



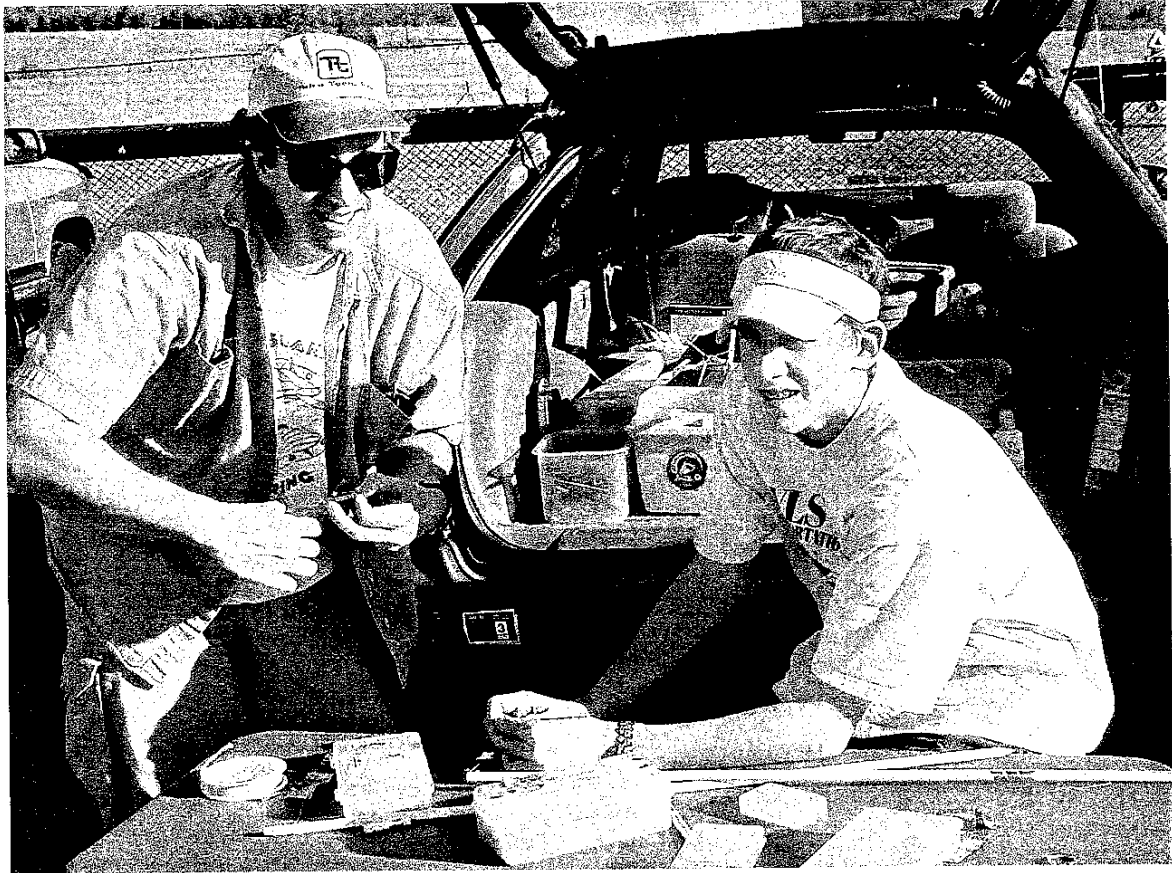
# Northern Virginia Association of Rocketry



## Free Press



November – December 2001  
January – February 2002

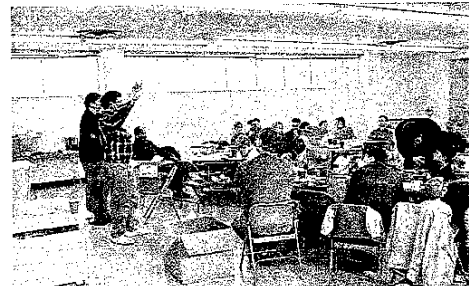


John and Andrew Hochheimer prepare their super-rocs at the November Contest  
(photo by Jonathan Rains)

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SEE PAGE 8 FOR NOVAAR'S AUCTION  
AND HOLIDAY  
PARTY.



Fly Safe, Fly Fast, Fly High!

## NOVAAR FREE PRESS

November December 2001- January – February 2002

**Editor:** Greg Bock

**Contributors:** Trip Barber, Jim Brower, John Hochheimer, Jonathan Rains

The **NOVAAR Free Press** is the official newsletter of the Northern Virginia Association of Rocketry, NAR Section 205. Subscriptions are included as part of the membership dues.

