

Northern Virginia Association of Rocketry

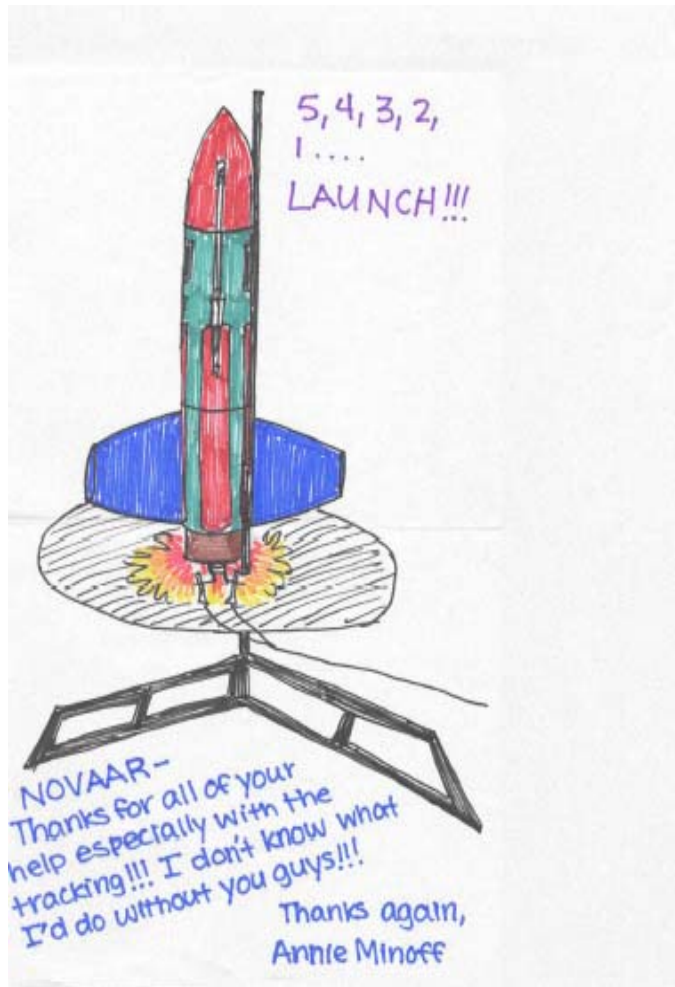


Free Press

March – May 2004

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UPCOMING EVENTS

June 26 – 27 2004 -
Regional at Carlisle, PA
hosted by SPAAR
(www.spaar.org)

Events:

- ½ A Streamer Duration
- ½ A Helicopter Duration
- ½ A Rocket Glider Duration
- ½ A Parachute Duration (multiround)
- B Eggloft Altitude

4 July 2004 - July 4th
High Power Rocket
Demonstration at Great
Meadow

6 July 2004 – Club
Meeting at Kings Park
Community Center

DON'T MISS NOVAAR's 20 JULY CLUB MEETING!!!

RAFFLE!!

Several Large Rocket Kits

RAFFLE!!

Kits donated by HobbyTown

Be sure to visit NOVAAR's new website for launch site directions, rocket software, launch schedules and schedule changes, vendors, local hobby stores, archived club newsletters, weather forecast at Great Meadow and more!!!

<http://www.geocities.com/novaar.geo>



THE FLYING SEASON HAS ARRIVED!! FLY WITH THE BEST! FLY WITH NOVAAR!

NOVAAR FREE PRESS

March – May 2004

Editor: Greg Bock

Contributors: Trip Barber, Roger Hillson, Mitch Guess, Jonathan Rains and Joe Woodford

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.

