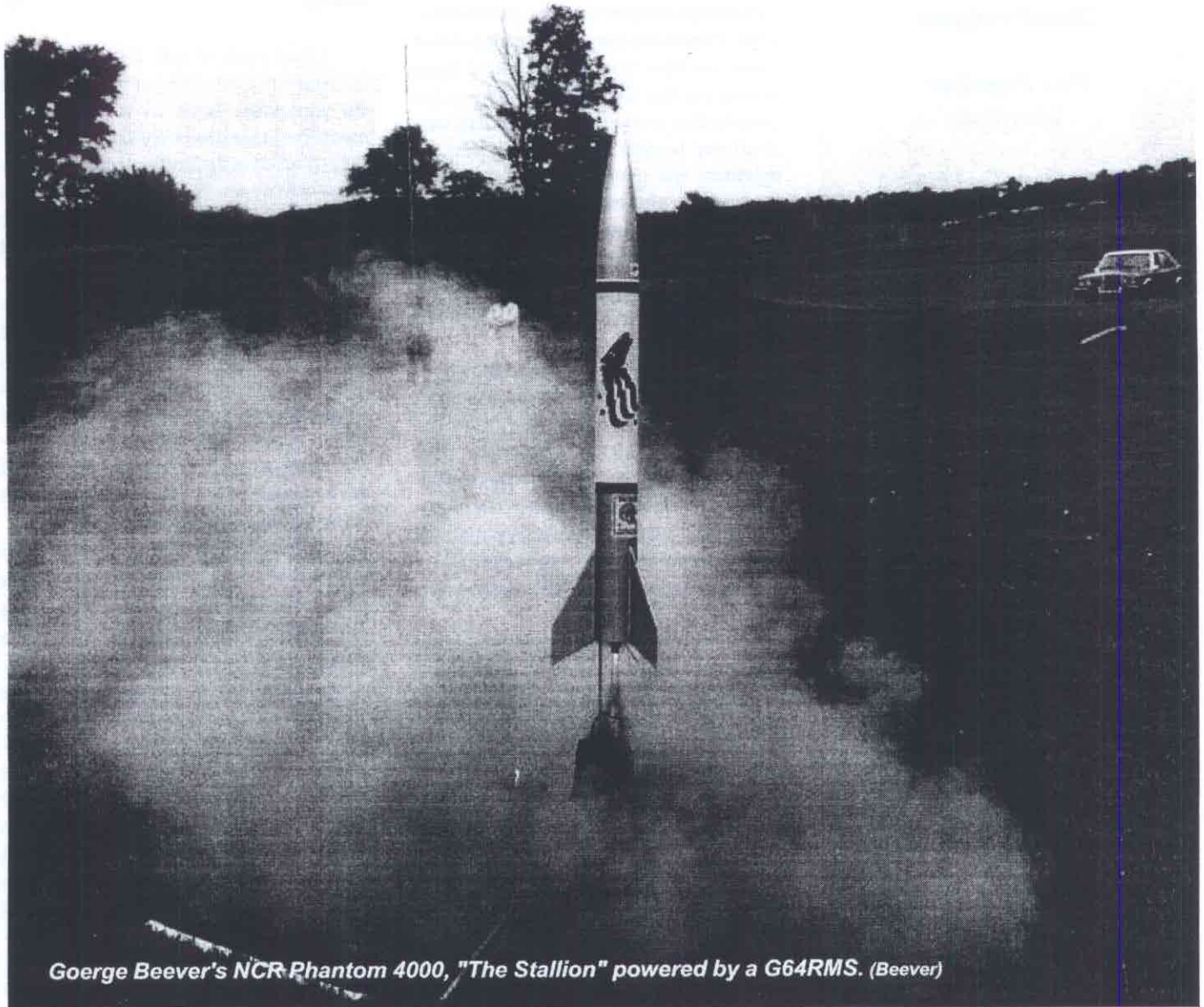


# COUNTDOWN

Official Newsletter of SPAAR  
THE SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY



Goerge Beever's NCR Phantom 4000, "The Stallion" powered by a G64RMS. (Beever)

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# COUNTDOWN

Volume 9, Issue 5  
September/October 1996

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**COUNTDOWN** is the newsletter of SPAAR, the Southern Pennsylvania Area Association of Rocketry, NAR Section #503, as well as Tripoli Susquehanna #71. **COUNTDOWN** is published 6 times a year for the benefit of SPAAR club members. Any information contained in **COUNTDOWN** may be used as long as proper credit is given. Please address all correspondence to:

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## The Editors' Corner

For some of our new members, this may be your first issue of the **COUNTDOWN**. For most, however, you've been reading this for some time. By now, you've noticed something different, a new look, a new format, photos, a new masthead. A little explanation is in order.

Yours truly has been doing the newsletter since the club's founding in 1988. I've always enjoyed working on the newsletter. Especially during those times when I may not have been a very active flyer, putting out the **COUNTDOWN** was my contribution to the club. It was also very gratifying to get feedback from SPAAR members and newsletter editors around the country, who enjoyed the work we put into it. In 1993, the **COUNTDOWN** was judged as the runner-up for the NAR's Newsletter Award, one of the few times that being in second place is nothing to be ashamed about.

However, with the recent growth of SPAAR, a one man operation just can't cut it. For a club like SPAAR a timely and informative newsletter is essential. With increasing work and family responsibilities, I found little free time to write, copy, staple, fold, stamp, address, and mail the newsletter in anything that looked like a regular schedule. SPAAR deserves better.

So, at a recent meeting, I announced that a new newsletter person was needed (to which Dan Weinhold replied "didn't you try this before?"). Shortly thereafter, Glenn Feveryear hooked me up with Randy Brust, one of our newer members, who had expressed interest in this type of thing. Hmmmm..... a phone call showed that Randy's area of interest is in layout; I enjoy writing. Sounds like a team to me. Randy showed us an example of what he could do computer-wise with a back issue of the **COUNTDOWN** at a recent launch. Lots of ooohs and aaahs. The result is what you see here. A more modern-looking, easier to read, easier to produce, more professional looking **COUNTDOWN**. And most important, hopefully a more timely **COUNTDOWN**. There may be a few snags and bugs to work out, but we'll get there. As an added bonus to the newsletter staff, Bill Rhoat,

one of those original 1988 members, has also stepped forward to help out with newsletter production. Don't worry Bill, there is plenty to do. Thanks.

So even though the good old space shuttle logo has been retired after six years, we look forward to a better newsletter. And, as always, your contributions are needed. Plans, articles, whatever. Let us hear from you.

## George

I just want to add a quick note to introduce myself to the club members. I am your basic BAR. I built and flew model rockets religiously as a kid and was reintroduced to the hobby about 9 months ago when my son (8 years old) received an Estes Alpha kit for a birthday present. We built and flew the rocket and I was hooked again!

As George said, I recently volunteered to help out with the newsletter and received some samples of past issues from him. I was pretty impressed with the work George has done, especially for a one man show. I think that between George's prolific writing and the computer tools that I have available, we can produce an even better **COUNTDOWN** for the club.

One change that I want to make is to have lots of pictures to go with the various articles. I think this makes an interesting newsletter and club members should get a kick out of seeing their creations in print. I'll try to start taking pictures at launches but I really need your help with this. If you have any good pictures, it would be great if you could send them to me (address below). If you could label them with the type of rocket, the owner, and what launch they are from it would really be great! All pictures will be scanned and returned to the sender unharmed. Remember, not every picture will make it into the newsletter, but we'll try to use as many as we can. For the next issue, we'll need pictures starting with the September launch.

If you have any questions or comments regarding the newsletter, please let us know.