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Visit NOVAAR's Web site at:

<http://www.geocities.com/CapeCanaveral/8561>

**Or better yet....**

### ATTEND NOVAAR MEETINGS!

NOVAAR holds meetings twice a month. We meet the first and third Tuesday from 7:00 PM to 8:30 at the Kings Park Community Center--behind the Chinese restaurant in the Kings Park Shopping Center. The shopping center is in North Springfield, two miles outside the Beltway (I495) at the intersection of Braddock and Burke Lake Road.

Dues are \$5.00 per year for members age 13 or younger, \$8.00 per year for ages 14-18, and \$10.00 per year for age 19 or older. The maximum yearly membership fee for a family is \$20. Make checks payable to "NOVAAR" and send to the Treasurer at:

Roger Hillson  
4317 Selkirk Drive  
Fairfax, VA 22032  
ATTN: NOVAAR RENEWAL

Members who wish to receive important announcements of launches, meetings and other club activities should send their E-mail address to Roger Hillson (hillson@erols.com)

## NOVAAR Meeting Highlights

By John Hochheimer, NOVAAR'S Recording Secretary

NOVAAR held a regular meeting on January 15, 2002. Here's what happened. We talked about launch dates, club meetings and building sessions. We scheduled a building session for February 17 to refurbish launch equipment. See the calendar for more details.

The contest held on November 3, 2001 was down graded to an open meet due to a lack of contestants. This means that we now can have a section meet in the spring (scheduled for June 8). The events will be A RG, Set Altitude (175m), 1/2 A SD MR. Please participate in this section meet, and prepare for RAMTEC the following weekend.

The annual auction and party raised about \$565 for NOVAAR, and the treasury now stands at about \$1,200.

The club discussed equipment and high power pads. Bart Merkley suggested that he could have high power pads constructed that are similar to our existing large pad. The club voted to have Bart purchase additional pads for a total of \$350.

Trip Barber reported on the Team America Rocket Challenge, an event that he is working on with the Aerospace Industries Association. (See Trip's article in this issue) The event is scheduled for April 12 and 13, 2003 at Great Meadow. The teams will design, build, and fly a 2-stage rocket carrying two eggs to a precise altitude of 1,500 feet. The eggs must be recovered safely and undamaged.

Trip Barber and Mike Poss presented an excellent discussion on drag. Trip talked about drag in general and Mike added his thoughts on drag, from the perspective of altitude records. Mike is looking for members who are interested in pursuing altitude records with him. The presentation was outstanding, and we need to convince these two to give an update later in the year. We desperately need to talk about a few things... the club needs to establish high power goals and a means to get there. Come to the next two meetings and help us decide which way to go. We will provide an update after the next meeting. We need speakers and discussion topics for the meetings. Please volunteer!! Let me know what you can talk about to the members. Also, if you have suggestions for topics, let me know.

## NAR-AIA Challenge for High School Students

By Trip Barber

The NAR and the Aerospace Industries Association are jointly organizing and sponsoring an "aerospace design challenge" event to spark interest and excitement in aerospace studies among high-school students. And NOVAAR is in a leadership role in the thick of it. AIA is a DC-based trade association of the 70 largest companies in the professional aerospace industry, and is sponsoring this event as part of its overall program for commemorating the centennial of powered flight in 2003. Over the past several months as the NAR liaison, I have been working with the AIA to develop an event that is technically challenging, and develops the skills needed and used by aerospace engineers.

The purpose of the Challenge is to teach students the practice of aerospace system design by having them work in teams to design and build a safe, stable two-stage model rocket flight vehicle, and then use it to lift a fragile payload (2 raw Grade A Large hen's eggs) to exactly 1500 feet and return this payload safely and undamaged. The details and applications for the event will go up on the AIA website on April 1, 2002 and will be summarized on the NAR site. An announcement about the event and a form to request registration information are currently available at the NAR and AIA websites listed below.

Here is a brief outline of the details. The contest is open to teams of 3 or more students who are currently enrolled in the same U.S. high school, under the supervision of one or more teachers from that same school. Each team must complete a registration form and pay a nominal entry fee of \$160. The fee covers participation in the fly-off event, plus a kit containing items needed to design the rocket and measure its altitude.

**Each team that registers receives the following items:**

- Miniature Adept A1 electronic barometric altimeter.
- RockSim computer program for rocket design and altitude estimation.
- G. Harry Stine's Handbook of Model Rocketry.
- 28-page handbook of design guidelines, tips, and rules for this specific event.

