

THE ZOG-43

The Newsletter of NARHAMS, NAR Section #139.
NAR National Champions 2001, 2004

1965-2005



40th Anniversary



ZOG-43

Volume 27 Number 5
May 2005

NARHAMS ON THE WEB

<http://www.narhams.org>

Send and receive E-mail with other NARHAMS members through NARHAMS Web page grouplist via yahoo-groups.



NARHAMS serves Baltimore, the state of Md., Washington DC and the surrounding Metropolitan areas. The club is a section of the National Association of Model Rocketry (NAR) and we are the oldest continuously active model rocket club in the United States, first established as a high school club in 1963, changing our name to NARHAMS when chartered as a NAR section in 1965. NARHAMS is the only five time winner of the NAR "Section of the Year" award.

Years won: 1997,1998,1999, 2001, 2004

NARHAMS members regularly fly their model rockets at NASA's Goddard Space Flight Center on Soil Conservation Rd. in Greenbelt Md. The launches are open to the public and are held the first Sunday of every month (weather permitting), starting at 1 PM.

Sport Launches are usually held the second Saturday of every month at Middletown Recreation Park in Middletown Md. Check the web page for updates.

NARHAMS welcomes all prospective new members to our monthly meetings. They are held on the first Saturday of the month from 5:30 to 9:30 PM at the College Park Airport Annex Building. Dues are 10 cents a week, with an initial 50 cents up front (good for 5 weeks) as a sign of good faith.

NEW: Monthly meetings available on-line via chat-room , simply go to the NARHAMS homepage and click on the link.

ZOG ROYAL COURT

(NARHAMS OFFICERS)

ZOG (President)

Jennifer Ash-Poole
410-674-6262

VICE ZOG (Vice-President)

Jim Filler

COLLECTOR OF THE ROYAL TAXES (Treasurer)

Ed Pearson 301-577-7775

KEEPER OF THE HOLY WORDS (Secretary)

Chris Kidwell 571-434-7507

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Khim Bittle 301-293-2399

Directions to College Park Airport:

Follow I-495 to Kenilworth Ave. South. Make a right onto Paint Branch Parkway, then make a right on Cpl. Frank S. Scott Dr. At the airport entrance go straight to the Operations Building, the annex building is adjacent to the "Ops" building.



ECRM-32 Regional Contest Coverage

By: Jim Filler NAR 27862

April 16th&17th, NARHAMS hosted the thirty-second rendition of the East Coast Regional Meet. Through the years this infamous meet has been most famous for the lack of good quality flying conditions. Rain, sleet, and snow are all problems we have had to endure over the years. Even though the postal service states that none of these things stop the mail, they have certainly been a hindrance through the years flying at ECRM.

Friday night Dr. Kidwell and Bubbles the Terrible opened up registration at the Days Inn in Frederick. A few contestants from out of town made their way in to get an early start on Saturday. I purposely didn't watch the weather most of the week prior to Saturday, fearing the worst. Saturday morning arrived with a mostly sunny day and light breeze. The first order of business was to get the range set up and the trackers online. From doing this so many times now, I can set the trackers up in my sleep with pretty good results. We had a brief contestants briefing and opened the flying up to sport launches and tracking.

Altitude events are always a challenge logistically. We have a good system that usually produces good results. Dr. Data runs the club laptop imputing flight data and between two trackers and a tracking control person, this year went off well, too. Four by "A" cluster was selected mainly due to the fact that this is also an event at NARAM-47 in August. The actual tracking showed all the good flights as tracked closed, with most below 5%



Katherine and Steve Humphrey load an 1/8A model. Photo by Glen Feveryear.



Steve Foster preps the Flying I-Beam Kids' Thunderbird model. Photo by Glen Feveryear.

closure. Several competitors had good flights well over 300 meters. The most prevalent design was the long main tube usually out of 13 or 18mm tube with three outboard pods. Many competitors decided to use the A10-PT motor in the outboards to help with motor ejection problems. Cluster altitude requires that you return your model and show that you retained all four motors. Several flights still suffered core motor ejections resulting in DQ's. I think that this will be a lesson that many of us, me included will take to NARAM trying to improve in this area. Overall, Steve Humphrey had a meet best flight with a tracked

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Meatball Rocketry display their team built Titan I-Dynasoar. Photo by Bubbles.



Matt Filler strikes a pose with his Lucky 7 model. Photo by Dr. Chris Kidwell.

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Inside this issue:

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- Plus- Meeting Minutes, and a Kit Review!!!

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ZOG-43 is the official newsletter of NARHAMS the National Association of Rocketry Headquarters Astro Modeling Section # 139

NARHAMS is the oldest model rocket club in the United States!

ZOG- 43 is dedicated to model rocketeers of all ages, abilities, and interest. We are committed to providing the most current, up-to-date information on model and real world rocketry, and to provide educational material as well as entertaining information. ZOG -43 is published monthly and is available to anyone on a subscription basis. Current rates are \$10 for meeting pickup or email or \$15 for postal mail U.S. Funds for 12 issues a year, payable to NARHAMS

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For more information.....

If you have any questions about ZOG-43 or NARHAMS, or if you have any comment(s), correspondence, free merchandise or if you'd like to submit an article, send them to :

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Columbia, Md. 21044
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ZOG-43 is edited by Kevin Johnson, and is an eight-time winner of the NAR/LAC "Rockwell" Trophy, recognized as the best NAR section newsletter.

Years won: 1969, 1973, 1975, 1990, 1991, 1992, 2003, & 2004

Zog-43 staff typist is none other than Jennifer Ash-Poole a.k.a. Secretary to the Stars !

Photographs: by Kevin Johnson, except where noted.