Send submissions to:

Ken Brown
7021 Forest View Drive
Springfield, VA 22150-3120

Submissions can also be sent electronically to the editor at:
gbock@erols.com

NOVAAR Officers

- President: Trip Barber (ahbarber@alum.mit.edu)
 - Secretary: John Hochheimer (john.hochheimer@verizon.net)
 - Treasurer: Roger Hillson (hillson@erols.com)
 - Senior Advisor: Ken Brown (brown007@bellatlantic.net)
- Ken Brown
7021 Forest View Drive
Springfield, VA 22150-3120

Visit NOVAAR’s Web site at:

http:// www.geocities.com/novaar.geo
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 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 ages 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
ATTN: NOVAAR RENEWAL
4317 Selkirk Drive
Fairfax, VA 22032

Members who wish to receive important announcements of launches, meetings and other club activities should send their e-mail addresses to John Hochheimer (john.hochheimer@verizon.net)

President’s Corner

By Trip Barber

NOVAAR was once again the core of the team of NAR volunteers that made the Team America Rocketry Challenge (TARC) final flyoff, the biggest and most high-visibility rocket event held in the world, an outstanding success. The 20 or so NOVAAR members who came together to do this last year and again this year can truly be proud of what they achieved for the NAR, for our hobby, and for the young people for whom we hold Team America. Without the hard work by NOVAAR members long in advance of the flyoff, the NAR would not have received the lavish praise that we did for running what many student and teacher participants called "the best-organized event of any kind, rocketry or otherwise, I have ever attended".

Almost all of NOVAAR's most active members were part of this team; particular thanks go to Greg Bock for the hard work on range equipment and the high school auditorium; John Hochheimer for the shirts, hats, and trophies; Carl Curling for the signs and banners; Eric Robinson and Rose Fichtel for registration; and Jonathan Rains for running the flight range. For all of you, who had any part, thank you from me and from the National Association of Rocketry.

Now let’s go on to the 4th of July public demonstration launch, then to hosting NARAM-46. This is truly NOVAAR's year to run things, and I do not know another rocket club in America that does it as well. I'm proud to be part of NOVAAR.

COVER: During the school year, NOVAAR helped club member Annie Minoff with her science fair project. Annie’s project was entitled “*The Effect of a Helicopter Recovery System's Rotor Blade Length on a Rocket's Falling Velocity*”. Club member’s tracked about 9 helicopter models for Annie to get her the data she needed for the project. Annie sent us this card as a thank you to the club, and Roger Hillson had the card scanned, so we could use it on our newsletter cover.

You’re Very Welcome, Annie! We enjoyed helping you with your project.

Laurel Hill Park and Model Rocketry

By Trip Barber

We are making progress in our effort to get a model rocket launch site approved for once-monthly use at the new Laurel Hill Park in Fairfax County (the former Lorton Prison site). Our use of a field there is written in as an acceptable "occasional use" in the draft site plan that has been drafted and posted for public review and comment, and I spoke on behalf of NOVAAR and the hobby at the public hearing on this site plan held by the Park Authority Board on May 4th.

I will be following this up with an official letter statement, which I've sent to all of you. I will be asking that all NOVAAR members also file public letter inputs on behalf of our use of the site. The site plan will be voted on by the Board on June 23, and will then go to the County Planning Commission for another level of review and approval before implementation. Maybe by next year we will know how this has turned out, and will be able to fly there. There is a still lot to do, but we are making good progress.

March Building Session

Throughout the year, NOVAAR has a club rocket building session on the 3rd Sunday of the month at the Kings Park Community Center. In March, Ken Brown, NOVAAR's Senior Advisor and owner of Qualified Competition Rockets, led the session and supplied kits. About 8 members attended and built B payload and B eggloft models. Both these events will be held at NARAM 46 this summer.



Club members busy building eggloft and payload models.

NOVAAR's JULY 4th DEMO LAUNCH



VOLUNTEERS NEEDED



This year NOVAAR's annual July 4th high power rocket demonstration at Great Meadow will be at 7:15 PM. We need volunteers to operate the range (rocket fliers and rocket retrievers, in equal numbers); a few people and some nice-looking display models for the information booth that Craig Beyers will be running; and about 20 rockets to fly, almost all of them G power or above (with at least 12 H/I/J serious HPR rockets).