The models for this event must weigh no more than 3.3 pounds (1500 grams) at liftoff, and must use two or more commercially made, NAR safety-certified model rocket

motors with a maximum combined propellant weight of no more than 4.4 ounces (125 grams). The small electronic barometric altimeter provided to each team must be carried within the rocket, and will determine the altitude. The winning team will be the one whose flight vehicle comes closest to exactly 1500 feet in a safe and stable flight with both rocket stages operating, and returns both eggs undamaged -- in a single attempt at the "fly-off."

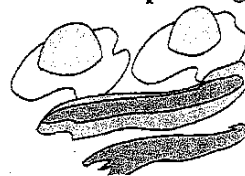
The prizes are huge. A total of approximately \$50,000 in U.S. savings bonds will be divided among students of the top 5 teams, and approximately \$9,000 cash will be given to their school science departments. The "fly off" where the winners are determined and prizes awarded will be run by NOVAAR at Great Meadow, the weekend of April 12-13, 2003. This will be a very big event, with hundreds of attendees and up to 100 teams flying. It will be a major effort for every member of NOVAAR to run this show, similar to a NARAM (although just one day long!). The AIA will be bringing in astronauts, national media, and aerospace industry executives for the day.

Although dual egg loft may sound like a fairly easy event to NOVAAR members, this Challenge event is a lot harder than NAR competition eggloft. It is really hard to select the precise combination of rocket motors and rocket size to fly TWO-stage dual eggloft to a precise altitude of 1500 feet; considerable design and simulation effort, plus flight tests, are required. The difficulty is deliberate; to make sure that the student teams really learn how to do performance calculations, and to ensure that we do not have a many-way tie for first place.

This challenge event is an outstanding opportunity for the NAR, and its various sections throughout the country, to strengthen their position in the education world. In addition, it is an opportunity for NAR sections to increase the contact with high school students, an age group where the NAR has typically had very low and declining membership numbers. NOVAAR is leading the way in this effort.

<http://www.nar.org/TChallenge.html>

<http://www.aia-aerospace.org/>

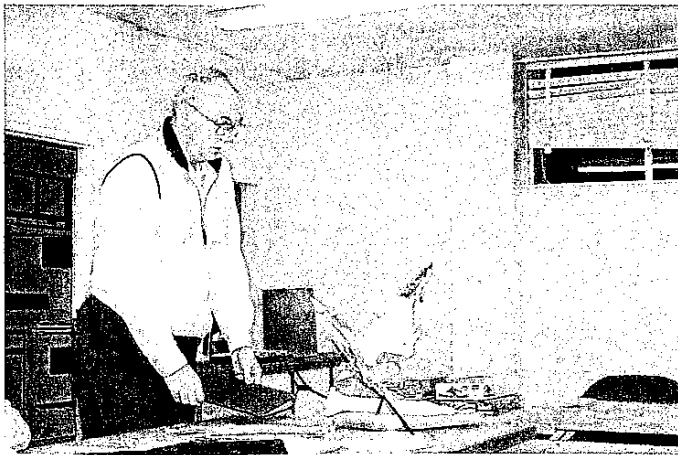


with few details or a larger model with lots of details to increase the difficulty factor when judged.

## Plastic Model Conversion

By Jim Brower

It has been a long time since the plastic model conversion event has been flown, but it will be flown May 18-19 at ECRM-29. You will either love or hate Plastic Model Conversion (PMC). In this NAR recognized competition event, competitors enter plastic models of rockets, jets or other aerospace vehicles (either real or from science fiction/fantasy) that have been converted to fly as model rockets. These are commercially produced models that the rocketeer modifies to accept a model rocket body tube, a motor and a recovery system. The models are judged statically on craftsmanship and degree of difficulty, and then on their flight characteristics. As with scale modeling, the model must have a qualified flight. Section 5.5 of the Pink Book covers the rules for Plastic Model Conversion.



Jim Brower discusses the finer points of Plastic Model Conversion at a NOVAAR club meeting. The two plastic models shown are aircraft, but many available rocket kits make good candidates for PMC.

Before entering PMC, the builder is first faced with the major decision of what model to build. While the model selection is essentially unlimited – there are all types of jet models, rockets and space vehicles available from which to choose--what interests the modeler is paramount. The builder must decide whether to construct a small model

The most common sizes are 1:72, 1:48 or 1:32 scale. The recent de-certification of Apogee 10.5 mm motors, limits the models to those capable of accepting motors and body tubes 13mm or greater. There are several important factors or guidelines the modeler should keep in mind. First you must factor in the size and weight of the model with the available motors and their lift off weight. The bottom line-- a model with an undersized motor will not lift off or fly successfully, and a stable, safe flight is a prime requirement for the event. Secondly, you must determine where the tube will fit within the model, will it be straight through the model's CG and CP or will it be offset. If offset, you will need to compensate to make sure the model will be stable during flight. Next, you need to consider how the recovery device, a parachute or streamer, will be deployed. Will it be deployed through the nose, will the model split apart, or will it function through an engine nacelles?