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President's Message for May

May 19th is the premiere of the last installment of the Star Wars saga.

Last month, I went to a convention, Celebration 3, that featured George Lucas giving a few words. I saw a lot of Star Wars fans and Star Wars stuff. I spent most of the weekend volunteering for the convention, but I did get to see "Uncle George", Star Wars in 30 minutes, and part of the Star Wars archives.

Fan clubs, like the 501st (the Stormtroopers) and Rebel Legion, help run the conventions and the volunteer booth. Believe me, a lot of people don't get to see what they want because they are busy making sure the convention is running. If they had to hire people to do what we were doing, then the cost of the con would be astronomical.

Rocket organizations work the same way. The NAR only has one paid employee who helps run the HQ out of her basement. EVERYONE else is a volunteer, from the Board of Trustees down to the club level. The reason I am talking about volunteers is because our club would not run without them, and our hobby would not work without them. Imagine what NARAM, NARCON and TARC would be like if we didn't have the volunteers. Think that club launches just sort of happen? I would like to say THANKS to all the volunteers of NARHAMS, the NAR, and Goddard for all they have done to help the club and the hobby.

Two of our volunteers have decided to step down, and we need replacements. Khim Bittle has been our Senior Advisor and Middletown Park Equipment person for quite a few years. Khim isn't leaving, he just needs a break from being the advisor and equipment wrangler. We will need a new Section Advisor come elections in September, and we need to figure out how to make sure the club equipment

gets back and forth to the launches even sooner.

Kevin Johnson has decided to step down as editor as of September. Kevin is feeling a little (!) burned out, but is willing to help a new editor get up and running if they would like to help with the Zogs for the next few months. This is a good opportunity to see how hard Kevin works to put together our award-winning newsletter, and to see how much fun it is to nag...er, I mean ask people for articles.

Sometimes the hardest part is figuring out what you can do to volunteer. If the above positions sound interesting, talk to Khim or Kevin about them. If they seem too daunting, then ask one of the officers, and we can give you a few suggestions on what to do. You don't have to give the amount of time these two have given in the past few years, but even a little bit helps.

Zog Bubbles ✨

Sorry for the Delay..

This issue of the Zog-43 is slightly late due to a number of reasons. The one with the biggest impact was my travel schedule for work. Recently I had 3 back to back weeks where I was traveling to clients in Texas and North Carolina. This was right in the prime time when I typically gather the content for the newsletter and get it completed. Your June issue will be in your hands or in your mailboxes by the 20th, and then we can get back on our regular delivery schedule. ✨

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**Show your NARHAMS membership card and receive a
20% discount off rocket kits, motors, and building
supplies!!**

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Legal Fund Raffle Reminder

From NAR President, Mark Bundick Folks,

With the launch season starting to get into full swing now, I'd just like to remind you that your local or regional event is a perfect opportunity to ask people to think about buying tickets for the "Save Rocketry Now" Legal Fund raffle.

Tickets are only \$10 each, and if you buy 5 of them, we'll give you a 6th for free.

You can see the great list of donations from 27 generous vendors at: www.saverocketrynow.org/prizes.asp

and you can enter online with either a credit card or via PayPal at:

www.saverocketrynow.org/entries.asp

Please consider promoting this important effort to fund our legal fight against unnecessary and illegal regulation at your upcoming rocketry event.

Cheers, Bunny ✨

Interview With Tom Ha

By Steve Humphrey, NAR 17888

Where are you from, and where do you live now?

I live in Mount Holly Springs, Pennsylvania, a small town between Carlisle and Gettysburg. I was born in Sarasota, Florida and spent several happy years on Key Biscayne, where I would live today if not for housing costs.

What kind of work do you do?

I'm a computer support person for a Credit Union in Mechanicsburg, PA. I run the entire IT shop, supporting home banking and all the other electronic services, plus all the security and back office needs of the staff. It's challenging because the work changes all the time.

When did you start flying model rockets?

My fondest memories are of launching rockets at an abandoned airport outside Miami Florida back in the late 60's. The airport is now the site of Florida International University, but back then it was an overgrown area in the boondocks with huge concrete pads, great for driving right out onto to fly. I believe it was Cub Scouts that started us building and flying.

Did you get started while in Cub Scouts?

Yes. My Dad was the Cubmaster, so he was in charge of the whole thing. I recall it quickly becoming a family activity, because I have two older brothers who also wanted to get in on the fun. Back then, we only knew about kits and I remember that I saved for quite a while until I could afford my own rocket.

Have you been in the hobby since then?

No, I dropped out for years at a time, but even then rocketry has always been a thread throughout my life. I recall flying rockets the year we moved up to PA (1971) and at various other times

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as my parents moved us around the county that I grew up in. I flew rockets in farm fields, on soccer fields and in local parks.

What got you back flying model rockets?

Well, I always had it in the back of my mind to get my sons involved, and when they started Cub Scouts and I realized they might find them as enjoyable as I did at their age, that's when I got really back into it.

What kind of rockets do you fly now?

I must admit that I was really a "kid in a candy store" when I got back in. Trying to get the 75 cents together back in the 60's to afford a simple kit left me with a yearning for lots of variety. So I started buying at least one of everything that I thought was neat, and the first place I started was with the Estes starter kit that has the Spitfire SST and Goliath.

What really surprised me was getting the remaining rockets from the family's collection, and realizing that the HUGE rocket that I recalled as a kid was only about 2 feet long and BT-55 in size! In my memory, it was over 6 feet tall, and bigger in diameter than a Big Daddy!

I fly some of everything now, with an L1 rocket nearly complete, lots of model rockets and several of the Aerotech kits for mid-power. I really like variety, so I fly helicopters, gliders, saucers and

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traditional rockets.