## Randy Brust

6205 Domarray St.  
Coopersburg, PA. 18036

## Section News Notes

by George Beever

**Do Not BYOLE:** Whaaa? In the past, the club put away its launch system from November to April, and everyone brought their own launch system to launches. This worked OK when only 5 to 10 flyers could be expected to show up during those times. Not so anymore. Last winter, the "Misfire Alley" system was an accident waiting to happen. So, we will be using the club launch system year 'round (By the way, it stands for Bring Your ...oh, you get the idea.).

**HPR Launch System:** SPAAR Tripoli Susquehanna has asked for a price quote from VBR Custom for a launch system to support high power rockets. The specifications, as submitted, are:

1. Continuity check at the pad.
2. Capability of handling at least 4 pads.
3. Feature a relay system.
4. A minimum of 500 feet of cord distance from controller to pad.
5. Arming light at controller.
6. Removable key switch at panel, to allow for positive disarming control.
7. Firing switch to be of momentary toggle switch type, normally open.
8. Panel enclosure should be of painted aluminum.

Vaughn Bros. has acknowledged receipt of the specs, and will get back to us shortly.

The decision to purchase a commercially built HPR launch system was made at the August club meeting, with the specs being decided on at the September meeting. This system is not intended to replace the existing equipment that is used for model rockets, but to work in conjunction with it.

In addition, efforts are being made to locate a site to hold a High Power launch sponsored by SPAAR/Tripoli Susquehanna in the spring of 1997. Locations in

Lebanon and Chester Counties are being explored. The long range goal is to host wavered HPR launches in the spring and fall of each year. And you say nothing of interest happens at club meetings.

**Speaking of the HPR Launch System:** Even though an HPR Launch System is needed and will be money well spent, it still means bucks from the General Fund. With a current balance of about \$700, we're in good shape. But Roger Dwyer came up with a good idea. Roger went rooting around his rocket closet, and came up with some goodies which he donated to the club. We've decided to raffle these and any other donated items off to raise funds to help offset the cost of the HPR system. Here's a list of what Roger donated:

1. One QCR Rotaroc-B helicopter duration model, built, doinked but fixable.
2. One QCR Rotaroc-D for D or E 24mm motors, also built and doinked but fixable.
3. One 1/2A Super-Roc contest model, built with Apogee parts.
4. One QCR D Rotaroc kit, #97.
5. One QCR 1/2A-A Rotaroc kit, #95.
6. One QCR 1/4A Rocket-Glider kit, with sliding wings, #14.
7. One QCR 1/4A-1/2A Boost/Glider kit, #35.
8. One QCR Moving Piston Kit, #400-410.
9. One Edmunds Canard Rocket/Glider, built, for 13mm motors.
10. One "Bag 'O Goodies", containing streamer material, wadding, parachute material, plus various odds 'n ends.
11. One 1/72-scale Monogram plastic kit of a B-26 bomber.
12. One 1/72-scale Revell kit of a Junkers JU-88C Night Fighter.

13. One Revell plastic model kit of a harbor tug.

14. And last but certainly not least, a 1/96-scale Revell plastic Saturn V display model, built. This model is not adaptable for flight, but since it dates from 1969, it's a real collectors item.

We are asking all members to look through their hobby stuff for things to donate for this raffle. Almost anything you can think of is welcome, such as kits, parts, motors (both new and old "collectable"), decals, photos, doo-dads, whatever. The Grand Exalted Keeper of the Junk is me, George Beever. Raffle tickets will be \$1.00, that's all. They can be purchased at any SPAAR event. Don't forget to write your name on the back of the tickets! The target date for the drawing is sometime in spring. As the jackpot gets larger, we will update the list in future issues of the Countdown. Thanks!

**Safety Issues:** A concern about safety has been raised at recent club meetings and launches, regarding the use of high powered rocket motors by younger members, or by those new to the hobby. The issue has many sides to it, but we all agree that safety, and SPAAR's excellent record of it, are paramount. At the same time, we want to foster a climate that allows the new and younger members to learn more about the hobby, while not compromising safety. In addition, a restrictive atmosphere certainly must be avoided, but due regard must be made to the rules and regulations as set forth by our parent organizations, the National Association of Rocketry, and the Tripoli Rocketry Association. The regulations set by the NAR and TRA have a direct bearing on the liability insurance that SPAAR has, a requirement to fly as a club almost anywhere, in particular Cocaico High School. Now throw in the fact that various governmental regulatory agencies all have a say in the hobby, you can understand where there is some confusion as to what we can and cannot do.

After much discussion at recent meetings, contacts were made with both the NAR and TRA Headquarters, seeking direction and advice. The following is the



recommended course of action for SPAAR and its members, at SPAAR launches:

*"By regulation of the Consumer Product Safety Commission, and at the direction of the National Association of Rocketry and the Tripoli Rocketry Association, Inc., no one under the age of 18 years of age will be permitted to fly a rocket containing a "G" class motor. All rocket motors will be either NAR or TRA certified motors, as listed in the appropriate organization's Motor Certification List. All motors are subject to verification at check-in".*

Actually none of this is new or earth shattering. It is simply putting into words what has been known for a long time. Up to date Motor Certification Lists are available electronically, and we will be pub-

lishing lists, hopefully in the next issue. Again, the use of certified-only motors is nothing new, and in reality very few motors that are commercially available are not either NAR or TRA certified. Some of the Aerotech reloads are not, so that should be kept in mind.

Again, the idea here is not to restrict or ruin anyone's fun. But the group has to be considered as a whole.

As for our members who are new to the hobby and are just learning what it is all about, we encourage you to ask questions. Experience is one of SPAAR's best resources, and if anyone blows off your question, or acts like your question is "dumb", he's a jerk. Period. Read anything you can get your hands on about model or high power rocketry. In addi-

tion, some videotapes are going to be made available for use through Mountainside Hobbies. These tapes are of workshops that were done in past years, and they cover topics such as High Power Model Rocketry Construction Techniques, Advanced Finishing Techniques, and Competition Rocketry. They contain valuable information that is of interest.

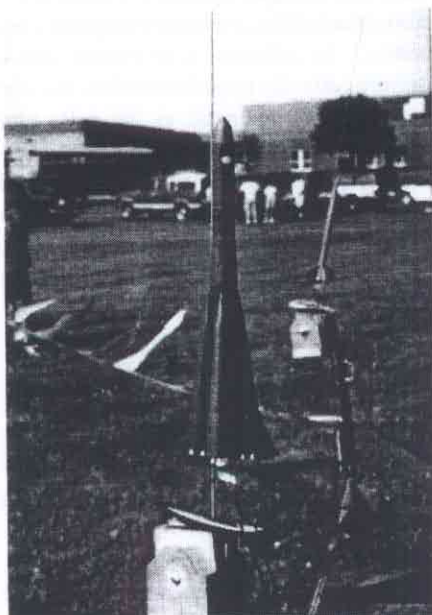
Finally, for those new to the club or to rocketry, there is the SPAARTREK Program, outlined in the last issue. This program is designed to teach the basics, as well as to attain performance goals. It's certainly worth a look. Contact program coordinator Bill Rhoat at 717-733-6915 for more details. ■

## SPAAR Sport Launch

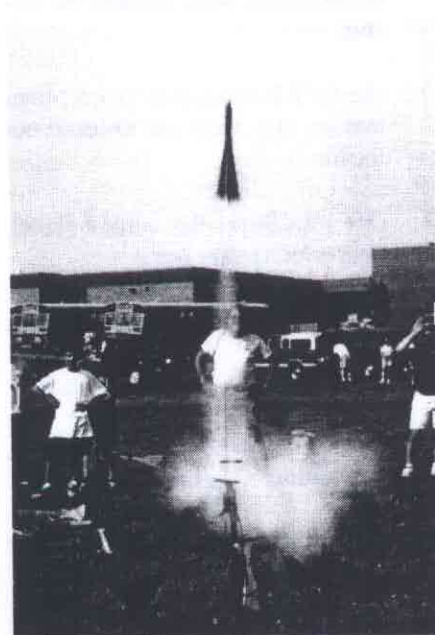
July 14, 1996

by George Beever

The real challenge of the July 14 Sport Launch was threefold: a summer recreation soccer league (sorry soccer parents, but this is getting ridiculous), the breeze (odd for a Pennsylvania summer afternoon), and the school roof. Unfortunately, several rockets fell victim to the last two.



