



# ***THE ZOG-43***

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



**Sept/Oct 2011**  
**Vol 33 Number 5**



Photo looking out from the control rack at the Capitol Cup  
*(photo taken by Ole Ed Pearson)*

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## About NARHAMS

NARHAMS serves Baltimore, the state of Md., Washington DC and the surrounding Metropolitan areas. The club is a section of the National Association of 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 seven time winner of the NAR "Section of the Year" award.

Years won: 1997, 1998, 1999, 2001, 2004, 2006, and 2007

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 third Saturday of every month at Old National Regional park near Mt. Airy, 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.

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

### **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.

## THE ZOG-43 ZOG-43

**Volume 33    Number 5**  
**September/October 2011**

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 bi-monthly and is available to anyone on a subscription basis. Current rates are \$10 for email or \$15 for meeting pickup or \$20 for postal mail U.S. Funds for 6 issues a year, payable to NARHAMS    Material in ZOG -43 is not copyrighted. Free and unlimited reproduction is granted with the proper credit to the author and/or ZOG-43.

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 :

ZOG-43,  
1404 Sweet Cherry Court  
Severn, MD 21144

E-Mail ZOG-43 at:  
zog43editor@yahoo.com  
Zog-43 Editor: Jennifer Ash-Poole

## ZOG ROYAL COURT (NARHAMS OFFICERS)

**ZOG** (President)  
Jim Filler

**VICE ZOG** (Vice-President)  
Alex Mankevich

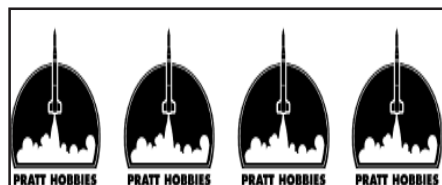
**COLLECTOR OF THE ROYAL TAXES** (Treasurer)  
Ed Pearson

**KEEPER OF THE HOLY WORDS** (Secretary)  
Chris Kidwell

**COURT JESTER** (Section Advisor)  
Mark Wise

\*\*\*\*\*

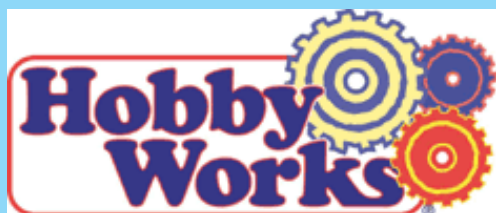
**Welcome New Members**  
Dan Ryan  
Peter Vanderham  
Benjamin Vanderham  
Gregory Vanderham



Pratt Hobbies is proud to announce that we are now a QUEST dealer! Contact us for all your Quest and MicroMaxx products.

Check it out at  
[www.pratthobbies.com](http://www.pratthobbies.com)

Mention your NARHAMS membership on the online order form for a Special Ludicrous Discount!



Save up to 20 % at Hobby Works when you show your club membership card.

## Greetings and Happy Autumn!

After several e-mails received I am putting together a few words for my bi0monthly column so the ZOG-43 Editor doesn't send the boys down from Jersey to rough me up. ☺ Speaking of our editor, please send your editor an article, photos or even drawings done in crayon that are club or rocket related. If everybody sent something then the editor wouldn't have to nag.... I mean inform us about needing stuff! In all seriousness, either pick something you are familiar with or something you are learning more about and put together an article for your editor! Alan.... No ghost stories about heads on the runway! Tom Lyon if your reading, no scale data on AMC Gremlins !

