

# The NOVAAR Free Press



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Section 205  
Flying Since 1970

NOVAAR Free Press

January – February 2007

This is the official newsletter of the Northern Virginia Association of Rocketry (NOVAAR), Section 205 of the National Association of Rocketry (NAR). This newsletter is a benefit of being a member – *You are a member, aren't you?*

Section Officers

- President:.....Joe Woodford  
[president@novaar.org](mailto:president@novaar.org)
- Secretary:.....Trip Barber  
[secretary@novaar.org](mailto:secretary@novaar.org)
- Treasurer: .....Will Marchant  
[treasurer@novaar.org](mailto:treasurer@novaar.org)
- Senior Advisor: .....John Hochheimer  
[senioradvisor@novaar.org](mailto:senioradvisor@novaar.org)

Membership and Dues

To maintain the clubs launch equipment and pay for our website we collect dues. Dues are collected annually and are; \$5 for members age 13 and younger, \$8 for members age 14 to 18 and \$10 for everyone else. A membership application can be found at many local hobby shops and on our website.

Meetings

NOVAAR holds meetings on the first and third Tuesday of the month, from 7:00 pm to 8:30 pm, at the King's Park Community Center in Springfield, VA. The most current topics to be discussed and directions to our meeting room can be found on our website.

Build Sessions

Once a month, on the third Sunday of the month from 1:00 pm to 5:00 pm, at the King's Park Community Center, the club gets together to build rockets and share construction techniques. The schedule and directions to our meeting room are on our website.

Launches

NOVAAR conducts monthly launches at [Great Meadow](#) which is located in The Plains, VA – approximately 50 minutes south of Washington DC on Route 66. Launches start at 9 am and run until 5 pm (10 am to 4 pm during the winter). The most current schedule and directions to [Great Meadow](#) can be found on our website.

There is no charge to fly at club launches (*motor sizes A to F*). However, there is a \$5 charge to launch high-powered rockets (*motor sizes G to I -- the field is not large enough for bigger motors*). AND, you don't have to be a member to fly with us. Though, after you meet us and, realize that we don't bite – *as long as we take our medication – we know you will want to join.*

If weather threatens the launch day, our website will report the status of the launch by 8:00 pm the day before.

Website

The club's website ([www.novaar.org](http://www.novaar.org)) is where the most current information about future club activities can be found. The site is maintained by...

- Webmaster: .....Dan Winings  
[webmaster@novaar.org](mailto:webmaster@novaar.org)

Newsletter

The club's newsletter is published 6 times a year or, as close to that schedule that is humanly possible for the editor to achieve. The newsletter reports on the club's activities and features articles written by club members about their endeavors within the Model Rocketry Hobby. The articles include, *but are not limited to*, topics on sport rocketry, competitive rocketry and high-powered rocketry. Send submissions to ...

- Editor:.....Frank Prekel  
[nfp@novaar.org](mailto:nfp@novaar.org)



Calendar

June 2007

SUN	MON	TUE	WED	THU	FRI	SAT
					1	2
3	4	5 NOVAAR Meeting	6	7	8	9 NOVAAR Launch
10	11 Father's Day	12	13	14 Flag Day	15	16 Smoke Trails
17 Smoke Trails	18	19 NOVAAR Meeting	20	21 First Day Summer	22	23
24	25	26	27	28	29	30

16 and 17 June  
Steel City Smoke Trails Regional Competition

July 2007

SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3 No Meeting	4 July 4 <sup>th</sup> Demo	5	6	7
8	9	10	11	12	13	14 NOVAAR Launch
15 NOVAAR Build	16	17 NOVAAR Meeting	18	19	20	21
22	23	24	25	26	27	28 NARAM-49
29 NARAM-49	30 NARAM-49	31 NARAM-49	28 July to 3 August NAR Annual Meet #49			

August 2007

SUN	MON	TUE	WED	THU	FRI	SAT
			1 NARAM-49	2 NARAM-49	3 NARAM-49	4
5	6	7 NOVAAR Meeting	8	9	10	11
12	13	14	15	16	17	18 NOVAAR Launch
19 NOVAAR Build	20	21 NOVAAR Meeting	22	23	24	25
26	27	28	29	30	31	



## Editor's Ramblings

Thanks to Mike Knouse for the photos of the March and of the Culpeper launches. To Ed Seward for the Scout launch story and pictures. And Adam Martin for his certification story.