**Stephen Knight's 1/100 scale Vostok on the pad. (Beever)**

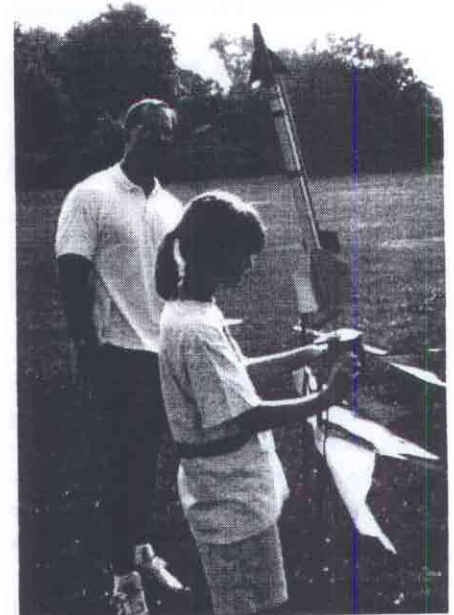


**The Vostok takes to the air. (Beever)**

The bad news was that Guy Destafano lost a Mountainside Hobbies ADR 4.0, flown on an Aerotech G80, to the corn fields. Welcome to the dreaded "Denver void" Guy. Bill Rhoat, George Beever, John Yost, and possibly Frank Sombers lost rockets to the roof. Other modelers went into cornfields looking for rockets, some never to be seen again. The rockets, that is. Well, at least I think that we got all of the modelers back! Anyway, a word to some of the newer members: flying a

Cocalico during the summer requires some forethought and luck. With corn fields on three sides, you have to be a bit flexible in motor and model selection. In other words, depending on the breeze, leave the big ones in the car. This is a lesson that many of us who have flown there in past years have found out to our mutual sorrows.

There were some neat flights, though. One of the flights that ended up on the roof



**Courtney Sombers and her father Frank, as she prepares to fly her Estes AIM-9 Sidewinder. (Beever)**

was John Yost's D-powered Boost/Glider. Not too many of these are flown, and even fewer successfully. John's model boosted out well, transitioned perfectly, had a great flight, the dethermalizer worked as planned, and well, you know the rest. Roof job.

Stephen Knight, another new mem-

ber (just when is one no longer considered a "new member"?) flew a Russian Vostok, built from plans published in Sport Rocketry. The little bugger weighed a ton with all of its nose weight, but it flew great on a C6. Rick Snader flew "Taz" on a G80 for a good flight. Sorta looks like an ADR 4.0 on steroids. Frank Sombers' daughter

Courtney flew a very nice Estes AIM-9 Sidewinder on C6-7s.

The "Loudest and Neatest Flight of the Day" award went to Guy Destafano, who flew a LOC Legacy on an Aerotech G40-10 White Lightning. A real nice flight. More amazing, he actually recovered the model, despite the "Void".

### Flight Log

| #  | Flyer            | Model         | Manufacturer | Motors              | Result      |
|----|------------------|---------------|--------------|---------------------|-------------|
| 1  | Mike Snader      | Skywinder     | Estes        | Estes C6-5          | Good Flight |
| 2  | Mark Beever      | Alpha III     | Estes        | Estes A8-3          | Good Flight |
| 3  | Mark Beever      | Athena        | Estes        | Estes A8-3          | Good Flight |
| 4  | Mark Beever      | Turbo Copter  | Estes        | Estes A8-3          | Good Flight |
| 5  | Courtney Sombers | Sidewinder    | Estes        | Estes C6-7          | Good Flight |
| 6  | Courtney Sombers | Sidewinder    | Estes        | Estes C6-7          | Good Flight |
| 7  | Jesse Stauffer   | Cheetah       | Aerotech     | Aerotech E15-7W     | Good Flight |
| 8  | Jesse Stauffer   | Phantom 4000  | NCR          | Aerotech F25-4W     | Good Flight |
| 9  | Bill Rhoat       | Der V-3       | Estes        | Estes D12-5         | Roof Shot   |
| 10 | Rick Snader      | Skywinder     | Estes        | Estes B6-4          | Good Flight |
| 11 | Rick Snader      | Sparrow       | Estes        | Estes A10-3         | Good Flight |
| 12 | Rick Snader      | Sparrow       | Estes        | Estes A10-3         | Good Flight |
| 13 | Rick Snader      | Barracuda     | Aerotech     | Aerotech E15-7W     | Good Flight |
| 14 | Rick Snader      | SR-71         | Estes        | Estes C6-5          | Good Flight |
| 15 | Rick Snader      | Warthog       | Aerotech     | Aerotech E15-4W     | Good Flight |
| 16 | Rick Snader      | TAZ           | Scratch      | Aerotech G80-4T     | Good Flight |
| 17 | Rick Snader      | Mosquito      | Estes        | Estes A10-3         | Lost?       |
| 18 | Guy Destafano    | Legacy        | LOC          | Aerotech G40-10W    | Good Flight |
| 19 | Guy Destafano    | ADR 4.0       | Mountainside | Aerotech G80-7T     | Corn Seeker |
| 20 | Guy Destafano    | Broadsword    | Estes        | Aerotech E30-4T     | Good Flight |
| 21 | Frank Sombers    | Arrow         | Scratch      | Estes D12-5         | Good Flight |
| 22 | Frank Sombers    | SR-71         | Estes        | Estes C6-5          | Good Flight |
| 23 | Frank Sombers    | SR-71         | Estes        | Estes C6-5          | Good Flight |
| 24 | Frank Sombers    | V-2           | Mountainside | Aerotech E30-7T     | Good Flight |
| 25 | Frank Sombers    | V-2           | Mountainside | Aerotech E30-7T     | Unknown     |
| 26 | John Yost        | Rota-Roc      | Scratch      | Estes B4-2          | Prang       |
| 27 | John Yost        | D-Light D B/G | Scratch      | Estes D12-3         | GF-Roof Job |
| 28 | Brian Royer      | Poppy         | Scratch      | Estes C6-7(3)       | Good Flight |
| 29 | Brian Royer      | Poppy         | Scratch      | Estes B6-6(3)       | Good Flight |
| 30 | Brian Royer      | Scorcher      | Scratch      | Estes D12-7         | Good Flight |
| 31 | Brian Royer      | Big Bertha    | Estes        | Estes C6-5          | Good Flight |
| 32 | Brian Royer      | Nice Machine  | Estes        | Estes D12-7         | Good Flight |
| 33 | Brian Royer      | Bailout       | Estes        | Estes C6-5          | Good Flight |
| 34 | Brian Royer      | Scorcher      | Scratch      | Aerotech F14-4J     | Good Flight |
| 35 | Stephen Knight   | Wizard        | Estes        | Estes B6-4          | Good Flight |
| 36 | Stephen Knight   | Vostok        | Scratch      | Estes C6-5          | Good Flight |
| 37 | Stephen Knight   | A-3           | Scratch      | Estes A10-3         | Good Flight |
| 38 | Rick Hackman     | XR-54         | Scratch      | Estes D12-7         | Good Flight |
| 39 | Rick Hackman     | F3A Tiger     | Scratch      | Estes D12-5         | Good Flight |
| 40 | Rick Hackman     | XR-76         | Scratch      | Estes D12-5         | Good Flight |
| 41 | RiCk Hackman     | XR-77         | Scratch      | Estes B6-4          | Good Flight |
| 42 | Roger Dwyer      | Flying Saucer | Scratch      | Estes D12-0         | Good Flight |
| 43 | Roger Dwyer      | Sparrow Hawk  | Thoy         | Aerotech F40-7W RMS | Good Flight |