What other hobbies do you have?

A few months ago I bought a couple of snowmobiles but the weather was not co-operating. I love to travel, to read and to listen to a cowboy group, Riders in the Sky. I also am very involved in supporting other deserving groups, like the American Diabetes Association and the local public radio/TV station (WITF). I'll also plug my favorite online comic strip that I support financially, Kevin and Kell (www.kevinandkell.com).

You formed an NAR Section in PA, right?

Yes, I started the Central Pennsylvania Rocketeers, NAR Section #659, as a way to use a field I had found, and to give local groups like Scouts and 4-H a place to fly. I've heard several times now from people who are quite relieved to find out there is a place to fly in the area. The club is very low-key, not many members, not much dues, nor even many meetings. If I can't develop a core of regular flyers soon, I'll probably fold the club.

[Shortly after I talked to Tom he indeed closed the section. He posted the following explanation on the narhams-members Yahoo group.]

"The field was pretty much a loss after RAMTEC-11. The farmer was upset we had gone into the field, even though I had specific permission to do so from the Fire Company [that owned the field]. The farmer happens to be a dues-paying volunteer with the Fire Company, which I'm not, not living in their local area.

I could have made an issue out of it, and I might have been permitted to fly on the remaining grass area, but that would require a new contract and legal fees assuming I had permission, so I decided to cut my losses."

Why did you join the NAR?

flight of 327 meters. A few of the ejected motor flights had better altitude, but were DQ'ed.

After a 30 minute lunch break following altitude, we opened up for duration events. Set duration was required by pink book rules to be the first duration event by all flyers flying at the meet. The set time again was derived from the NARAM-47 event and copied at 65 seconds as the target. This is one of those events that seem easy until you fly it. Then it seems that something causes far better or far worse anticipated results. Scoring is done by taking the time and calculating the percentage of error. Paul Miller had a meet best with a result of 15.4% error from the target time.

Science Fiction and Future Scale turn in was also taking place at the Pratt Hobbies compound. I actually didn't make my way over with my model until everyone else had turned their models in. We had eleven entries overall. With all the models being turned in for static judging it was time to focus on the other duration events.

¼ A Helicopter was interesting from the perspective that building light was really important in achieving altitude. Even though the weather was really nice by ECRM standards, thermal activity was really hard to come by. Limited altitude and temps only in the 60's just didn't add up to thermals. The best flight turned in was by the Flying I-Beam Kids with a single best flight of 36 seconds.

The other duration event was also a challenge in building light and achieving altitude. 1/8 A streamer duration multi-round creates a whole new challenge in duration using the micro-maxx motors. Some flyers went with kraft tubes in either micro-maxx diameter or 10 mm tubing. However, with the arrival of Venus Rocketry a new vendor being run by Mark Petrovich of our club, some chose to try out a

different approach of very light models made from fiberglass tubing similar to FAI style models but only about 9mm in diameter tapering down to the motor tube. These are some nice models that yield some good altitude and come with ejection plugs that seem to really help with ejection issues with these tiny motors inside of larger tubes. The meet saw some excellent flying in this event with records being established in each division. Since flights were not real long, we chose to time all the flights beyond the 20 second max time so that records could be established. Katherine Humphrey outdid everyone else at the meet with consistency and flying three flights all maxes and a single best flight of 42 seconds for the "A" Division record. Kris Bittle established a "B" Division record with a flight of 18 seconds. Steve Humphrey also managed three maxes in "C" Division and set the "C" Division record of 36 seconds. In Team Division, Slightly Harmful set the record with a meet best flight of 78 seconds.

Open Spot Landing was also flown this year at ECRM-32. I picked the spot by simply throwing the club equipment box hammer upwind as far as I could. This is another one of those events that seems so simple until you fly it and the breeze decides to increase, decrease or change direction right when you launch. Some flyers flew typical sport models with streamers, some with chutes, and some went with the saucer approach. The best flight at the meet was by Slightly Harmful flying a Peter Alway bunny rabbit to only 5.82 meters away from the spot.

The weekend was finished up on Sunday with duration flying and the Science Fiction and Future Scale Model flying. We typically try to have a craftsmanship event every year. Since we fly either Sport Scale or Plastic Model Conversion, we decided to try something different this year. This was the first time most of us had flown this



Paul Miller accepting the Ole Ed DLBF trophy from Ole Ed. This roving trophy goes to the C Div flier with the lowest score for the meet. Past winners have added items to the time capsule in the base. Photo by Kevin Johnson

event and it brought several different prototypes. In "A" Division Michael Humphrey flew the "Tintin's Moon Rocket" to first place. Katherine Humphrey flew a nicely done "Josie and the Pussycat's Spaceship". Kate Bittle flew the "Gauchito" from the X-prize event. Matt Filler flew the "Lucky-7" also from the X-prize event. In "B" Division Kris Bittle flew a "Vanguards Eagle". In "C" Division Steve Humphrey was way out in front after static with a beautiful "Spaceship Friede" model but suffered major damage after not making a safe recovery and a DQ. I flew an X-Prize "Gauchito" and Bill Harvey flew an X-prize "Lucky-7". Team Division saw Meatball Rocketry team with an "X-20 Dyna-Soar Titan-1" model with the Dyna-Soar gliding, well sort of a gliding recovery. Slightly Harmful and the Flying I-Beam Kids both entered "Thunderbird-3" models.

We closed the range down, packed up everything and proceeded over to

one of the park shelters for the bbq and awards. Michael Humphrey was the "A" Division meet champ with a total of 1272 points. Kris Bittle was the "B" Division champ with 1368 points. Somehow I managed to win "C" division with 1260 points and the Flying I-Beam Kids won Team Division with 1932 points and the overall meet champ. NARHAMS racked up 11,496 points and put another ECRM in the books.