Join with me and the matra, "Articles, Articles, Pictures, Pictures, Please, Please". And of course "Thank you, Thank You and Thank You".

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## NOVAAR Hatpins



Available from Frank Prekel -- [fjprekel@aol.com](mailto:fjprekel@aol.com).

The NAR pin is available from NARTS  
([www.nar.org/narts](http://www.nar.org/narts))

The Flag Ribbon is out-of-print and no longer available.

## Competition Rocketry

### Club Competition in June

TARC flights are done, time for NOVAAR to take the field and have a Club competition. The date has been set for the June Club Launch (June 9, 2007), and you know whthe place (Great Meadow). Be there.

#### The scheduled events are:

- ❖ A B/G
- ❖ A SD (multiround)
- ❖ A H/D
- ❖ Random Duration

Come-on out and show your stuff.

☆☆☆

### Steel City Smoke Trails #7 Set

The Pittsburg Space Command has announced that the next Smoke Trails Regional Competition will be June 16 and 17, 2007.



#### The scheduled events are:

- ❖ A Boost Glider Duration
- ❖ A Helicopter Duration

- ❖ B Streamer Duration
- ❖ B Super-Roc Duration
- ❖ B Eggloft Altitude

Come-on out and show your stuff.

Club website:

<http://www.psc473.org/>

Smoke Trails Info Page

<http://www.psc473.org/SCST-INFOPAGE.pdf>

☆☆☆

## NAR Annual Meet #49 Set for July

NARAM 49 will be hosted by SMASH (the Southwest Michigan Association of Spacemodeling Hobbyists -- NAR 500) in Delton/Kalamazoo, Michigan on July 28, 2007 to August 3, 2007:

#### The scheduled events are:

- ❖ Research & Development
- ❖ C-Scale Altitude
- ❖ C-Rocket Glide Duration
- ❖ A-Helicopter Duration
- ❖ B-Egg Loft Altitude
- ❖ A-Boost Glide Duration
- ❖ E- Super-Roc Altitude -- A&B Division
- ❖ G- Super-Roc Altitude -- C&T Division
- 6' x 1/4" rod and 6' rails are provided
- ❖ B- Streamer Duration
- ❖ Open Spot Landing



Club website:

<http://smashnar500.homestead.com/>

NARAM-49 website

<http://smashnar500.homestead.com/NARAM-49.html>

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## Qualified Competition Rockets

Complete Line of NAR Competition Kits and Parts  
Sport Model Rocket Kits and Micro Maxx Kits

QCR kits have placed  
at NARAM's 31 - 48

For catalog, send Self-Addresses Envelope to ...

Kenneth Brown  
7021 View Drive  
Springfield, VA 22150  
Phone: 703-451-2808

[www.cybertravelog.com/qcr](http://www.cybertravelog.com/qcr)

Remember: *You can't fly the packaging  
or the illustrations*

## About the NARAM #49 Launch Site

Article taken from:

[http://smashnar500.homestead.com/NARAM/1Pages/Launch\\_Site.html](http://smashnar500.homestead.com/NARAM/1Pages/Launch_Site.html)

NARAM 49 will be held on the grounds of the Michigan Farmers Hall of Fame in Delton, Michigan.

The Michigan Farmers Hall of Fame is a farm dedicated to preserving history, celebrating farmers in

NARAM-49. This building houses many pieces of antique farm equipment. There are also pictures of farmers honored in the Hall of Fame over the years. This building also contains food services and a country music sound stage.

Through the center of the farm is a community of buildings including a church, rest rooms, game room,



the state of Michigan, and entertaining thousands with country music.

The site includes a 100 year old church relocation and restoration. Lot's of camping, a play ground, game room, and recreation hall.

For more information on the farm and its activities go to [www.prairievillefarmdays.com](http://www.prairievillefarmdays.com)



The entrance to the drive into the field on Milo road is at:

7990 Milo Road, Delton, Michigan.

or

N 42 degrees, 27 minutes, 25.5 seconds Latitude

W 085 degrees, 26 minutes, 33.2 seconds

Longitude



The Michigan Farmers Hall of Fame is free to the public and will be open the whole time we are flying

the country music building, and a country music sound stage as well as the Miloville Ice Cream Parlor. Ice Cream is a daily necessity on the farm. Lunch and snacks will be served there most of the day.