|    |               |             |              |                     |             |
|----|---------------|-------------|--------------|---------------------|-------------|
| 44 | George Beever | Patriot     | Estes        | Estes C6-5          | Roof Shot   |
| 45 | Shaun Bender  | Mini Cobra  | Estes        | Estes A10-3         | Good Flight |
| 46 | Shaun Bender  | Delta V     | Scratch      | Estes C6-7          | Unstable    |
| 47 | Shaun Bender  | Yankee      | Estes        | Estes A8-3          | Good Flight |
| 48 | Shaun Bender  | Wizard      | Estes        | Estes C6-3          | Good Flight |
| 49 | Jeremy Ritter | Space Racer | Estes        | Estes A8-3          | Good Flight |
| 50 | Jeremy Ritter | Space Racer | Estes        | Estes C6-7          | Good Flight |
| 51 | Jeremy Ritter | Space Racer | Estes        | Estes B6-4          | Good Flight |
| 52 | Jeremy Ritter | Space Racer | Estes        | Estes C6-7          | Good Flight |
| 53 | Jeremy Ritter | Space Racer | Estes        | Estes C6-3          | Good Flight |
| 54 | Jeremy Ritter | Bad Dream   | Scratch      | Estes C6-3          | Good Flight |
| 55 | Jeremy Ritter | Space Racer | Estes        | Estes B6-4          | Good Flight |
| 55 | Brent Rowe    | AGM-78      | Cluster R    | Aerotech F40-7W RMS | Good Flight |
| 56 | Brent Rowe    | V-2         | Mountainside | Aerotech F14-6J     | Unknown     |

### Launch Statistics

Number of flyers: 17

Weather: Breezy, warm

### Models Flown:

|                      |    |
|----------------------|----|
| Estes                | 21 |
| Scratchbuilt         | 15 |
| Aerotech             | 3  |
| Mountainside Hobbies | 3  |
| Cluster R/Thoy       | 2  |
| LOC/Precision        | 1  |
| North Coast Rocketry | 1  |

### Motor Usage:

|                     |    |
|---------------------|----|
| Estes               | 46 |
| Aerotech Single Use | 12 |
| Aerotech RMS        | 2  |

### Impulse Distribution:

|   |    |
|---|----|
| A | 10 |
| B | 9  |
| C | 18 |
| D | 9  |
| E | 6  |
| F | 5  |
| G | 3  |

## SPAAR Sport Launch

August 4, 1996

by George Beever

At least once a year, there is one Sport Launch that attracts a larger than expected crowd, where people seem to come out of the woodwork, and the question of "uh, who is that guy?" is on everyone's lips. So it was on August 4. It could also have been called "The Return Of Dr. Bob & Family". Bob and Carla Balogh were SPAAR members in the early 90s. Dr. Bob always flew an interesting assortment of models. For example, there was an Estes V-2 powered by an Aerotech E6, which had a burn time of about 12 minutes or so. Great flight. And then there was a certain two-stage composite motor flight that staged, well, let's just say that the swine at the local pig farm have never been the same. They actually went screaming into the night when they heard Bob was back. OK, not really, but the Baloghs had left us for a while, to our dismay. Two kids later,

they're back. All kidding aside, it's great to see the Baloghs again. Chris Balogh flew an Estes Magnum that dad modified into a 3-stager. Despite the terror that it caused among the local oinkers, it put in a great flight. Daughter Laurel had two nice flights with an Estes Patriot. Mark Beever



Steve Knight's Estes Mercury Atlas lifting off. (Hackman)

flew his Estes Manta twice, but the little stinker never seems to work right. The glider that is, not Mark. Gerard Hertzog was a brave young fellow and flew an Estes Hercules on a CE-0/C6-7 combination for a nice flight. Courtney Sombers got two nice flights out of her Estes Sidewinder on C6s.

As for the older folks, Guy Destefano certainly has some interestingly named scratch built models. One is called "050292"; that's his marriage anniversary. Makes sense. Another is "Juice 6959ICWU". I have no clue on that one. They fly nice, though. Matt Zimmerman has an interesting model he calls "John Deere". I'm not sure if it started life as a kit or if it's a scratch build, but it's painted in John Deere green and yellow. Sometimes it flies with a miniature farmer that has his own parachute. The whole thing is pretty cool.

Ed Miller had some old favorites to fly. Ed likes things that go fast. Take for example his scratch built "Tekyon" with a



Vulcan G200. And then there is a personal favorite, the three engine cluster "Hyperon". It takes three 29mm motors. Ed's choice was three Flight Systems F100's. Talk about bravery. But anyway, the Hyperon is a real neck-jerker. Ed also flew the "Super two-stage Big Bertha", which is a "slightly modified" version of the Super Big B. Ed added a drop stage, which is powered by 3 Estes D12-0 motors. These in turn ignite an Aerotech E30 sustainer. Neat flight.



**The Mercury Atlas under 'chutes.** (Hackman)

Bill Jordan flew a beautifully finished Estes Jayhawk on an Aerotech E15 White Lightning motor for an awesome flight. Nice job, Bill. As impressive was his LOC Legacy on a G40-10WL. That model really moves out on that motor. Bill also flew an upscale "Mosquito X5". The Mosquito is a favorite subject for upscaling. It also flew well, on an Estes D12-5. I'll bet those plans would look real nifty in this newsletter. Hint, hint. (I have no pride).

Another interesting flight was John Balmer's scratchbuilt Astrocam Carrier. A bit more streamlined than the stock Estes launch vehicle, it did appear to gain more altitude with a straighter boost.

It wasn't just the Balogh kids that flew rockets, either. Dr. Bob flew a vintage Estes Honest John (the one from the 80s), an Estes Space Shuttle, as well as his Estes Astrocam (twice). All were good flights.

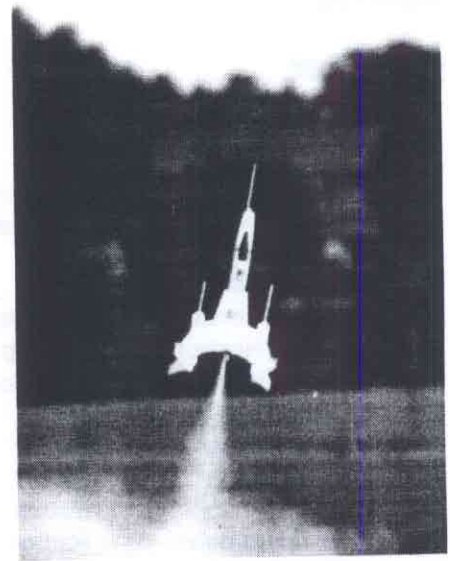
Rick Snader brought out his entire Aerotech fleet, or at least a good portion of it. The Mustang, Arreaux, and Astrobee-D all flew, as well as the scratch built "Taz

Mod". This is the big Taz, slightly shorter. It flew great on a G40. Rick and family also flew their Estes Skywinder a number of times, and it worked each time! I think its the only one that ever did.