Finally, you need to consider whether or not you want to take a risk by using a plastic model that allows you to cluster two or more motors to increase potential flight points. Plastic models such as the F-15, F-14, and the SU-27 come to mind as potential candidates for conversion to clustered motor flight. In particular, the SU-27 models, both the 1:72 and 1:48 scale are easy models to convert to cluster motor flight. For those not inclined toward risk, the 1:32 scale MIG-21 is a highly detailed and easy to convert model for single motor flight. It has very stable flight characteristics, and can be flown on either an 18-mm or 24-mm "D" motor.

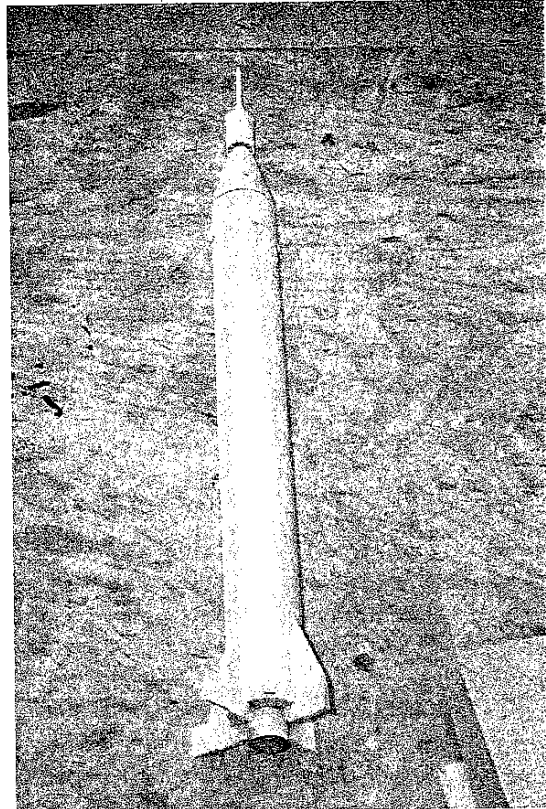
Craftsmanship is a most important consideration in PMC. Take your time when building your model. Test fit the pieces and fill any open seams. A good material to use is Squadron Green Putty. It is easy to use, dries quickly, and is easy to sand and paint. When you paint the model, first use light overlapping strokes for the primer using either an airbrush or spray can. Apply several light coats of primer, rather than a single heavy coat. If you use primer, I suggest you apply a white color primer. Most paints require a white base coat to be effective. Again, as with the primer, use light overlapping strokes for the coats of paint. Nothing ruins a model and costs you points than a paint job that sags and runs.

The other consideration is the degree of difficulty. You can achieve these points by using multiple colors, a

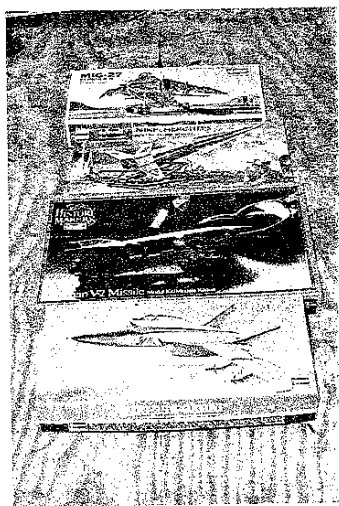
Complex camouflage paint pattern, extended landing wheels, detailed cockpit and pilot, and an array of detailed ordnance under the wings, and the difficulty of converting the model for flight.

With the combination of excellent craftsmanship and a high degree of difficulty your model will place well in the static display. But remember, a successful flight is paramount!! There's nothing worse than spending a lot of time to complete a beautiful model, and then wondering how it will fly. The same rules used in model rocket designs apply to PMC—for a successful flight the center of gravity (CG) for the model, must be forward of the center of pressure (CP). For a typical plastic model the CG turns out to be at least an inch in front of the CP. This can be easily done, before the model is completed, by adding weight to the nose to offset the weight of the motor(s) that you plan to use.

There are a lot of plastic models from which to choose. Those pictured represent ones that have been successfully converted. There are several good sources in the local area for plastic models—Piper Hobby and the Hobby Hanger in Chantilly, Granddad's Hobby Shop offaddock Road, and Ryders Hobby in Sterling. GrandDad's Hobby has a big sale every September.