I would like to say thanks to all of those who came out and participated as well as did range duty. Additional thanks go out to Dr. Kidwell for results, Doug Pratt and Josh Tschirhart for scale judging and Khim Bittle for range equipment support. We also want to thank the vendors for door prizes. Please be sure to support them with your business, Aerospace Speciality Products, Pratt Hobbies, Edmonds Aerospace and Venus Rocketry. Hope to see you next year! 🌟

Calendar of Events for 2005

May 1- 1 - 2 pm Goddard Public Launch
 May 7- 5 - 10 pm Monthly meeting, NARAM models (Chris Kidwell)
 May 14- 10 am - 10 pm OPOSSUM-9 open meet/ night launch
 May 21- 8 am - 5 pm TARC Flyoffs Great Meadow, VA
 May 28-30- Balticon-39 Baltimore, MD
 Jun 4- 5 - 10 pm Monthly meeting, fiberglass tubing (Mark Petrovich)
 Jun 5- 1 - 2 pm Goddard Public Launch
 Jun 11- 10 am - 4 pm Sport launch, cluster/staging theme
 Jul 2- 5 - 10 pm Monthly meeting, open building session, focus on staging
 Jul 3- 1 - 2 pm Goddard Public Launch
 Jul 9- 10 am - 4 pm Sport launch, airborne trooper spot landing, special prize for 40 troopers deployed
 Jul 10- 12 - 4 pm Goddard building session, open to public, tie in to Goddard Contest
 Jul 17- 10 am - 4 pm Goddard contest
 Jul 30- Aug 5 24/7 NARAM-47 OH

Aug 6- 5 - 10 pm Monthly meeting, pirates discussion (Alan Williams)
 Aug 7- 1 - 2 pm Goddard Public Launch
 Aug 13- 10 am - 4 pm Sport launch, pirate theme
 Sep 3- 5 - 10 pm Monthly meeting, elections, night launch discussion (John McCoy)
 Sep 4- 1 - 2 pm Goddard Public Launch
 Sep 10- 10 am - 10 pm Record trial, FAI S6A (A SD), night launch
 Sep 25- 12 - 4 pm AIAA Picnic Launch
 Oct 1- 5 - 10 pm Monthly meeting, leftover parts scratch building (Jim Miers)
 Oct 2- 1 - 2 pm Goddard Public Launch
 Oct 8- 10 am - 4 pm Sport launch, Oktoberfest theme, microbrew launch
 Nov 5- 5 - 10 pm Monthly meeting, glider building session (Robert Edmonds)
 Nov 6- 1 - 2 pm Goddard Public Launch
 Nov 12- 10 am - 4 pm OPOSSUM-10
 Dec 3- 5 - 10 pm Monthly meeting, holiday party
 Dec 4- 1 - 2 pm Goddard Public Launch
 Dec 10- 10 am - 4 pm Sport launch



Sport launches are held at Middletown Park from 10am-4pm, waiver up to 3.3 lbs and "G" motors not exceeding 62.5 grams of propellant. All flights "E" power and above are restricted to 5 degrees from vertical and between the hours of noon and four PM. Call ahead to confirm launch and waiver availability.

Business meetings are held at the College Park Airport Annex Building. Meetings begin at 5pm with building sessions or presentations and last until 10:00pm or so.

Questions? Call Club President Jennifer Ash-Poole at 410-674-6262 or visit NARHAMS online at <http://www.narhams.org>

Back when I was growing up I hadn't known about the NAR. Even if I had known, I doubt I would have had the money to join. Now that I can afford to support the NAR, I do so with money towards the legal fund, membership, donations to auctions, etc. I also give my time to TARC [Team America Rocketry Challenge], as I find it fun to be involved.

The NAR gives me that connection to the whole wider array of people and events that aren't available elsewhere.

I know you had been involved with competition for a few years, but I haven't seen you at the most recent meets. What got you started and are you still competing?

I got into competition when I got back into the hobby about three years ago or so. I'm not competing now because I really find I don't have the time (or concentration) to devote to the nuances of competition that would cause me to really do well. So instead of just making everyone else look good, I've taken a break from it. I stay aware of contest flying by using the contestroc [Yahoo] group, and will probably get back into competition once I find an event that appeals to me sufficiently.

While I started competing just to see how I would stack up against others, I kept at it long enough to realize that it's great to be a part of that core of rocketeers that knows each other and catches up at each event, like an extended family. It's as much the social aspect as the competition itself that draws me to rocketry. There are great people involved in rocketry, from the families to the individuals, and I hope that says something about me!

Is there anything in the NAR or hobby in general that you would like to see changed?

I'd really like to see an effort to find and purchase a national flying field. I also wish I had more resources to help with the legal battle, like close personal ties

to a Senator or two. There's really nothing I would like to have changed that I can afford the time to change ... and that's really where I draw the line. If I can't do it myself, or motivate others sufficiently to do something, then I'm not going to just cry sour grapes.

What do you like best about model rocketry?

The camaraderie between sport flyers, competitors, vendors and all of the extended family. I could just fly rockets right here in Central Pennsylvania, at my own field, but that doesn't fill my need for socializing and helping others.

Is there anything you'd like to add?

I'm tempted to try for the NAR Board, although I really am not sure I can provide enough of a unique insight into any aspect of rocketry that would allow me to contribute significantly, especially when the other candidates are people like Jay Apt or other famous contributors to the hobby. With my background in IT, I can hardly speak to fund-raising, member retention, or clout in Washington. But I'm still intrigued enough to mention it here. ✨



John McCoy launches Jim Miers' 3-stager at the May sport launch.