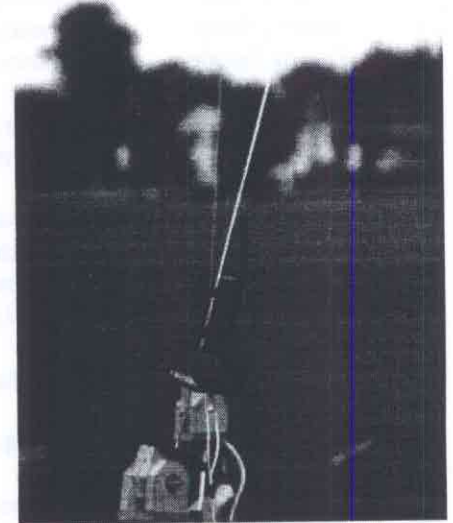
The Baloghs weren't the only "old" members to make a return. Bob Fuld and family were there, flying their Estes kits.

New members were there in force, too. Steve Knight showed that his interest appears to primarily be in the area of scale models. He flew a scratch built model of the German "A-3", a predecessor of the V-2, a Launch Pad kit of an Italian missile called the "Folgore", as well as a well-built Mercury-Atlas from the Estes kit. Poor Steve. He really agonized over flying the Atlas. We all know the feeling: "...gee, I've just spent a zillion hours building this, and I know I have to fly it sooner or later, but I don't think I can handle it if it does a power prang into the ground, especially in front of all these people..." Of course, supportive comments like, "You've never flown it before? Ever? Whoo boy...", or "Well, mine flew OK...I guess", or "What kind of glue did you use? (fill in unsuspecting modeler's answer here) Oh, man you should have used (whatever the modeler did **not** use). I suppose it will hold together..." In spite of all this, Steve's model turned in a great flight (much to his relief!). Paul Lorah flew an Estes Mean Machine, first on a D12, then on an Aerotech E15. Both flights were great. Ted Jones' LOC Aura also flew great on an Estes D12, so for flight #2 he upped the power with an Aerotech E16 reload. Nice flights. Another new member, LeRoy Bonawitz, really seems to like his Mountainside Hobbies 2.6" V-2. He flew it four times, all on D12-3s, for what appeared to be good flights. An "old" member (in terms of years with the club, not age!), Roger Dwyer, flew a real nice Estes Titan IIIIE. Powered by a D12-3, it was a very nice flight.

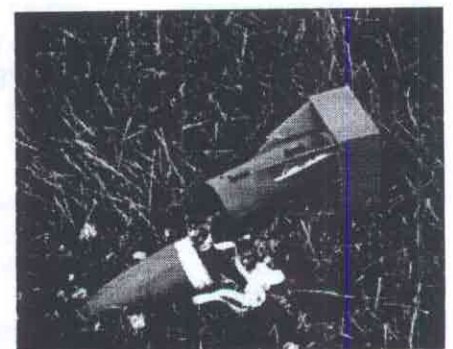
The really neat thing about this launch was the way in which just about everyone pitched in with the work that goes along with a launch. There was plenty of help setting up and tearing down the range equipment, as well as with range duty and cleanup afterwards. This is what is needed for a successful launch. Great job everybody!



**Bob Fuld's Estes Strikefighter is off on another mission.** (Hackman)



**Rick Hackman's scratchbuilt XR-79 pre-flight.** (Hackman)



**Rick Hackman's XR-79 post-flight. OUCH!** (Hackman)

## Flight Log

| #  | <u>Flyer</u>     | <u>Model</u>          | <u>Manufacturer</u> | <u>Motors</u>             | <u>Result</u> |
|----|------------------|-----------------------|---------------------|---------------------------|---------------|
| 1  | Courtney Sombers | AIM-9                 | Estes               | Estes C6-7                | Good Flight   |
| 2  | Courtney Sombers | AIM-9                 | Estes               | Estes C6-5                | Good Flight   |
| 3  | Gerard Hertzog   | Little Joe II         | Estes               | Estes A10-3               | Good Flight   |
| 4  | Gerard Hertzog   | Hercules              | Estes               | Estes C6-0/C6-7           | Good Flight   |
| 5  | Gerard Hertzog   | Icarus                | Quest               | Estes B4-4                | Good Flight   |
| 6  | Gerard Hertzog   | IRIS                  | Estes               | Estes C6-5                | Good Flight   |
| 7  | Gerard Hertzog   | Hercules              | Estes               | Estes C6-0/C6-7           | Good Flight   |
| 8  | Gerard Hertzog   | Bullpup 12D           | Estes               | Estes C6-5                | Good Flight   |
| 9  | Gerard Hertzog   | Little Joe II         | Estes               | Estes A10-3               | Good Flight   |
| 10 | Mark Beever      | Manta                 | Estes               | Estes B6-2                | Good Flight   |
| 11 | Mark Beever      | Bandit                | Estes               | Estes B6-4                | Good Flight   |
| 12 | Mark Beever      | Manta                 | Estes               | Estes C6-5                | Good Flight   |
| 13 | Laurel Balogh    | Patriot               | Estes               | Estes B6-4                | Good Flight   |
| 14 | Laurel Balogh    | Patriot               | Estes               | Estes B6-4                | Good Flight   |
| 15 | Chris Balogh     | Magnum+               | Estes               | Estes D12-0/D12-0/C6-7    | Good Flight   |
| 16 | Dennis Lorah     | Big Bertha            | Estes               | Estes C6-5                | Prang         |
| 17 | Marie Lorah      | Apollo                | Quest               | Estes B6-4                | Good Flight   |
| 18 | Jeremy Ritter    | Hawkeye               | Estes               | Estes A10-3               | Good Flight   |
| 19 | Jeremy Ritter    | Cub                   | Scratch             | Estes C6-7                | Good Flight   |
| 20 | Jeremy Ritter    | Hawkeye               | Estes               | Estes A10-3               | Good Flight   |
| 21 | Jeremy Ritter    | Hawkeye               | Estes               | Estes A10-3               | CATO          |
| 22 | Danny Fackler    | Unknown               | Scratch             | Estes A10-3               | Good Flight   |
| 23 | Danny Fackler    | Bandit                | Estes               | Estes B4-4                | Good Flight   |
| 24 | Danny Fackler    | Hawkeye               | Estes               | Estes A10-3               | Good Flight   |
| 25 | Danny Fackler    | Mini Patriot          | Estes               | Estes A10-3               | Good Flight   |
| 26 | Danny Fackler    | IRIS                  | Estes               | Estes C6-5                | Good Flight   |
| 27 | Rob Nye          | Commanche-3           | Estes               | Estes D12-0/C6-0/A8-3     | Good Flight   |
| 28 | John Balmer      | Astrocarn Carrier     | Scratch             | Estes C6-7                | Good Flight   |
| 29 | Brian Royer      | Sparrow Hawk          | Thoy                | Aerotech F52-8T RMS       | No chute      |
| 30 | Brian Royer      | Nice Machine          | Estes               | Aerotech E30-7T           | Good Flight   |
| 31 | Brian Royer      | Poppy                 | Scratch             | Estes C6-7 (3)            | Good Flight   |
| 32 | Brian Royer      | Scorcher              | Scratch             | Aerotech F40-7W RMS       | Unknown       |
| 33 | Brian Royer      | BAR-I                 | Scratch             | Aerotech G64-4W RMS       | Unknown       |
| 34 | Brian Royer      | Sky Ripper            | Scratch             | Aerotech G64-4W RMS       | Good Flight   |
| 35 | Brian Royer      | Poppy                 | Scratch             | Estes C6-7 (3)            | Good Flight   |
| 36 | Ed Miller        | Hershey Kiss          | Scratch             | Aerotech G64-4W RMS       | Good Flight   |
| 37 | Ed Miller        | Hyperon               | Scratch             | FSI F100-8 (3)            | Good Flight   |
| 38 | Ed Miller        | Tekyon                | Scratch             | Vulcan G200-5             | Good Flight   |
| 39 | Ed Miller        | Super 2-st Big Bertha | Scratch             | Estes D12-0 (3)/AT E30-4T | Good Flight   |
| 40 | Rick Hackman     | XR-82                 | Scratch             | Estes D12-5               | Unknown       |
| 41 | Rick Hackman     | Turbo Twister         | Scratch             | Estes D12-5               | Good Flight   |
| 42 | Rick Hackman     | XR-77B                | Scratch             | Estes D12-5               | Good Flight   |
| 43 | Rick Hackman     | XR-78                 | Scratch             | Estes A8-3                | Unknown       |
| 44 | Rick Hackman     | XR-79                 | Scratch             | Estes D12-5               | Unstable      |
| 45 | Rick Hackman     | XR-81                 | Scratch             | Apogee 1/2A3-4            | Unknown       |
| 46 | Bill Jordan      | Jayhawk               | Estes               | Aerotech E15-4W           | Good Flight   |
| 47 | Bill Jordan      | Mosquito X 5          | Scratch             | Estes D12-5               | Good Flight   |
| 48 | Bill Jordan      | Legacy                | LOC                 | Aerotech G40-10W          | Good Flight   |
| 49 | Bill Jordan      | Ninja                 | Estes               | Estes A3-4                | Good Flight   |
| 50 | Bill Jordan      | Sparrow               | Estes               | Estes A3-4                | Good Flight   |
| 51 | Guy Destafano    | Juice 6959ICWU        | Scratch             | Aerotech G80-7T           | Good Flight   |
| 52 | Guy Deatafano    | V-2                   | Mountainside        | Aerotech G40-4W           | Separation    |