Glencoe Model's Jupiter C



There are a wide variety of plastic model kits suitable for conversion. Above are Monogram's Mig - 25, Foxbat, Revell's V-2, Nike Hercules and Mig - 27.

**ATTENTION ALL NOVAR MEMBERS !!!!**

BE SURE TO CHECK THE DATE ON YOUR MAILING LABEL. IF YOUR MEMBERSHIP HAS EXPIRED PLEASE RENEW USING THE CONVENIENT FORM ON PAGE 11.

**Steel City Smoke Trail 1**

By Greg Bock

Rob Edmonds, Jim Brower (T-721) and Greg Bock participated in Steel City Smoke Trail 1, on 20-21 October 2001. This regional contest hosted by Pittsburgh Space Command was held in conjunction with Pittsburgh Tripoli's "Dragon Fire" launch. Dragon Fire consisted of sport launches for rockets using up to I motors.

The regional meet had A Payload, ½ A Parachute Duration, ½ A Streamer Duration, C Rocket Glider and the unusual E-Flex-Wing. Six clubs participated in meet. The field was reasonably good, and a local hobby shop showed up to sell rocket supplies, kits, motors and igniters. With 10% discount on these items, I walked away with the newly re-released Estes Maxi V-2 and a package of their new E-9 motors.

The meet was well organized and smoothly run by Steve Foster and Rod Schafer and other PSC members. The meet motel was the “Best Val U” motel right off Rt 70—not a luxury suite motel, but a good deal for under \$30.00 per night. Rod & Steve had a room set up for meet registration, and everyone received an info packet and an apple. Included at no extra charge was the background noise of a refrigerator truck left running all night long in the motel parking lot. You only knew it was there when the compressor would kick in every half hour and wake you up. On Saturday evening PSC hosted a banquet at the local “Hoss” restaurant within walking distance of the motel. The banquet was well attended and the food and company great.

The weather was reasonably good with the exception of some afternoon winds. Among the more interesting events was the E Flex-Wing event with NOVAAR’s Jim Brower (as T-721) taking 1<sup>st</sup> place in team division with 153 seconds. Rob Edmonds took 2<sup>nd</sup> place and PSC’s Rod Schafer took 1<sup>st</sup> place with 177 seconds. What made the event interesting were the two different approaches taken by contestants. One group went for altitude using 24mm body tubes making for a small model that reached high altitudes; the others used heavy, large diameter model boosters to decrease altitude, and improve chances for getting a return. Both methods seemed to have an equal number of “no-glides”. Of the 12 contestants who entered the event no one obtained 2 qualified flights.

Two of the tracking volunteers for the “A” payload event, Glenn Feveryear and Greg Bock, demonstrated their outstanding skills by successfully tracking two simultaneously launched (accidentally, of course) “A” payload models. Although it appears the trackers did not track the same model --the trackers debated which model they actually tracked--- the tracks closed anyway.

The final highlight was Steve Foster’s “parachute duration model that wouldn’t die”, achieving almost 4 ½ minute flight, the last flight of the contest. It behaved like a converging series or something. While never going too high in altitude, Steve’s ½ A PD model repeatedly caught thermal after thermal as it traveled down range until the timers and the crowd lost sight of it. Just as everyone thought the model was ready to land (and the timers ready to stop their watches) it would catch another thermal, gain some altitude, start to land, then catch another thermal, gain altitude, start to land, then catch another thermal, as it drifted down range. The process repeated itself and the model finally converged on a western Pennsylvania hillside about a mile away

PSC plans to make this an annual event, with next year’s Steel City Smoke Trail 2 scheduled for 5-6 October. Events are A SD, A PD, B Eggloft Altitude, Sport Scale and F helicopter!