Our goal is 100% reliability; no rocket can be making its first flight at this launch, no high-power certification flights, and no sometimes-it-works kinds of rockets. Flights should not go over 2000 feet, due to likelihood of loss in the surrounding trees, and should use chutes on the small end of size, and dual-deploy if you have that technology down reliably.

Please contact Trip Barber to participate and for details.

Jonathan Rains and Trip Barber bought their professional fin alignment jigs. This fixture, which was developed by Art Rose, allows one to precisely align the fins so they are straight.¹

Thanks, Ken for hosting a great session.

Newsletter Items Needed Badly Need Help???

Your newsletter editor sure does. We need a steady stream of articles from club members who

- **are doing interesting rocketry projects,**
- **have recently built and flown new rocket kits**
- **are willing to share their expertise with others**
- **are working on original rocket plans**

We've had a great run of items over the past few issues, but are now running dry on articles. Please consider submitting some items to the newsletter.

¹ See page 36, figure 3-9 of the *Handbook of Model Rocketry - 7th Edition* for a picture of this device.

NOVAAR Shows Off New Range Equipment and Web Sites

(Mitch Guess, Jonathan Rains and Greg Bock contributed to this article)

NOVAAR's rocketry enthusiasm didn't go into hibernation over the long winter months. Members were busy with monthly sport launches and mentoring TARC teams from local area schools. In addition to the launches, and the annual trailer refurbishment, NOVAAR members built or acquired some new range equipment.

- Mitch Guess designed and built a new 18 pad low power launch system to support the Team America Rocketry Challenge competition for 2004.
- Jonathan Rains purchased NOVAAR's first rocket retrieval pole with a donation made to NOVAAR by Aerojet Corporation. Aerojet's donation also helped the club obtain its first rail launcher --a 6 ft long Black Sky rail.
- Dan Winnings gave the club's web site a new look.
- And Jonathan Rains and Charlie Sykos were busy setting up a web site for NARAM 46.

Here are a few more details:

NOVAAR's New Launch System

The design specifications were the following:

- * Support for 18 pads
- * Based on toggle switches
- * Use standard AC electrical outlets

Mitch constructed the system with two banks of 9 toggle switches to select which pad or pads will be launched. The top bank of 9 switches selects the odd numbered pads, and the bottom bank of switches selects the even numbered pads. Since the system can launch multiple rockets at a time (Drag Race), care must be taken when setting the pad select switches to guard against inadvertent launches. The switches have super bright LED's on the end of the toggles to assist in determining which pads are selected.

The system has a "flash bulb safe" continuity test circuit that utilizes a piezo beeper which limits the test current to less than 10ma. The system is armed with an automobile style ignition key switch. With the key switch turned off, all power is removed from the system including the continuity test circuit. There is a 30 amp panel style fuse installed which protects the system from internal shorts. The red launch button energizes a relay which completes the high current circuit and fires the igniters at the pads.

The launch system enclosure is made out of .093 inch thick G10 Fiberglass. This stuff works great for making fins for Mid Power and High Power rockets.²



Mitch demonstrates the new launch controller at NOVAAR's March 13 sport launch at Great Meadow.



A closer view of the new controller shows the 18 LED toggle switches; the black continuity check button to the lower left; piezo beeper; arming circuit at the center; and the red firing button on the right.

² Mitch has hundreds of 15X15 inch sheets of G10 that he got for free, so if any one wants some let him know and he will bring some to a launch.

The Long Pole in the Tent

Trees are the model rocket's natural enemy. Model rocketeers have all heard folklore about a lone tree on a field capturing a rocket. Some NOVAAR club members say they've lost more rockets to trees than they've built. Well, thanks to Aerojet Corporation, NOVAAR has an active countermeasure, and a deterrent. No tree will dare grab a rocket after seeing this item—at least no tree less than 35 feet high.



Jonathan Rains poses with the new rocket retrieval pole after successfully retrieving a treed rocket with it. The pole was bought with part of a donation that Aerojet Corporation. The retrieval pole was "christened" at the May 15th launch by Greg Bock when he retrieved a black Aerotech *Initiator* from a tree.