|     |                 |                  |                |                     |             |
|-----|-----------------|------------------|----------------|---------------------|-------------|
| 53  | Guy Destafano   | Phobos           | PML            | Aerotech G40-7W     | Good Flight |
| 54  | Guy Destafano   | Peacock          | Rocket R&D     | Aerotech F50-6T     | Good Flight |
| 55  | Guy Destafano   | Peacock          | Rocket R&D     | Aerotech G80-7T     | Good Flight |
| 56  | Guy Destafano   | 050292           | Scratch        | Aerotech F50-6T     | Unknown     |
| 57  | Matt Zimmerman  | PA Crude         | AAA Model Av.  | Aerotech F14-6J     | Good Flight |
| 58  | Matt Zimmerman  | John Deere       | Scratch        | Aerotech F40-4W RMS | Good Flight |
| 59  | Matt Zimmerman  | PA Crude         | AAA Model Av.  | Aerotech F14-6J     | Good Flight |
| 60  | Bob Balogh      | Space Shuttle    | Estes          | Estes C6-3          | Good Flight |
| 61  | Bob Balogh      | Actrocam         | Estes          | Estes C6-7          | Good Flight |
| 62  | Bob Balogh      | Honest John      | Estes          | Estes C6-5          | Good Flight |
| 63  | Bob Balogh      | Astrocam         | Estes          | Estes C6-7          | Good Flight |
| 64  | Rick Snader     | Skywinder        | Estes          | Estes C6-5          | Good Flight |
| 65  | Rick Snader     | Mustang          | Aerotech       | Aerotech E15-7W     | Good Flight |
| 66  | Rick Snader     | Skywinder        | Estes          | Estes C6-5          | Good Flight |
| 67  | Rick Snader     | Skywinder        | Estes          | Estes C6-5          | Good Flight |
| 68  | Rick Snader     | Skywinder        | Estes          | Estes C6-5          | Good Flight |
| 69  | Rick Snader     | Arreaux          | Aerotech       | Aerotech E15-7W     | Unknown     |
| 70  | Rick Snader     | Astrobee-D       | Aerotech       | Aerotech G80-4T     | Unknown     |
| 71  | Rick Snader     | Sparrow          | Estes          | Estes A10-3         | Good Flight |
| 72  | Rick Snader     | Taz Mod          | Scratch        | Aerotech G40-7W     | Good Flight |
| 73  | LeRoy Bonawitz  | V-2              | Mountainside   | Estes D12-3         | Good Flight |
| 74  | LeRoy Bonawitz  | V-2              | Mountainside   | Estes D12-3         | Good Flight |
| 75  | LeRoy Bonawitz  | V-2              | Mountainside   | Estes D12-3         | Unknown     |
| 76  | LeRoy Bonawitz  | V-2              | Mountainside   | Estes D12-3         | Unknown     |
| 77  | LeRoy Bonawitz  | Prime Number Exp | Estes          | Estes A10-3         | Unknown     |
| 78  | Steve Knight    | Hercules         | Estes          | Estes C6-0/C6-3     | Good Flight |
| 79  | Steve Knight    | Cub              | Scratch        | Estes A8-3          | Good Flight |
| 80  | Steve Knight    | Folgore          | The Launch Pad | Estes D12-3         | Good Flight |
| 81  | Steve Knight    | A-3              | Scratch        | Estes A10-3         | Good Flight |
| 82  | Steve Knight    | Mercury-Atlas    | Estes          | Estes D12-3         | Good Flight |
| 83  | Frank Sombers   | Arrow            | Scratch        | Estes D12-5         | Good Flight |
| 84  | Frank Sombers   | Arrow            | Scratch        | Estes D12-7         | Good Flight |
| 85  | Roger Dwyer     | Titan IIIIE      | Estes          | Estes D12-3         | Good Flight |
| 86  | Roger Dwyer     | Tornado          | Estes          | Estes B8-5          | Good Flight |
| 87  | George Beever   | Gemini-Titan     | Estes          | Estes C6-5          | Good Flight |
| 88  | George Beever   | Nike-K           | Quest          | Estes C6-5          | Good Flight |
| 89  | Bob Fuld        | Nova Payloader   | Estes          | Estes B4-4          | Good Flight |
| 90  | Bob Fuld        | Nova Payloader   | Estes          | Estes B6-4          | Good Flight |
| 91  | Bob Fuld        | Unknown          | Estes          | Estes C6-3          | No chute    |
| 92  | Bob Fuld        | Unknown          | Estes          | Estes C6-5          | Good Flight |
| 93  | Bob Fuld        | Strikefighter    | Estes          | Estes C6-5          | Good Flight |
| 94  | Bob Fuld        | Strikefighter    | Estes          | Estes C6-3          | Good Flight |
| 95  | Bob Fold        | Athena           | Estes          | Estes B6-4          | Good Flight |
| 96  | Bob Blankenship | Thunderhawk      | Estes          | Estes A3-3          | Separation  |
| 97  | Bob Blankenship | Super Shot       | Estes          | Estes B6-4          | Good Flight |
| 98  | Bob Blankenship | Super Shot       | Estes          | Estes A8-3          | Good Flight |
| 99  | Bob Blankenship | Super Shot       | Estes          | Estes A8-3          | Good Flight |
| 100 | Paul Lorah      | Super Big Bertha | Estes          | Estes D12-5         | Good Flight |
| 101 | Paul Lorah      | Mean Machine     | Estes          | Estes D12-5         | Good Flight |
| 102 | Paul Lorah      | Mean Machine     | Estes          | Aerotech E15-4W     | Good Flight |
| 103 | Paul Lorah      | Omloid           | Estes          | Estes C6-5          | Unknown     |
| 104 | Ted Jones       | No Name          | Scratch        | Estes D12-5         | Shred       |
| 105 | Ted Jones       | Aura             | LOC            | Estes D12-5         | Good Flight |
| 106 | Ted Jones       | Aura             | LOC            | Aerotech E16-7W RMS | Good Flight |

**Launch Statistics**

Number of flyers: 28

**Models Flown:**

|                      |    |
|----------------------|----|
| Estes                | 40 |
| Scratchbuilt         | 26 |
| Aerotech             | 3  |
| Quest                | 3  |
| Mountainside Hobbies | 2  |
| LOC/Precision        | 2  |
| The Launch Pad       | 1  |
| Thoy                 | 1  |
| Public Missiles      | 1  |
| Rocket R&D           | 1  |
| AAA Model Aviation   | 1  |

**Motor Usage:**

|                     |    |
|---------------------|----|
| Estes               | 93 |
| Aerotech Single Use | 18 |
| Aerotech RMS        | 7  |
| Flight Systems      | 3  |
| Vulcan              | 1  |
| Apogee              | 1  |

**Impulse Distribution:**

|      |    |
|------|----|
| 1/2A | 1  |
| A    | 19 |
| B    | 12 |
| C    | 38 |
| D    | 24 |
| E    | 7  |
| F    | 10 |
| G    | 11 |

**Battle Park '96**

Culpeper, VA., May 4-5, 1996

by Ed Miller

Mike Showalter, Brian Mayes, and Sonny Thompson team up to put on the largest launch in the Northeast every spring. This year the weather was good and many flyers came out to show off their new projects.