**Steel City Smoke Trail 1  
Meet Champions**

| Place             | Contestant          | NAR Number | Section | Total Points |
|-------------------|---------------------|------------|---------|--------------|
| <b>A Division</b> |                     |            |         |              |
| 1                 | Humphrey, Michael   | 75192      | Ind     | 1050         |
| 2                 | Conley, Matt        | 79901      | 473     | 558          |
| 3                 | Ha, Christopher     | 79497      | 139     | 492          |
| <b>C Division</b> |                     |            |         |              |
| 1                 | Kiparski, Wolfram   | 28643      | 606     | 978          |
| 2                 | Humphrey, Steve     | 17888      | Ind     | 927          |
| 3                 | Foster, Steve       | 72814      | 473     | 918          |
| 4                 | Schafer, Rod        | 36564      | 473     | 795          |
| 5                 | Feveryear, Glenn    | 24931      | 503     | 654          |
| 6                 | Romani, Ed          | 79677      | 593     | 453          |
| 7                 | Edmonds, Rob        | 37700      | 205     | 414          |
| 8                 | Pace, John          | 49785      | 473     | 279          |
| 9                 | Ash-Poole, Jennifer | 61415      | 139     | 240          |
| 10                | Bock, Greg          | 44161      | 205     | 234          |
| 11                | Ha, Thomas          | 76754      | 139     | 216          |
| 12                | Kidwell, Chris      | 45255      | 139     | 174          |
| 13                | Hardobey, Michael   | 43720      | 473     | 57           |
| <b>T Division</b> |                     |            |         |              |
| 1                 | Calvin & Hobbes     | T-721      | 205     | 1614         |
| 2                 | Murphy's Lawyers    | T-999      | 139     | 1206         |
| 3                 | Grumpy Old Men      | T-255      | 139     | 1110         |

| Sections |         |  |     |      |
|----------|---------|--|-----|------|
| 1        | NARHAMS |  | 139 | 3438 |
| 2        | PSC     |  | 473 | 2607 |
| 3        | NOVAAR  |  | 205 | 2262 |
| 4        | IND     |  | 0   | 1977 |
| 5        | MTMA    |  | 606 | 978  |
| 6        | SPAAR   |  | 503 | 654  |
| 7        | SOJARS  |  | 593 | 453  |

## NOVAAR OPEN MEET - 3 NOVEMBER 2001

The meet was held on 3 November 2001 at Great Meadow. The weather started out with some early morning rain, cleared up around 10 A.M. for a spectacular day. Unfortunately, there were only 9 contestants including two teams. Only one "A" division participant resulted in combining that division into C division. The poor participation in this meet might be attributed to the fact that it was originally scheduled for September, but changed to November 3 due to a scheduling conflict with the field. The events flown were: 1/2 A Boost Glide, A Rocket Glide, A Super Roc Altitude, C Egg loft altitude and A Multi-Round Parachute Duration. This meet had been scheduled as the 28<sup>th</sup> Mid Atlantic Regional Shoot (MARS 28), but was subsequently downgraded to an open meet due to poor participation.

| C DIVISION | Place | Contestant          | NAR Number | Section | Total Points |
|------------|-------|---------------------|------------|---------|--------------|
|            | 1     | Guigliano, Ed       | 46086      | IND     | 1848         |
|            | 2     | Barber, Trip        | 4322       | 205     | 957          |
|            | 3     | Edmonds, Robert Jr. | 37700      | 205     | 666          |
|            | 4     | Hochheimer, Andrew  | 74538      | 205     | 651          |
|            | 5     | Bock, Greg          | 44161      | 205     | 624          |
|            | 6     | Johnson, Kevin      | 77083      | IND     | 342          |
|            | 7     | Rains, Jonathan     | 13911      | IND     | 0            |

| Team Division | Place | Contestant     | Team Number | Section | Total Points |
|---------------|-------|----------------|-------------|---------|--------------|
|               | 1     | Calvin & Hobbs | T-721       | 205     | 1584         |
|               | 2     | Ho-Ho          | T-207       | 205     | 1296         |
| SECTION       |       |                |             |         |              |
|               | 1     | NOVAAR         |             | 205     | 5778         |
|               | 2     | IND            |             |         | 2190         |



Greg Bock (l) & Trip Barber (r) ready their models before going out to track.

Photos by Jonathan Rains



## NOVAAR'S Holiday Party and Auction

Once again chief auctioneer Jonathan Rains entertained and dazzled the crowd with humorous anecdotes about the items up for bidding. John Hochheimer and Jacob Rains assisted Jonathan with the many items. Although this year's party was not as well attended as ones in previous years, the Annual Holiday auction netted over \$550.00 for the club treasury—all in all, a pretty successful afternoon