Kate shows you CAN mix pink rockets and flame decals at ECRM.

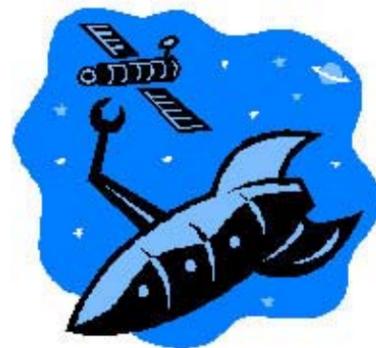


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Der Juni Astrobulletin, Mein Freund

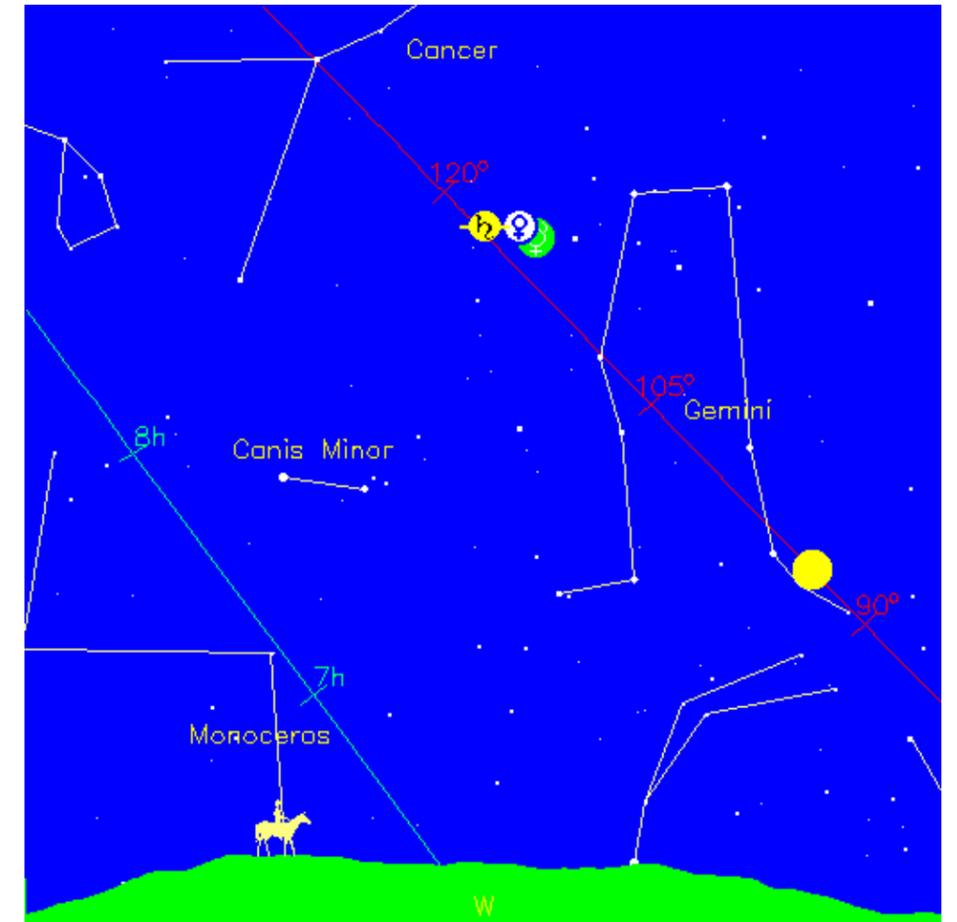
Paul Miller, NAR 51615

A recent ECRM brought Beethoven to our ears from a large white tent attached to a Virginia-plated van. A certain D.P. stationed within proclaimed that I should stick to astronomy and abandon musicology. I had accused the Herndon hybrid guy of Mendelssohn noise pollution, then I was sternly corrected that only Ludwig could compose those sweet sounds. I responded poorly blasting Billy Ray Cyrus on my car radio. Then, the Filler Ford truck sounded off with their favorite tune many dBs higher. Realizing I was wrong, I scrambled up the hill to the picnic.

Frankly, I earned an A in Music Appreciation at a local university, merely 40 years ago. "Astronomical" music has always ranked at the top of my listening pleasure. Please consider: Gustav Holst's The Planets; John Williams' Star Wars, E.T., and Close Encounters of the Third Kind music; and Beethoven's Moonlight Sonata. Don't for rocket music includes Elton John's Rocket Man, and the Platter's Smoke Gets in Your Eyes. Christmas just hasn't been the same since Alan Williams brought the Rocket Carols to the December 1991 NARHAMS meeting.

Sure, I'll just stick to astronotes for now. I was asked to be brief [by the staff typist], so here goes. Soon June will be busting out all over, especially in Oklahoma. Here in Delmarva the June sky promises some notable sights too! I will introduce the highlights **CHRONOLOGICALLY** (with dates):

- Jupiter heads back to Spica in the southwest nightly (5)
- New Moon (6)
- First Quarter Moon (14)
- Saturn in Gemini with Venus and Mercury below (18)



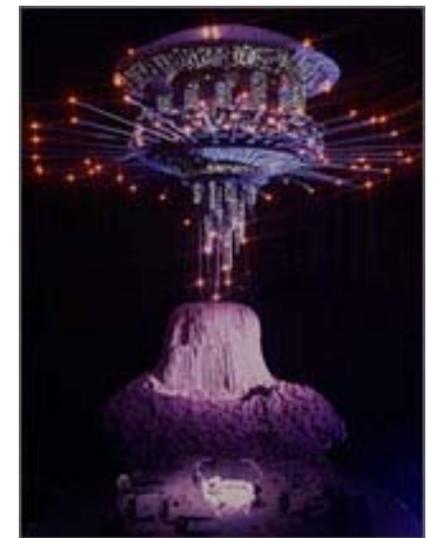
What you may see on June 24th-Saturn, Mercury and Venus in a close encounter. Sky map from <http://www.fourmilab.ch/cgi-bin/uncgi/Yourhorizon>.