Roger Dwyer with his LOC/Precision Bruiser, ready for his Level 2 certification flight. (Miller)

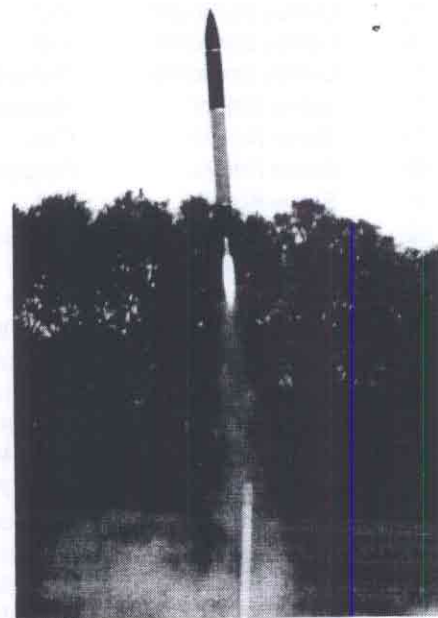
Many Tripoli Prefectures were represented. Tripoli Virginia, Tripoli Susquehanna (Roger Dwyer and Ed Miller), Tripoli Garden State, LIARS, Tripoli Connecticut, Tripoli North Carolina, and others. Bruce Kelly, Tripoli President, came all the way from Utah to attend.

Many dealers were on hand to make a buck. Ken Allen from Performance Hobbies, Ross Dunton from Magnum, Kevin Nolan from Countdown Hobbies, LOC/Precision, Pratt Hobbies, Ed LeCroix from Aerotech, and many others.

On Saturday, Roger Dwyer attempted to certify to Level 2 with his LOC/Precision Bruiser on a J800. The attempt failed because of an ejection charge that was apparently too small. The Bruiser fell from the sky on it's side, broke a fin and bent the bulkhead did not have good luck, either. His scratch built Flamethrower flew on two I160 motors but had a premature ejection at burnout, and the rocket was destroyed. Ed also flew his two-stage Quantum Leap on an I357 and an H238 combination.

Lift-off was spectacular. At staging the H238 over pressurized the lower part of the second stage. The side wall blew out, and it lost a fin. However, it continued on for a good flight and good recovery.

Sunday started off with Ed and Roger doing some expedient field repairs to the Bruiser. The Bruiser was successfully flown to give Roger his Level 2 certifica-



The Bruiser lifts off under J800 power. (Miller)

tion. Congratulations, Roger! Ed LeCroix from Aerotech was giving out a lot of free demonstration motors on Sunday. Ed Miller got to try one of them in his Falcon. The I185J worked great. Ed also flew his I-ROC on an I357 for a great flight.

It's too bad these weekends go so fast. Everyone left eagerly anticipating LDRS in South Carolina. ■

## Kit Review

### AAA Aerobee-Hi by Bill Rhoat

The Aerobee-Hi is a sport scale kit offered by AAA Model Aviation Fuels. It is available in two different scales, and is a good representation of the 1950's sounding rocket. I chose the smaller, built around a 1.6" diameter tube.

The kit includes the regular components, and uses plywood fins and a heavy duty body tube. Assembly is fairly straightforward. The only difference that I noticed from other kits is that all three centering rings are cut from a common piece, the nose cone shoulder of coupler attached to the nose, and the body antennae fairings are represented by a 1/4" wide strip of wood which must be sanded into a half round shape.

I used epoxy for almost all of the

construction, although I did use cyano to fillet the fairings and to attach the nose cone to the shoulder. The fins are attached by through-the-wall mounting, the fins being epoxied into the centering rings. I feel that they should be mounted better to the motor tube, but since the centering rings are rather wide and made of paper, the mounting may be adequate. The slots in the tube must be cut by the modeler, but I believe that this is a common practice.

The instructions are rather thorough, although as usual, the scale documentation, especially in regards to paint schemes, is a bit thin. You might want to consult *Rockets of the World*, by Peter Alway.

This model has a rather wide motor selection, due to the use of a 29mm motor mount and through-the-wall construction. I have flown the model on an Estes D12-5, and it flew fine. I recommend that F and G motors only be used on a very calm day.

In general, this is a good kit. One question I have, however, has to do with the parachute. It is a cloth one, but the modeler must tie the shroud lines on. With all the other manufacturers using sewed on shroud lines, I wonder why this one doesn't?

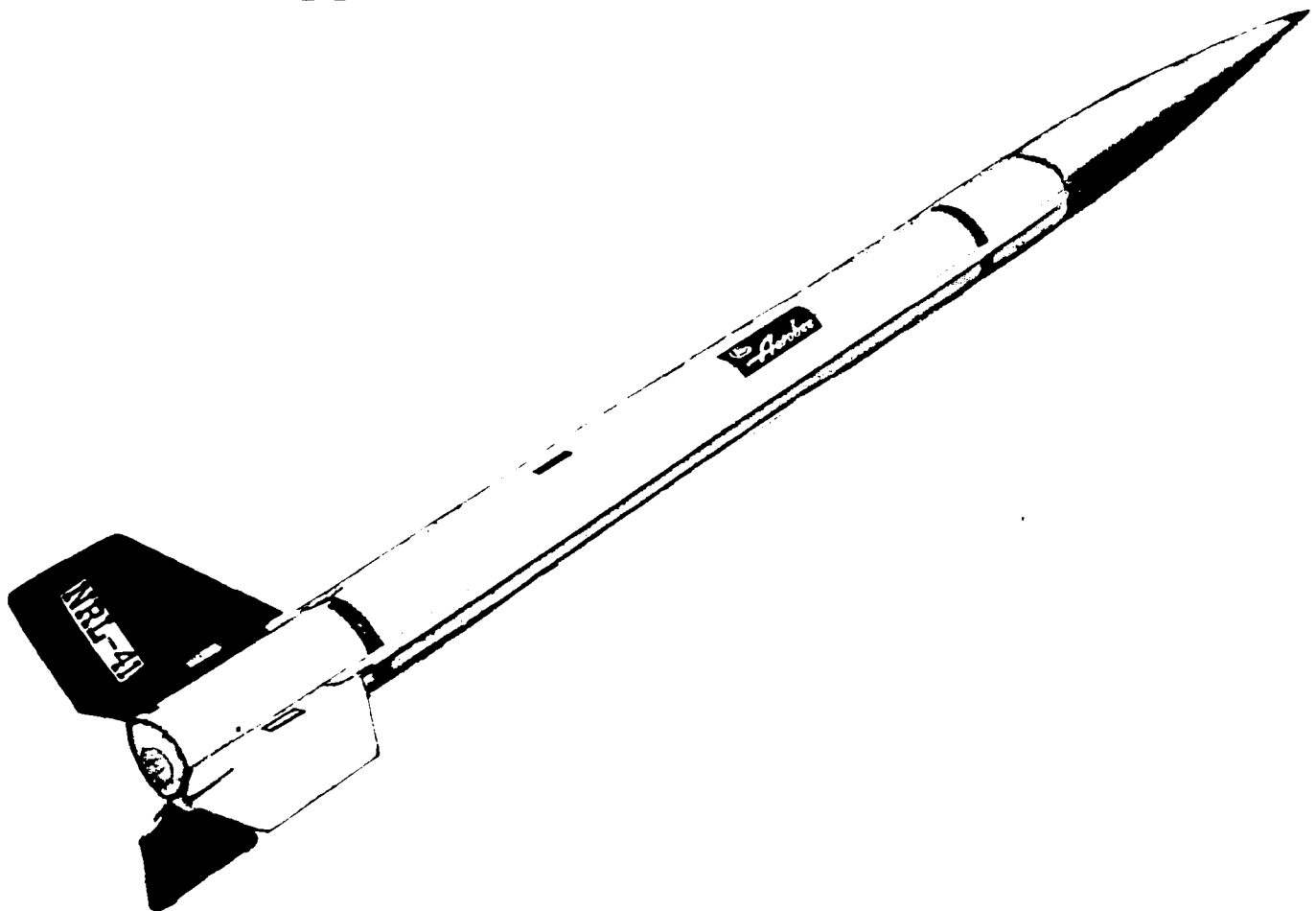
**Likes:** Through-the-wall fin mounting, heavy duty body tubes.