### Restrooms:

While attending NARAM-49 you will have 16 regular bathrooms available to you plus addition portable facilities.



### Pets:

The Michigan Farmers Hall of Fame is pet friendly. Please keep your animal under control and picked up after.

### Alcoholic Beverages:

At no time are alcoholic beverages or persons who have recently consumed those beverages allowed beyond the tent city line or near the launch range. Beverages are allowed to be consumed at the camp sites at the Michigan Farmers Hall of Fame.

### Smoking:

Smoking is not allowed near the launch range or in any buildings.

### Cowatorium



When you arrive at the field you will be driving up Cowatorium Drive to reach the launch range. To the West you will see the Cowatorium Dance Hall where

the town folk and their guest enjoy a bit of line dancing. Bring your boots and cowboy hat.



**Golf Cart Rentals:**

Golf cart rentals will be available. No one under 16 years of age may drive a golf cart at the Michigan Farmers Hall of Fame.

**Children:**

Kids are restricted from being inside any of the buildings without an adult. This excludes the Miloville Ice Cream Parlor.



**Other Contests at NARAM-49:**

In addition to the rocket flying and nail-bighting competition that occurs at a NARAM, several additional "special contests" have been set for NARAM-49.

- ❖ Best space decorated camp site.
- ❖ Best Space decorated hotel door. No damaging the door or pulling off the paint.
- ❖ Best rocket related center piece for your banquet table.



**NARAM-49 Registration**

There will be a big change in the way you register this year. Each individual must register. For flyers, fees will be paid by the individual. The Team and Family registration has been eliminated. The fees have been adjusted down to compensate. You can still pay for the whole family all at once after everyone is registered. We will accept checks, money orders, pay pal, and credit cards through the on-line site this year.

- ❖ Contest flyer under 19 \$12
- ❖ Contest flyer over 18 \$45
- ❖ Sport flyers and FAI only Flyers \$12

Register and pay from the NARAM-49 website (<http://smashnar500.homestead.com/NARAM-49.html>).



**General Rocketry**

**New Estes Catalog Released**

The Estes 2007 Catalog has been released. New this year's catalog is a new and "D" powered "Mean Machine", the re-release of the "Der Red Maxx" and an "E" powered "D-Region Tomahawk".



Estes Rockets Website:

<http://www.estesrockets.com/>

Catalog webpage:

<http://www.estesrockets.com/2007catalog.php>

Catalog file:

<http://www.estesrockets.com/assets/downloads/2007estescatalog.pdf>



**Are you a member of the National Association of Rocketry?**

**If not, Why Not ??**

**Visit the association's website**

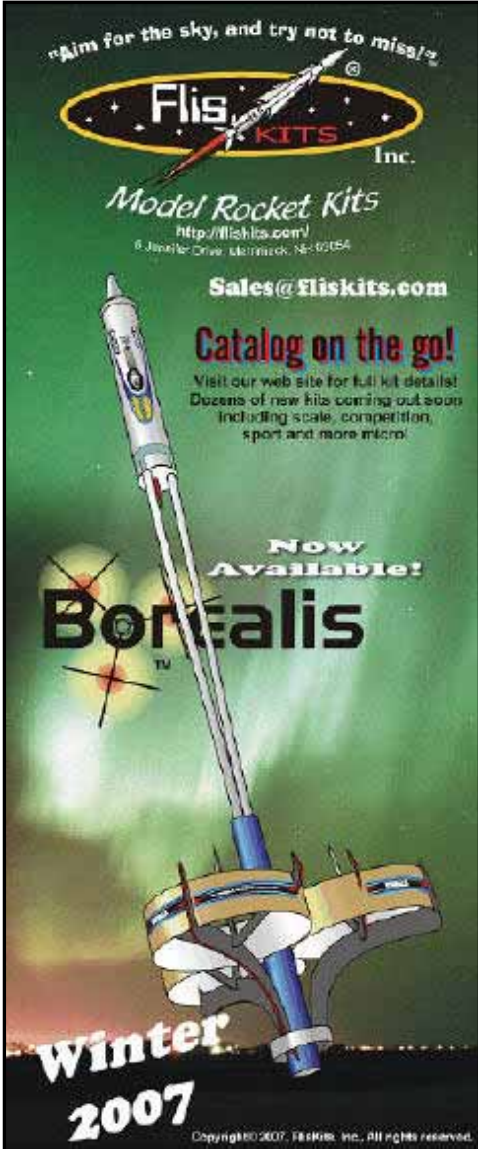
[www.NAR.org](http://www.NAR.org)