- Summer solstice (21)
- Full Moon (22)
- Three planets within 2 1/2° (24)
- Mercury and Venus only 0.1° apart (27)
- Last Quarter Moon (28)
- Mars rises 1:00 am EDT (30)

Pretty exciting isn't it? Of course, there are clouds and mosquitoes in June too.

Actually the most exciting is the trio of Saturn, Venus and Mercury in an apparent "close encounter" to Earth's observers from June 22-29. The climax of this grouping occurs on June 24 about 45 minutes after sunset on the WNW horizon. On the 27th, Venus and Mercury are virtual planetary companions some time and same place and just to the left of Pollux and Castor. Maybe with a water hose, shovel and lotts a mud, I can build a giant Devil's Tower in my front yard!

Phone Home, NARHAMSters! ✨



Asian Tsunami Seen from Space

by Patrick L. Barry

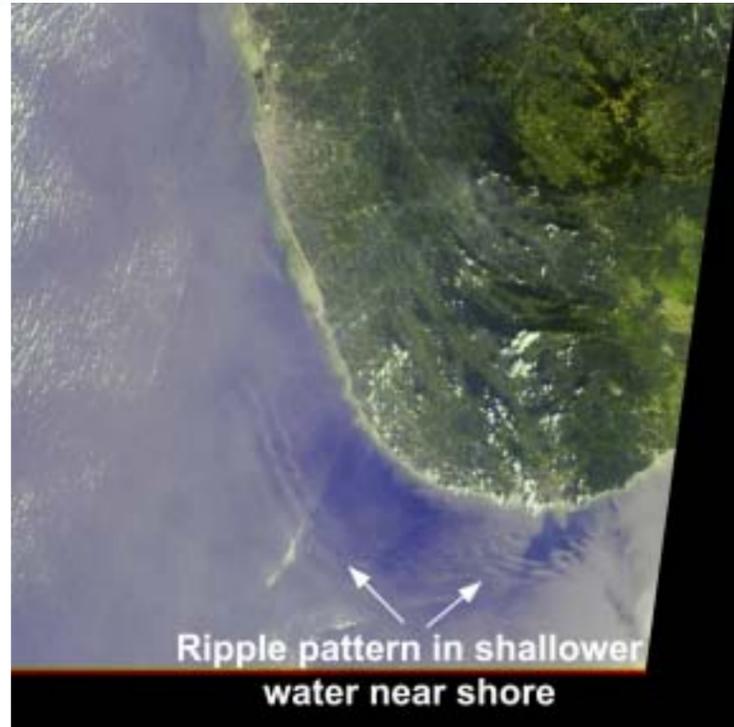
When JPL research scientist Michael Garay first heard the news that a tsunami had struck southern Asia, he felt the same shock and sadness over the tremendous loss of human life that most people certainly felt. Later, though, he began to wonder: were these waves big enough to see from space?

So he decided to check. At JPL, Garay analyzes data from MISR—the Multi-angle Imaging SpectroRadiometer instrument aboard NASA’s Terra satellite. He scoured MISR images from the day of the tsunami, looking for signs of the waves near the coasts of India, Sri Lanka, Indonesia, and Thailand.

Looking at an image of the southern tip of Sri Lanka taken by one of MISR’s angled cameras, he spotted the distinct shape of waves made visible by the glint of reflected sunlight. They look a bit like normal waves, except for their scale: These waves were more than a kilometer wide!

Most satellites have cameras that point straight down. From that angle, waves are hard to see. But MISR is unique in having nine cameras, each viewing Earth at a different angle. “We could see the waves because MISR’s forward-looking camera caught the reflected sunlight just right,” Garay explains.

In another set of images, MISR’s cameras caught the white foam of tsunami waves breaking off the coast of India. By looking at various angles as the Terra satellite passed over the area, MISR’s cameras snapped seven shots of the breaking waves, each about a minute apart. This gave scientists a



unique time-lapse view of the motion of the waves, providing valuable data such as the location, speed, and direction of the breaking waves.

Realizing the importance of the find, Garay contacted Vasily Titov at the National Oceanic and Atmospheric Administration’s Pacific Marine Environmental Laboratory in Seattle, Washington. Titov is a tsunami expert who had made a computer simulation of the Asian tsunami.

“Because the Indian Ocean doesn’t have a tsunami warning system, hardly any scientific measurements of the tsunami’s propagation exist, making it hard for Dr. Titov to check his simulations against reality,” Garay explains. “Our images provide some important data points to help make his simulations more accurate. By predicting where a tsunami will hit hardest, those simulations may someday

This December 26, 2004, MISR image of the southern tip of Sri Lanka was taken several hours after the first tsunami wave hit the island. It was taken with MISR’s 46° forward-looking camera.

help authorities issue more effective warnings next time a tsunami strikes.”

Find out more about MISR and see the latest images at www-misr.jpl.nasa.gov/. Kids can read their own version of the MISR tsunami story at http://spaceplace.nasa.gov/en/kids/misr_tsunami.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

News from VRS

Reported by Tom Lyon, NAR16558
Vikings Rocket Society conducting an outreach workshop working with William Fox Elementary School 5th graders held their class launch Friday May 17th in downtown Richmond. 49 rockets flown, and one of the more decorated rockets came from the excited daughter of the governor of Virginia.