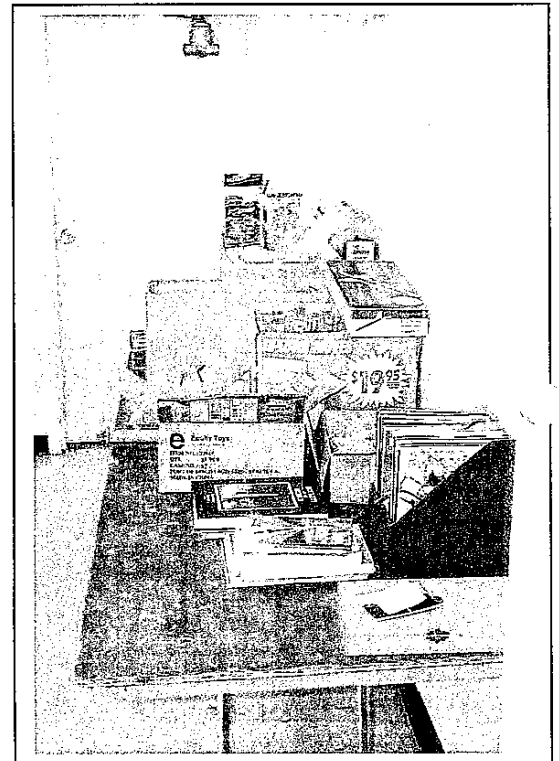
for both buyers and sellers. Trip Barber took first place in spending the most money, but Keith Wancowicz, Bart Merkley and Greg Bock followed closely behind.

The items were fantastic-- an early-mid sixties vintage Coaster motor sold for a mere \$10 -- A good size role of red "Canadian Plastic" parachute material, lots of vintage model rocket catalogs, motors and launch equipment.

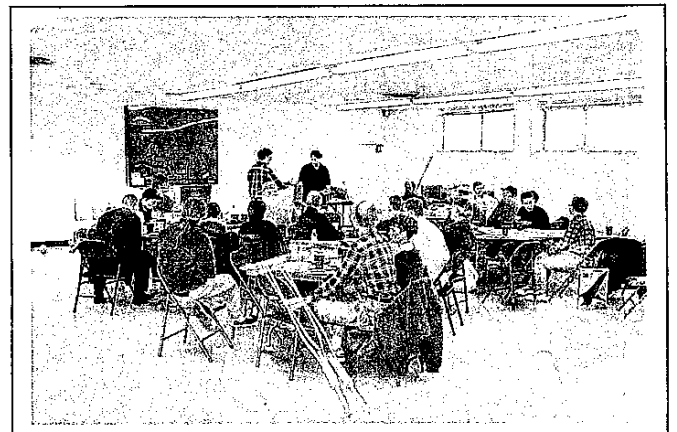
Jonathan Rains starts setting up the items for the auction.



Here are some examples of the fine items available.



Jacob Rains makes a delivery to Keith Wancowicz





# Northern Virginia Association of Rocketry

November – December 2001  
January – February 2002

## NOVAAR'S EVENTS

NOVAAR meets the 1st and 3rd Tuesday of each month at the Kings Park Community Center. Meetings begin promptly at 7 pm and usually last 1-½ hours. The Community Center is in the King's Park Shopping Center, Braddock Rd. and Burke Lake Rd. — two miles outside the Beltway in Springfield. NOVAAR flies at Great Meadow - Travel on I-66 to The Plains Exit #31; proceed south on Old Tavern Rd. (Rt. 245) to enter the gate

The following applies to all NOVAAR sport and high power events:

- Waiver – J Motor maximum, maximum altitude of less than 4500 feet (pending final approval from FAA)
- NOVAAR will require proof of ability of rocket to remain within ceiling limits and appropriate flyer certification.
- All NOVAAR Sport/High Power events are currently scheduled for Great Meadow

**February 17, 2002 – NOVAAR Building Session – Launch Equipment Refurbishing** – please come with hand tools to help the club prepare and refurbish launch equipment for the upcoming launch season. We will have the club trailer at the Kings Park Community Center to go through equipment.

**February 19, 2002 – NOVAAR Meeting, 7 PM Discussion** – Continuation of High Power Activities and Sport Launches – High Power Activities – come prepared to discuss NOVAAR and high power rocketry. We need your ideas for making this season even better than last for sport and high power rocketry at NOVAAR. We would like to have a discussion of the important issues related to high power rocketry including,

- Limits on rocket/motor size
- Equipment needs
- Funding high power launch equipment
- Safety

Also, bring a rocket or project to show off!

**March 5, 2002 – Club Meeting**

**March 17, 2002 – Building Session**

**March 19, 2002 – Club Meeting**

**March 23, 2002 - Sport and High Power Launch**  
Great Meadow - 9 AM – 5 PM

**April 2, 2002 - Club Meeting**

**April 14, 2002 – Building Session**

**April 16, 2002 - Club Meeting**

**April 20, 2002 – VACUUM-27 Contest & Sport/High Power Launch**

Great Meadow 9 AM – 5 PM

Events are:

- B Altitude
- B Helicopter (multi-round),
- B R/G
- B B/G
- Open Spot Landing

**April 21, 2002 - NOVAAR Building Session – (Scheduled)**

**18 May 2002 - Sport Launch Great Meadow 9 AM – 5 PM**

**June 8, 2002 - Section Contest & Sport/High Power Launch**

Great Meadow 9 AM – 5 PM

Contest Events are:

- A R/G,
- 1/2A Streamer (multi-round),
- Set Altitude (175 meters)

## OTHER REGIONAL EVENTS

**April 13, 2002 - OPOSSUM-6**

(Only Possible Open Strategically Shackled Uproarious Meet)

Open Meet, Middletown, MD. Events are:

- B Super-Roc Duration
- 1/4A Rocket Glider Duration
- 1/2A Helicopter Duration
- 1/2A Parachute Duration

**Contact Information**

"mailto:dbr903z@adelphia.net" - 410-781-7539

**May 18-19 2002 - ECRM-29**

(East Coast Regional Meet) at Middletown, MD. Events are:

- C Dual Eggloft Altitude
- Plastic Model Conversion
- 1/4A Rocket Glider Duration
- Open Spot Landing

**Contact Information**

"mailto:zog43@starpower.net" - 301-371-3365

**June 15-16, 2002 - RAMTEC-10**

SPAAR, Allentown College in Center Valley, PA. Events are:

- 1/2A Parachute Duration

Fly Safe, Fly Fast, Fly High!

A Rocket-Glider Duration  
 B Helicopter Duration Multiround  
 Set Altitude (175 m)  
 Sport Scale

**Contact Information**

"mailto:gfeveryear@earthlink.net" - 717-456-5570

**August 4-9, 2002 - NARAM-44**

McGregor, TX.

Events are:

- B Altitude
- E Eggloft Altitude
- 1/2A Parachute Duration
- C Helicopter Duration
- B Eggloft Duration
- B Boost Glider Duration
- C Rocket Glider Duration
- Sport Scale
- Research & Development



**Contact Information:**

"mailto:cd@naram2002.org"

NARAM Hotel – Manor House  
 Inn, 4201 Franklin Avenue  
 Waco, Texas 76710  
 (254) 772-9440

rocket found at Bellmore's house in the Meadowbend subdivision was not the kind that could easily be purchased at a store, said Martin.

"This was not a typical kind that you go to the craft store and buy," she said. "This one was homemade."

Martin said that hydrogen peroxide was not typically available unless the purchaser went to a specialty store that sold that chemical. The iron oxide could have easily been obtained, said Martin.

"Anybody in Galveston County could get that," she said. "Just look at your outdoor furniture." The Everclear could have been bought at any liquor store.

"The source of the material was not hard to find," she said. Martin said she does not think that Bellmore intended to launch the rocket. She said she thought he was testing the propulsion and thrust of the rocket.

*See the November and December 2001 issues of S&E Modeler for a two-part article entitled "Understanding Thermals". S&E Modeler = Sailplane and Electric Aircraft Modeler--- Greg Bock*

*The news story below, from the Galveston County Daily News, serves as a reminder why the most basic rule of our safety code is that we will not make our own motors. Even "professionals" cannot do this safely in a non-professional (home) setting--- Trip Barber*

**Man Dies After Homemade Rocket Explodes**

**By Alicia Gooden**  
 The Daily News

Published September 27, 2001

LEAGUE CITY — A NASA engineer died Wednesday after the homemade rocket exploded in his backyard, law enforcement officials said.

Phillip Bellmore, 42, was taken by Life Flight Tuesday night to Hermann Hospital around 7:45 p.m. He was later pronounced dead.

Fire Marshal Wanda Martin is investigating the accident. She said that Bellmore apparently had been mixing chemicals when the explosion occurred. Investigators found 90-proof hydrogen peroxide, iron oxide, and a bottle of 190-proof Everclear.

Martin said that there was no evidence, however, that those ingredients were the ones that caused the explosion. The

**EDITOR'S REQUEST**



**APRIL FOOLS ISSUE**

**Send in your wacky rocket pictures, short articles, foolish rocket building tips, phony rocket products and plans for the April Fools edition of the *Free Press*.**

**NOVAAR MEMBERSHIP APPLICATION**

Dues are \$5.00 per year for members age 13 or younger, \$8.00 per year for ages 14-18, and \$10.00 per year for age 19 or older. The maximum yearly membership fee for a family is \$20.00. Make checks payable to "NOVAAR" and send to the Treasurer at:

Roger Hillson  
4317 Selkirk Drive  
Fairfax, VA 22032  
ATTN: NOVAAR RENEWAL

Roger can also be reached by email (hillson@erols.com) and telephone (703-978-6957 evenings). Be sure and put "NOVAAR RENEWAL" somewhere on the outside of the envelope, and enclose a copy of the renewal application.

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