**To learn of the benefits that membership brings**

## New FlisKits Catalog, too

Article taken from: <http://fliskits.com/products/catalog/catalog.htm>

Our 2007 catalog is now out! We had a long stretch without a new catalog so this is a great addition to our site. While we have these in print form, you may not have gotten a hold of one yet so now you can download it!



Full color, 2 pages, showing all of our current kits with hints about future products, this catalog gives a brief description of each kit as well as some specification information (length, price, etc). For full product details you need to go to the product section of our web site and look up the specific kit.

**PLEASE NOTE:** This is a pdf file and it is 32MB in size (very large for those with dial up service). It is

designed to be printed on Ledger size paper (11" X 17") but is still readable if reduced to fit on standard printer paper (8.5" X 11").

If you would like a printed version of this catalog just contact FlisKits with your name and address and we will get one right out to you!

New kits in this catalog include:

- ❖ Borealis - Futuristic kit with laser cut fins, massive tube ring fins, ducted ejection and one of the most elegant profiles in model rocket history!

- ❖ D-Nelson Tomahawk - Sport model first introduced at the Pearl River ModRoc convention in the late 1980's
- ❖ Interloper - Our latest in the Micro to the Maxx line of micro model rocket kits

Missing from this catalog are our parts and accessories but we hope to have a downloadable version of a parts catalog available shortly, so keep watch!

FlisKits Website: <http://fliskits.com>

Catalog webpage:

<http://fliskits.com/products/catalog/catalog.htm>

Catalog file: <http://iflis.com/fliskits/winter.pdf>

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## Even a 2007 Sunward Catalog and an Update

Sunward has released their 2007 catalog as well as an update. 7 new models expand the Sunward fleet. The new kits include the box finned "Box Racer", the futuristic "Interplanetary Shuttle" and the "Space Racer".

Sunward Website:

<http://www.sunward1.com/index.htm>

Catalog webpage:

<http://www.sunward1.com/pricelist.htm>

Catalog file:

<http://www.sunward1.com/retailcatalog.pdf>

Supplement file:

<http://www.sunward1.com/catalogue2007supple1.pdf>

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## March Sport Launch

Saturday, March 3, 2007 was a typical breezy (ok, windy) spring day at Great Meadow. The club was joined by several TARC teams plus or cast of regular characters.









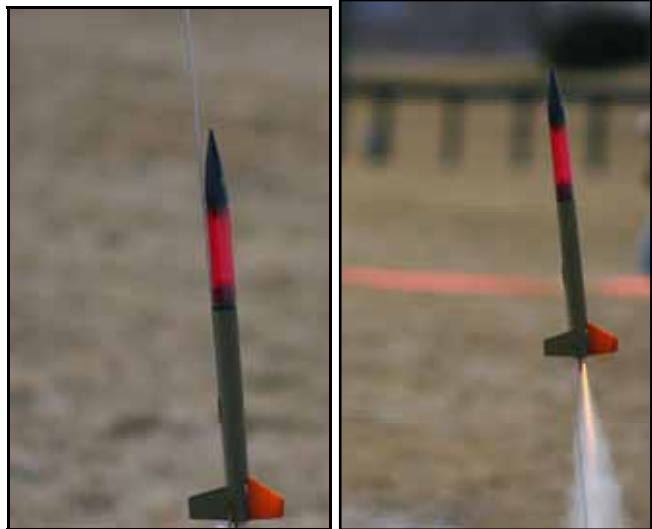


## April Sport Launch



The Club's launch schedule for April called two back-to-back weekends of two days of flying. The first weekend, March 30th and April 1st brought Cub Scouts, Boy Scouts, Indian Guides, several family groups and a whole slew of TARC teams. The lines were long, the parking lot full and the sky was full of rockets and the air smelled of black powder and Ammonium Perchlorate.