Chesapeake Bay Governors School TARC team in Tappahanock took third place in the physics division at the Virginia Junior Academy of Science competition with their project on “Study of Model Rocket Engine Variability” and displayed their homemade engine test stand. The CBGS TARC Team had made excellent practice flights for the TARC competition, but staging and cluster problems failed to make the final 100 at Great Meadows this year but did send in a qualified flight. The team also attended the TARC finals May 21st as spectators. 🌟

Meeting Minutes- 7 May 2005

Reported by Dr. Chris Kidwell

Prior to the meeting a NARAM models discussion was presented by by Chris Kidwell.

Meeting called to order at 7:58 pm by Jennifer Ash-Poole. Members attending: Jennifer Ash-Poole, Scott Branche, Jim Filler, Chris Ha, Tom Ha, Zach Ha, Tom Henderson, Chris Kidwell, John McCoy, Ed Pearson, Mark Petrovich, Alan Williams.

Minutes from April meeting read.



Motion to accept (Jim Filler/Tom Ha) passed.

Old Business

ECRM was held April 16-17. We had a good turnout from PSC and SPAAR and good weather.

Rockville Science Consortium: Apr 26, participants built Alpha IIIs, flew 18 later in the day.

OPOSSUM-9 is set for May 14. Range will be open for contest flights until 5:30pm. Night launch follows. Anything flying at night must have flown earlier in the day.

Goddard Contest July 17. Flyers are being proofread and will be distributed soon. Jennifer is still twisting arms for trophies and prizes.

NARAM-50 coincides with 50th anniversary of model rocketry (and International Geophysical Year). Perhaps NARHAMS should submit a bid? John is adamantly opposed to it and will not be part of it if we do. Ed feels it would be a lot easier than NARAM-35 due to NOVAAR helping with logistics. Tom Ha feels it is an honor to be asked, and thinks it is time for us to jump in and show the NAR what we can do. Discussion will continue.

Treasurer’s Report

For April- Collected \$106.89, spent \$260.00. Income: \$35 dues, \$35 Zog-43 subscriptions, \$32 raffle, \$4.89 interest. Expense: \$100 pavilion rental for ECRM, \$70 CP Airport Museum fees (cadet), \$50 NAR memberships (cadet), \$40 section renewal. Cash: \$147.61 Bank: \$1502.44 Total: \$1650.05. Motion to accept (John McCoy/Scott Branche) passed.

New Business

May 14 building session at Hobbytown USA. Tom Ha and Jennifer will be there 10 am - 1 pm. They can then come out to Middletown to fly.

TARC equipment: need 2 batteries, 3 retrieval poles (club, John, Tom Bagg), flag pole, US flag, 6-position launcher, satellite relay, set of leads. Chris will take stuff out of Middletown equipment box.

Next month building session is fiberglass tubing with Mark Petrovich.

Building session on July 10 at Goddard in preparation for Goddard contest the next week. Ed moves to allocate up to \$60 to buy kits. Scott Branche seconded. Passes Scott Branche has 25 Quest Star Hawk kits that he will donate.

NAR HQ is moving to Iowa at the end of June.

At ECRM last month, a Mean Machine came down under parachute and bounced off the roof of a minivan parked in the gravel parking lot. The owner of the vehicle noticed two scratches on the roof and wants the damage repaired. We have asked for her to give us an estimate on the cost.

We set up a display of 1/70 scale space models at Maryland Science Center today. John and Mary McCoy, Ed, Chris, Jennifer attended. John also did a MicroMaxx launch outside. They are interested in doing a building session/launch that can be completed in 1 hour time. John has some ideas for a kit. Maybe we can get Bill Stine to do production.

Motion to adjourn (Alan Williams/John McCoy) passed. Meeting closed at 9:22 pm. 🌟



Kit Review:
Semroc Fire Fly

By Tom Lyon, NAR16558

First... a quick history lesson about Semroc Astronautics Corp. Semroc was originally first started by Carl McLawhorn in late 1967 in North Carolina. Eventually getting seriously into manufacturing of their own components and engines by 1969. Financial troubles eventually forced Semroc to close its doors in early 1971. Some 31 years later, Carl McLawhorn restarted Semroc.

The Fire Fly is a "retro-reproduction" kit replicating the Centuri Fire Fly kit from 1968. The original Fire Fly was a two stage employing the use of "shorty" engines. These "shorty" motors were 1/2A and A 18mm motors that were ONE inch shorter, the first attempt at creating a mini engine. They were still 18mm, but just 1.75" long. The total length for this 2 stage is 9". Body dia. Is .908" (old Centuri ST-8).

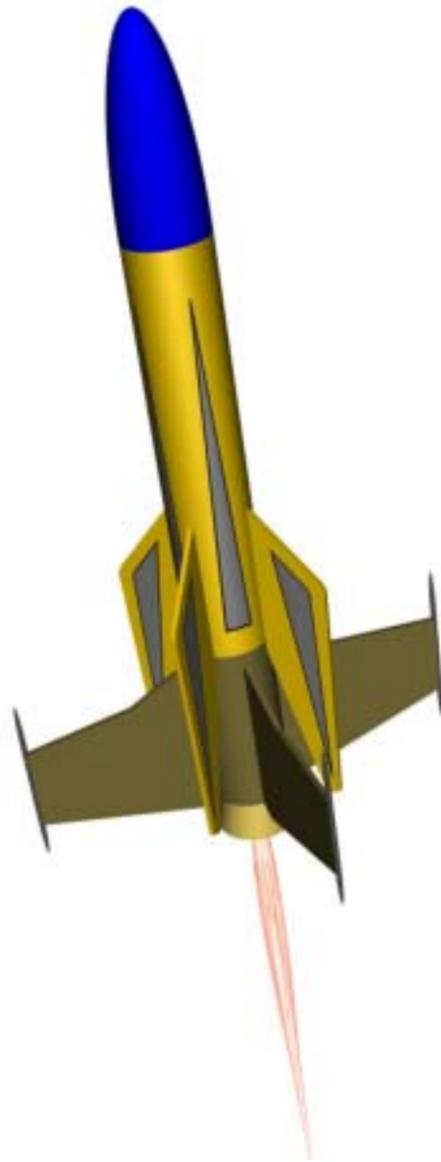
What Semroc has done with this kit is to maintain the original body tubes