Wait a moment—a BIG MOMENT ARM, that is - If the pole is fully extended, it takes two (probably several) people to hold it. One can get quite an upper body workout retrieving rockets with the new pole.

The club obtained several other range related items over the winter and early spring. John Hochheimer got the club an expanded selection of stainless steel launch rods from 1/8 inch to 1/2 inch.

We also have a new tent, funded by AIA, to replace our old one that was destroyed by the thunderstorm that ripped through Great Meadow the night before Team America.

NOVAAR's Website Gets A Makeover

If you have visited the NOVAAR webpage recently you've seen the upgrades that Dan Winnings has added. Dan has spruced up the webpage with a great menu of site selections on the left of the page. He has provided links to the websites of the US and Canadian national rocketry organizations, model rocketry software sites, an updated list of local hobby stores, selections for current and archived club newsletters, and of course, a link to submit newsletter items directly to the editor. Other selections include links to manufacturers, vendors, rocket electronics, scale data the NARAM 46 web page and the rec.models.rockets, (r.m.r.) FAQ site. Be sure to visit the website for all the latest info on club activities and rocketry in general. Also, be sure to check it out before attending our launches for time changes or weather cancellations.

You can reach the NOVAAR website by using any of the following URLs:

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

<http://geocities.com/novaar.geo>

<http://www.novaar.org> (this one is a re-direct)

Thanks for the great website, Dan!!

NARAM 46 Web Page

Working with NARAM 46 Contest Director Jonathan Rains, Webmaster Charlie Sykos, from the Hawaiian element of NOVAAR, has put together an outstanding website for NARAM 46. The site's URL is <http://www.naram46.org>, and it can also be reached from NOVAAR's home page. Besides the registration forms, hotel locations and contest schedule it has an outstanding "Event Tips" section which lists each NARAM event. This section shows the contest rules for the specific NARAM event, building techniques and a list of plans and kits available for each NARAM 46 event. George Gassaway contributed all of these event tips.

NOVAAR'S Launches: March – May 2004

(Compiled by Joe Woodford)

	13-Mar-04	3-Apr-04	4-Apr-04	15-May-04
	45F - Sunny	48 F - Partly Cloudy	42 F - Partly Sunny	91 F - Sunny
	NW 10-12 mph	WNW 10-12 mph	NW 17-20 mph	WSW 7 mph
Motor Class	Number of Launches	Number of Launches	Number of Launches	Number of Launches
1/2A	0	0	0	9
A	4	3	0	39
B	10	2	0	52
C	10	6	0	42
D	3	3	1	20
E	5	2	0	16
F	0	0	0	6
G	5	2	0	6
High Power				
H	2	0	0	0
I		0	0	4
J		1	0	3
Team America Rocketry Challenge	38	44	10	20
Total	77	63	11	217

Next Free Press Issue will cover

- Team America
- NOVAAR at Space Day
- July 4th Demo Launch
- Battle Park Spring Launch
- ECRM 31

Writer's and contributors needed

DON'T MISS NOVAAR's 20 JULY CLUB MEETING !!!

RAFFLE!!

Several Large Rocket Kits

RAFFLE!!

Kits donated by HobbyTown

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CONTEST RESULTS

NOVAAR held its first contest of the 2004 flying season at Great Meadow on April 3rd. The events were B Payload, B Eggloft Duration and 1/2A Streamer Duration. One of the highlights of the meet was a test of 3 station tracking. John Hochheimer, Karl Walbrecht, and Greg Bock tracked the B Payload models against a number of very challenging sky backgrounds. Of particular note in the 1/2A Streamer Duration event was A divisioner Zachary Yarashus who smoked everyone as the only contestant to get two qualified flights.