The next weekend was a completely different situation. April 7<sup>th</sup> and 8<sup>th</sup>, the last weekend for the TARC teams to qualify, brought cold temperatures and blowing rain. The poor weather required the launch windows to be reduced to mid day. It was nothing like the previous weekend.



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## April Scout Launch

### NOVAAR and the Scouts at Cape (er Camp) Snyder

by Ed Seward

On Saturday April 28th, a number of NOVAAR volunteers helped six scouts meet some of the requirements for their Space Exploration merit badge. The group of about six NOVAAR volunteers was led by Will Marchant coordinating the rocket building phase and Trip Barber operating the launch pads.



Above: Will quizzes one of the scouts on the parts and functions of a model rocket. The three rockets in the picture were assembled that morning by the scouts.



Three scouts and Josh from NOVAAR look on as another NOVAAR member talks about some of his rockets.



Will works with the six scouts to have them fill out their launch cards.



All six scouts had two successful launches each..



Following the scouts successfully meeting their two launch requirement, the NOVAAR members present took the opportunity to launch some rockets and other things. In one case, it was proven that with enough thrust anything can fly. In this case, it was a pie box.

The scouts were great. We had the opportunity to help them and get in some launches!

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## High Power Rocketry

### L2 Cert with a Saucer, no Less

by Adam Martin

I don't think I'm alone when I admit that my odyssey into HPR L2 began within seconds after my L1 certification flight touched down softly on the manicured lawn of Great Meadow. As I would like to move into bigger toys some day I settled on a rocket that was dual deploy, could be fibreglassed, and could take fly on a wide range of L2 motors.



*One of these rockets is not like the others ;-). They wanted to put it on the further back cell, but the lack of rail buttons prevented that*

This led me to the PML Eclipse, which I ordered at TARC last year. The joys of work and the associated travel put off the construction until around November, with everything being finished in time for the January launch. Unfortunately as most of you already know, a knot came undone, and I didn't get my certification. Luckily the rocket was significantly over built and despite the fall from 1962 feet under just a drogue shoot, there was no damage. The February and March launches weren't conducive to a L2 flight due to the winds.



*The Art Applewhite 18" saucer kit, What you get for your money, along with a lot of packing peanuts!*

Faced with a diminishing number of launches before TARC, and my desire to get motors there, I started to look for a more "wind resistant" rocket that I could certify on I began talking to Will Marchant. His pointed me in the direction of Art Applewhite and his collection of saucers.

And coincidentally enough he had a L-2 saucer kit that even had the necessary modification that would allow for the deployment of a streamer that would meet NAR's requirement for an active recovery system. And lucky for me that there was also a \$40 rebate for any one who certified with this kit! This pretty much made it a no brainer, and after getting permission from my wonderful fiancé, I ordered it the next morning.



*Just after deployment of the "mustache". I'm not really sure how that effected the flight, but what ever works. Kudos to Mike Knouse for his excellent photography work on this picture*

The kit arrived a little over a week later, and my initial reaction was more of shock than any thing else. It was hard to believe that this collection of foam board and foot long tubing would take me to HPR L2. Construction of the kit was fairly strait forward, although most of the instructions seemed some what cryptic until I started on the step. I have to admit that I was a bit concerned about the instructions insistence on using white glue for some of the bonds of the fiber board; however a quick test reveled that this bond on par with the strength of an epoxy bond, or at least as best I could test it in my parents basement. I also must admit that for a first time saucer builder, Art's assessment of building time of 16 hours is a bit optimistic, although I did try. My initial plan was to have the saucer done in time to fly at Battle Park on the 14th, however with another week spent in Aberdeen, that goal was unrealistic, so I settled on a flight attempt at the MDRA Red Glare II launch on April 21st.



*Another great shot from Mike Knouse of the saucer tumbling to earth after deployment*

With the saucer ready to fly I met Will and we headed out to the eastern shore of Maryland. The plan was to fly his Cesaroni J330 motor, in Mitch's casing. This was my first



experience with a non Aerotech reload, and I have to admit it went together smoothly, although I was lucky enough that Will had his delay adjustment tool along so I could make the necessary changes. The interesting part came when I presented the rocket to the RSO for the safety check in, his response was that he didn't know how to check it in, and then asked me if it was safe to fly. How do you answer that one? The sent me to the farthest away launch rod they had; I wonder why?