and sizes, including "shorty" 18mm engine mounts, but provide adapters to fly with 13mm engines. However, because there are no longer any certified booster 13mm engines (the A3-0t and A10-0t have been out of production for a while now), the instructions say to fly as a single stage only (and only the upper stage). Another item, which threw me off guard, was you're instructed to glue the 13mm engine in the provided adapter. The kit includes 4 adapters, so essentially you get 4 flights out of this kit, unless you make up your own adapters. I opted to glue in engine blocks in the adapters and friction fit instead.

Assembly was quick and easy and very much like the old days. The only exception being this Semroc kit now supplies laser cut fins and the nose cone weight is now steel instead of lead. The original Centuri kit employed fin templates and the modeler had to cut the fins out of sheet balsa. It's now flown as a single stage using the upper stage since there are no 13mm booster engines being made, making the booster stage basically an display ornament Recovery is now a plastic streamer instead of crepe. Decals are also included for dressing up the fins

One other cool thing about Semroc kits, is that each kit is provided with a data card with the model's specifications, original release date and manufacturer AND Semroc production number. My Fire Fly kit has production # 152



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NEXT ISSUE'S SUBMISSION DEADLINE IS JUNE 1st!

July 3rd
Visitor's Center
Goddard Space Flight Center

PUBLIC LAUNCH

June 11th
10:00AM-4:00PM

Cluster/Theme
Middletown Park

SPORT LAUNCH

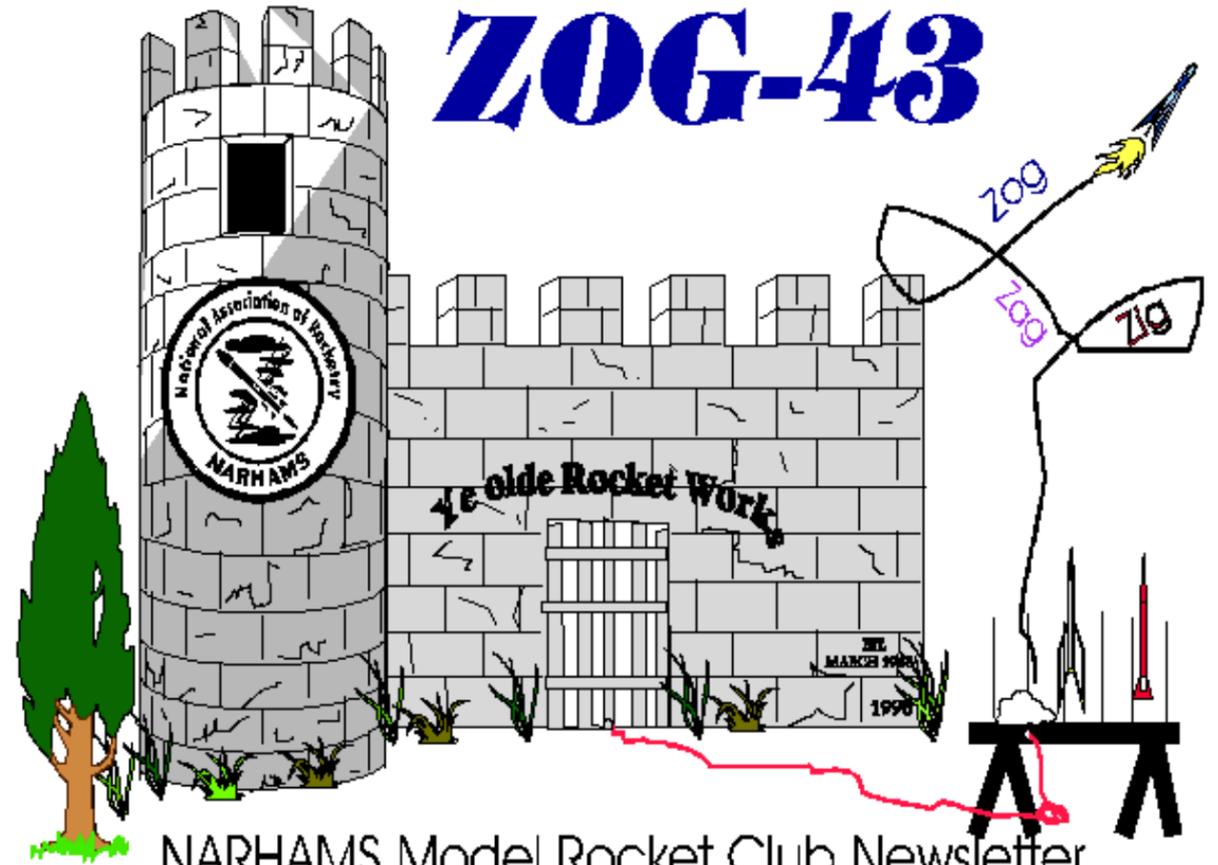
June 5th
Visitor's Center
Goddard Space Flight Center

PUBLIC LAUNCH

Launch Schedule

ZOG - FORTY THREE
5269 RIVENDELL LANE, APT 5
COLUMBIA, MARYLAND 21044

ZOG-43



NARHAMS Model Rocket Club Newsletter