**Dislikes:** Parachute, centering rings cut from one piece.

**Overall recommendation:** A nice mid-power kit to put together.

[Editor's Note: AAA Model Aviation Fuels rocket kits are available through Mountainside Hobbies, Ephrata, PA. 717-733-4140] ■

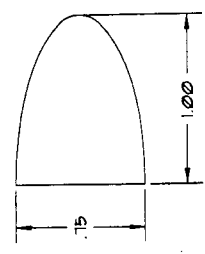
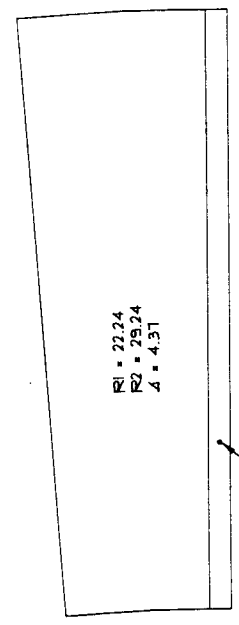
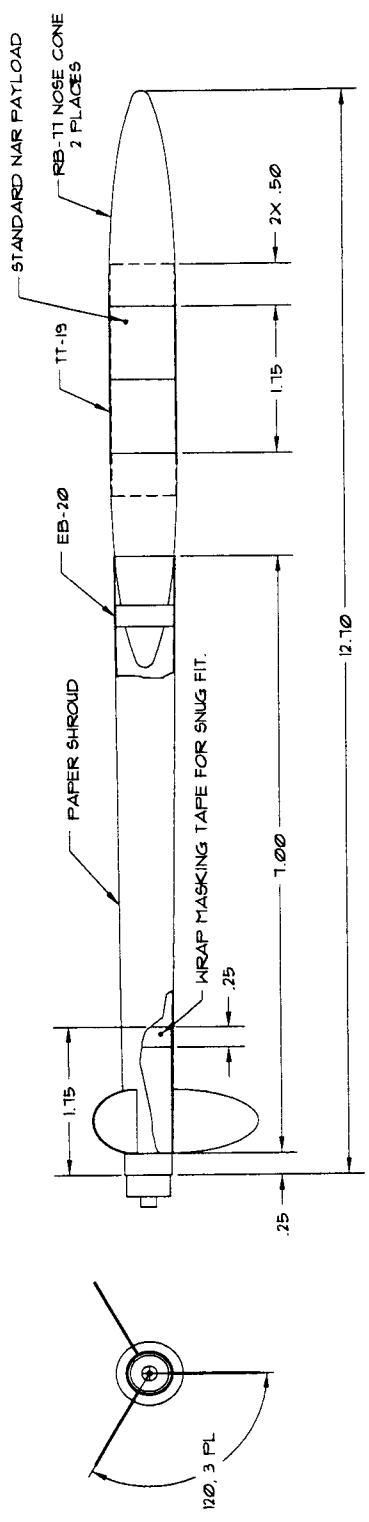
## AEROBEE-HI "NRL-41"





| REV. | DESCRIPTION | DATE | APPROVED |
|------|-------------|------|----------|
|      |             |      |          |

- NOTES:
1. TAPE NOSE CONE AND TT-19 JOINT USING TRIM MONOKOTE OR EQUIVALENT, 2 PLACES.
  2. PEEL OUTSIDE OF EB-20, AS REQUIRED, FOR A SNUG FIT INTO PAPER CONE.
  3. RECOMMENDED MOTOR: AFOGEE BT-8.
  4. WEIGHT: 315g WITHOUT MOTOR.
  5. USE 1101b X 60.00 KEVLAR FOR SHOCK LINE. SECURE USING A LOOP AROUND AFT END OF MOTOR CASING.
  6. RECOVERY DEVICE: 12.00 DIA PARACHUTE WITH SPILL HOLE.



FIN PATTERN  
 .015 THK WAFERGLASS  
 MAKE 3  
 SCALE 7/1

U.S. RECORD HOLDER  
 AT 350 METERS  
 96-9-21

|   |                      |                                     |           |
|---|----------------------|-------------------------------------|-----------|
| UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES |                      | Glass Fragments<br>Antipersonnel TM |           |
| DESIGNED BY<br>G. FEVERTEAR 96-9-22                     | SIZE / PART NO.<br>C | ISSUED BY<br>BPA131                 | REV.<br>- |
| SCALE 1/1   |                      | SHEET 1 OF 1                        |           |

IF LESS THAN 1/16 X 22  
 DRAWING IS NOT FULL SIZE.

4 3 2 1

**Official SPAAR Voting Ballot  
for 1997 Officers**

**President:** \_\_\_\_\_ Dale Green  
\_\_\_\_\_ Rick Hackman  
\_\_\_\_\_ John Yost  
\_\_\_\_\_ Other \_\_\_\_\_

**Member-at-Large:** \_\_\_\_\_ Mark Kamide  
\_\_\_\_\_ Bill Rhoat  
\_\_\_\_\_ Brian Royer  
\_\_\_\_\_ Other \_\_\_\_\_

**Vice-President:** \_\_\_\_\_ Randy Brust  
\_\_\_\_\_ Roger Dwyer  
\_\_\_\_\_ Dan Weinhold  
\_\_\_\_\_ Other \_\_\_\_\_

**Section Advisor:** \_\_\_\_\_ Glenn Feveryear  
(Must be NAR member) \_\_\_\_\_ Other \_\_\_\_\_

**Secretary-Treas:** \_\_\_\_\_ George Beever  
\_\_\_\_\_ Gary Feveryear  
\_\_\_\_\_ Ed Miller  
\_\_\_\_\_ Other \_\_\_\_\_

Nominations will be accepted up until voting time at the December meeting. For each of the 5 positions, please check one person, or check "Other" and enter the name of the person you wish to vote for. Please clip ballot and mail to:

**SPAAR**  
PO Box 127  
Reamstown, PA. 17567

**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:

Tripoli Rocketry Association  
PO Box 280  
Bessemer, AL 35021-0280

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# ***COUNTDOWN***

Official Newsletter of *SPAAR*  
THE SOUTHERN PENNSYLVANIA AREA ASSOCIATION OF ROCKETRY