*I'm pretty sure this is how the mustache is supposed to work. Even so, this is a beautiful shot of an unusual rocket tumbling back to earth. Thanks mike for the image!*

Overall the flight went well, as you can see in the following pictures. No altimeter was present, but I don't think I was going to set any altitude records with this design. The Active recovery device or "mustache" functioned as advertised and resulted in my certification, however I still think it caused for a more destabilized recovery, and shouldn't be used for further flights. Fortunately Art Applewhite was again happy to oblige by allowing me to return it to him so some one else can use it.



*The obligatory shot of the hat pin, so new it's still in it's wrapper*



*On the ground at Higgs dairy farm, this is exactly how it landed. Probably only about 200 feet from the pad and sitting perfectly upright on the ground.*

Recovery went well also, as the saucer touched down about 200 feet from the pad. The saucer itself was sitting straight up on the field, and quite happy. As you can see in the recovery pictures, the mustache got wrapped around the motor casing, but it was otherwise undamaged. After finally getting my flight in, I was rather happy. Now it's time to start dreaming about my L3 project!!



*I'm smiling so much I'm about to swallow my ears. Thanks Will and Mitch for your help!*

☆☆☆

## High Power Rocketry

### A Trip to Culpeper

photos by Mike Knouse

On April 13, 2007 Mike Knouse found himself on a bright sunny day standing in the middle of a field in Culpeper, VA. And, there happen to be a bunch of rockets flying – go figure.

The red rocket is Will's "Serenity" which is a Polecat Aerospace Thumper. It weighs 37.2 lbs and is 10 inches in diameter flying on an Aerotech K-1275.

The yellow and black rocket belongs to Doug Gamber. It is a two stage rocket flying as a single stage on an Ed Rowe Wicked White M 1800.



### The Ballad of Serenity

by: Josh Whedon

Take my love  
Take my land  
Take me where I cannot stand  
I don't care  
I'm still free  
You can't take the sky from me

Take me out  
To the black  
Tell 'em I ain't coming back  
Burn the land  
Boil the sea  
You can't take the sky from me.

Have no place  
I can be  
Since I found Serenity

But you can't take the sky from me





☆☆☆



# CanSat Summer Camp Program

*Build and launch a self-made satellite — It's a "blast"!*

July 9-14 (Launch date is July 14)  
Westfield High School 4700 Stonecroft Blvd  
Chantilly, VA 20151  
10am - 3pm  
Grades 9-12

**This program is all hands-on learning. Learn how satellites are built, launched, and operated. Build a "CanSat" satellite and launch it on a high powered rocket. Learn how to program the satellite to collect sensor data and transmit it to the ground station.**

## Program Overview:

- Learn about satellite orbits, simulate orbits on the computer
- Learn what makes up a satellite, how they are built, tested and launched
- Build a "CanSat" satellite with sensors, processor, and radio transmitter
- Program the CanSat to collect sensor data and transmit telemetry
- Test the CanSat in a vacuum chamber
- Build a high powered rocket to launch the CanSat
- Set up a ground station to collect and process the data
- Tour the Udvar-Hazy Museum (*no transportation provided, will need parent car-pooling volunteers*)
- **Launch the CanSat!**



**Class  
limited to  
20 students!**

### Launch site information:

Great Meadow  
The Plains, VA (*no transportation provided  
– will need parent car-pooling volunteers*)  
[www.novaar.org](http://www.novaar.org)

**Student Name:** \_\_\_\_\_

**Grade:** \_\_\_\_\_ **School:** \_\_\_\_\_

**Parent or Guardian Name:** \_\_\_\_\_

**Home Phone:** \_\_\_\_\_ **Work Phone:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**City:** \_\_\_\_\_ **State:** \_\_\_\_\_ **ZIP:** \_\_\_\_\_

**Email Contact:** \_\_\_\_\_

**Program Fee:** \$150 \_\_\_\_\_ **Shirt Size:** **S** \_\_\_ **M** \_\_\_ **L** \_\_\_ **XL** \_\_\_

**Send To:** Federation of Galaxy Explorers, 3916 Bokel Dr., Chantilly, VA 20151  
**Application deadline is June 9, 2007.** No refunds due to costs of materials