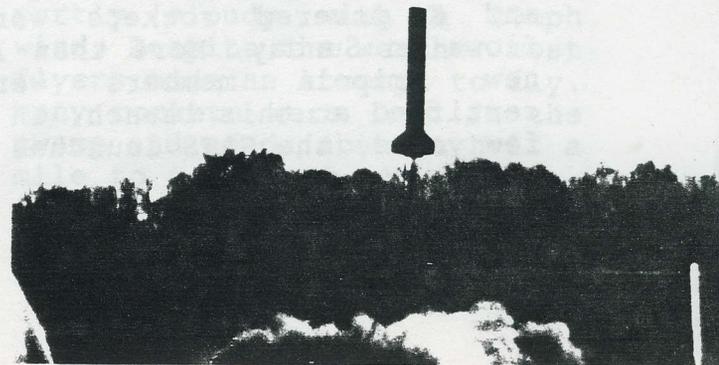
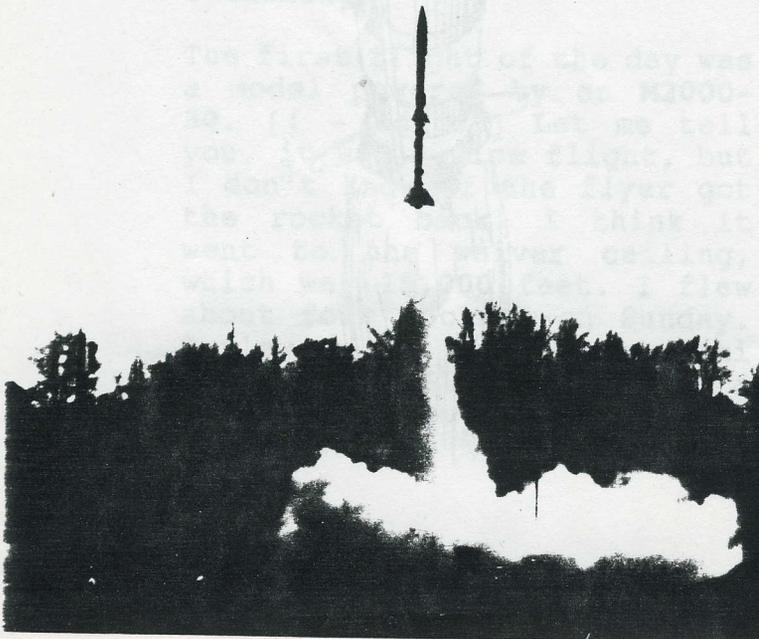
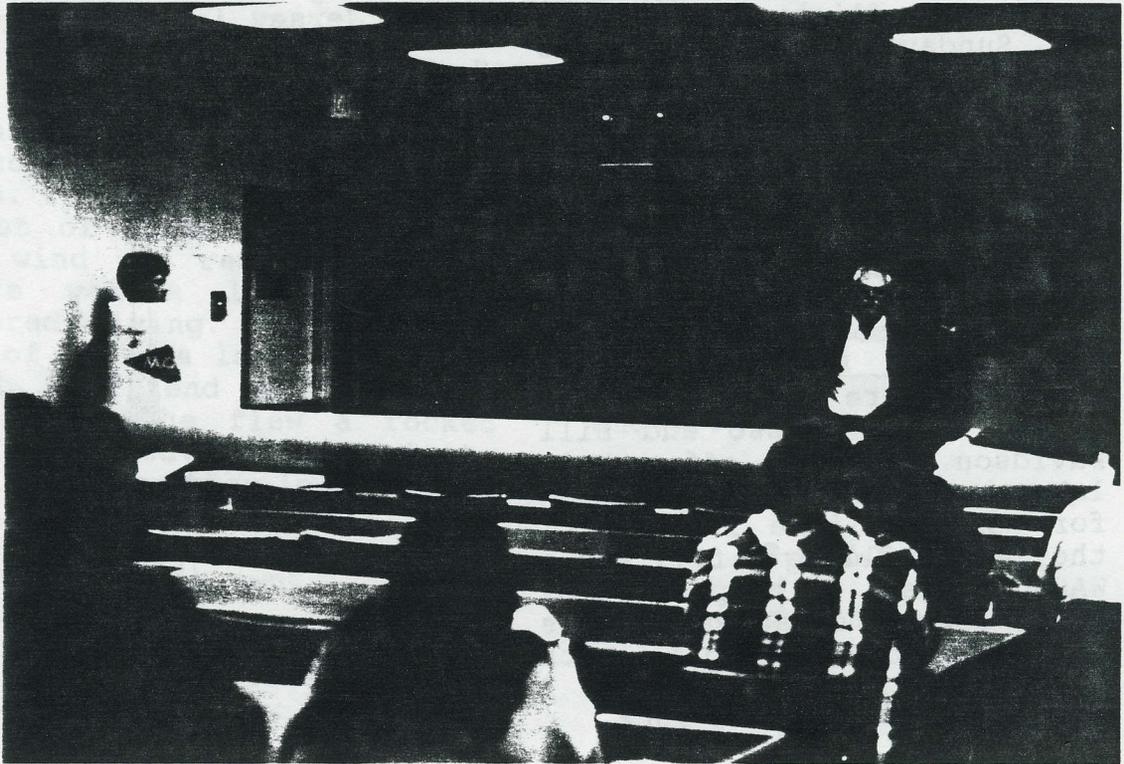
Sunday's weather was much better. Sunny, warm, with a minimal wind. A flyer, whose name I cannot remember, flew an all fiberglass Dynacom Tarantula on a full 98mm M class RMS motor. Computer projections said it flew to over 13,000 feet. It was extremely impressive. Many J and K powered rockets were flown on Sunday. More than 15 new Tripoli members were certified at this launch. In a few years, the RATS launches

could rival the Culpeper launches in attendance. I am looking forward to returning to New Jersey in the future.



RATS-1 PHOTOS

Top: Full scale WAC Corporal; Left: AMRAAM with an I211; Right, Bruiser under I500 power. Photos by Ed Miller.



THE SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY

Membership Application

Name \_\_\_\_\_ Address \_\_\_\_\_  
 Phone \_\_\_\_\_ Age \_\_\_\_\_ Date of Birth \_\_\_\_\_  
 NAR # \_\_\_\_\_ Tripoli # \_\_\_\_\_

I have been flying rockets for \_\_\_\_\_ years. I have not yet flown a model rocket \_\_\_\_\_.

DUES: 18 years of age or older: \$10 per year.

15,16,17 years of age: \$7 per year.

14 and under: \$5 per year

Family Plan: Oldest member joins at full price, all other family members 1/2 price; one issue of the Countdown per family.

Return this form to: SPAAR, PO Box 127, Reamstown, PA 17567.  
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THE NATIONAL ASSOCIATION  
OF ROCKETRY

For more information on the NAR, write:

NAR Headquarters  
PO Box 177  
Altoona, WI 54720  
1-800-262-4872

TRIPOLI ROCKETRY ASSOCIATION

[HIGH POWER ROCKETRY]

For more information on the TRA, write:

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PO Box 339  
Kenner, LA 70063-0339