NOVAAR 2004 Meet Champions

Place	Contestant	NAR Number	Section	Total Points
A Division				
1	Ridder, Mathew	82996	205	150
2	Yarashus, Zachary	82721	205	80
C Division				
1	Winings, Dan	20815	205	310
2	Woodford, Joseph	81130	205	206
3	Barber, Trip	4322	205	184
4	Ridder, Jeffrey	30309	205	117
5	Guess, Mitch	80566	205	0
T Division				
1	Calvin & Hobbs	T-721	205	139
Sections				
1	NOVAAR		205	1186

NOVAAR 2004 Results

Contestant	NAR Number	Section	B PAY	B ELD	1/2A SD
A Division					
Ridder, Mathew	82996	205	TL / 152		SEP
Yarashus, Zachary	82721	205			31 / 36
C Division					
Barber, Trip	4322	205	TL / 164	34	NDP / SEP / NDP
Guess, Mitch	80566	205	TL		
Ridder, Jeffrey	30309	205	TL	15 / 47	
Winings, Dan	20815	205	118	48	SEP / 37
Woodford, Joseph	81130	205	TL / 154	36 / 20	SEP / 36
T Division					
Calvin & Hobbs	T-721	205	TL / 132	29	LST / 25

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UPCOMING 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 1½ hours. The Community Center is located 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.

12 June 2004 - Sport Launch at Great Meadow 9 AM – 5 PM

15 June 2004 – Club Meeting at Kings Park Community Center; 7PM;

- “Bring a Sport Rocket” - Please bring your most unusual sport rocket.

June 26 – 27 2004 - Regional at Carlisle, PA hosted by SPAAR (www.spaar.org)

Events:

- ½ A Streamer Duration
- ½ A Helicopter Duration
- ½ A Rocket Glider Duration
- ½ A Parachute Duration (multiround)
- B Eggloft Altitude

4 July 2004 - July 4th High Power Rocket Demonstration at Great Meadow

6 July 2004 – Club Meeting at Kings Park Community Center; 7PM;

- "Future of the Hobby". NAR VP Trip Barber will review current status and expected future of the sport rocket hobby and the NAR.

18 July 2004 - (Sunday) Final prep session for NARAM at Kings Park Community Center 1-5 PM;

- In place of the club's usual building session members will fix up launch equipment, signs, registration materials, payloads and other items needed for NARAM 46.

If you did not receive a copy of NOVAAR's Competition Handbook when you joined the club, send a message to the club's treasurer, Roger Hillson at hillson@erols.com



20 July 2004 – Club Meeting at Kings Park Community Center; 7PM;

- Bring and Describe your NARAM contest rockets and sport launch rockets
- **You don't miss this one. There will be a raffle of several large rocket kits donated by the new Hobbytown store opening in early August near Lorton**



31 July – 6 August 2004 NARAM 46 at Great Meadow 9 AM- 5 PM

28 August 2004 - Sport Launch at Great Meadow 9 AM – 5 PM

18 September 2004 - Sport Launch at Great Meadow 9 AM – 5 PM

6 November 2004 (Backup day -7 November) - Sport Launch at Great Meadow 9 AM – 5 PM

11 December 2004 - Sport Launch at Great Meadow 10 AM – 3 PM

MODEL ROCKET COMPETITION HANDBOOK	
NORTHERN VIRGINIA ASSOCIATION OF ROCKETRY	
<small>A handbook of tips and proven basic model designs for beginners to use in entering model rocket competition. All plans are reprinted from various National Association of Rocketry (NAR) publications, and copyrights to the plans are retained by the NAR.</small>	
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NOVAAR MEMBERSHIP APPLICATION

Dues are \$5.00 per year for ages 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
ATTN: NOVAAR RENEWAL
4317 Selkirk Drive
Fairfax, VA 22032

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.

Date _____ Please check one: ___ New Member ___ Renewal

NAME: _____

DATE OF BIRTH _____

STREET: _____

CITY: _____ STATE: _____ ZIP: _____

HOME PHONE: _____

NAR membership number, if a member: _____

EMAIL ADDRESS
(Optional) _____

I heard about NOVAAR from:

Dues are for one year of NOVAAR membership and do not include optional NAR Membership.

Please check one category based on your age as of the previous July 1st:
One: ___ Age 13 or younger (\$5) ___ Ages 14-18 (\$8) ___ Age 19 or older (\$10)

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