*Editor's Note: Since Tom Lyon is a LAC Judge, he is not allowed to send us articles. I may have to dig up some old ones from the library. Those won't count against him, but may count against us. Just kidding!*

Shifting gears.... Next month is the planning meeting which will take place during the normal November meeting. We will start early at 5pm to extend the total time of the planning session. If you have ideas please send those to the club secretary Chris Kidwell via e-mail (link on the website). I, for one, liked the process we used last year to get the planning meeting done. It certainly brought more people to the meeting and involved them in the process. I would like to tweak this process this year by taking my opinions and ideas out of the mix. I found myself "pushing" ideas for the sake of getting the calendar filled and done. This year I need the membership to bring the ideas, talk about the ideas, refine the ideas, and get them onto the calendar. I will overseeing the process and will only provide the guidance to make the meeting "go". I hope to see you at the meeting and if you cannot make it please send in your ideas ahead of time.

**Jim**



Rockets in the Air Force Museum in Dayton, Ohio  
(photo by Jennifer Ash-Poole)

## Rocket Building Tip

by Jef Fineran

Good find in the dollar store...great for applying future...cut to the right size and go to town !

10 pack goes a good ways further than buying disposable foam brushes..





## And the FROG goes to....

Long time club member and friend Don Carson retired from NASA this past September after 38 years working for the government—28 of them at GSFC.

The MAVEN project manager and former STS Spartan manager hosted a celebration party September 15, Don's birthday, at the Old Bowie Grill in a packed room upstairs attended by family, friends and co-workers.

Some of these roasted Don (e.g., MAVEN Principal Investigator Bruce Jakosky from Boulder Colorado, "Don came in pledging to turn this organization around 360°"), others praised him, and Sue Bright told of introducing Don to his future wife Lourdes. Their children, Jay and Nicki, took all in great stride.

Don revealed he wanted to be a sounding rocket engineer all his life and even as a seven-year old thought that his second grade teacher, Mrs. Shepherd, was married to the Astronaut Alan Shepard

The club awarded Don their highest honor, an out of cycle FROG award in recognition to Don's inspiration and integrity, and Jim Barrowman (out of town at the time with his family) sent a heartfelt letter recounting in part Don's model rocket experience.

The award read in part, "Don's life-long love of aerospace has led to a successful NASA career, dear friends, and serves as both a model and inspiration for all model rocketeers."

After Don got up and summarized his work career, he was given a group gift of a radio controlled sailplane. He liked this very much. Then it was time for music. Don had flown in from Colorado chanteuse Rebecca Folsom and her guitarist Chris who with

two local musicians proceeded to entertain the gathering.

Afterwards, Don wrote to club officers, "I am truly honored to receive this recognition from a group that played such an influential role in my life. Many of the

experiences and lessons gained through my involvement in the hobby benefited me directly as I moved through life. Designing, building and flying competition models sparked the engineering problem solving juices in me. Producing the Zog-43 exercised those writing muscles that paid off in college and at work. I was never again daunted by multi-page writing assignments. My involvement in serving the club as an officer and helping run contests helped prepare me for leading teams in my career at NASA and, perhaps even more challenging, leading the PTA at my kids' elementary school! If you can lead a volunteer organization, you are well on your way to successful management in the workplace."

"Although I learned from building and flying models, the most important experiences came from the people I was fortunate enough to associate with. This hobby attracted and exposed me to a tremendous range of characters, er individuals, from the craftsman to the techie, introvert to roaring extrovert, young and old, all were welcomed. At the risk of omitting many, I'd like to thank a few folks for their support. Ole Ed for his constant presence and for showing me how to run contests. Paul Conner for teaching me the craft of rocket boosted gliders. Dave Lewis, my competition teammate and cohort in producing the Zog-43. Finally,

my thanks to Jim and Judy Barrowman for their friendship, many rides to events, their patience with all us "kids", but most importantly, for their laughter. Model rocketry should always be fun."

"Again, I am most humbled and grateful to receive this recognition and thank you from the bottom of my heart."

Two days later Don showed up at the Capitol Cup and helped

timed flyers in the S8 E/P radio-controlled E-engine rocket-glider event. Asked if he had fun, Don replied, "I'd rather be flying instead" and pledged to work with Dimitri Avramov to hone his own RC skills.



# NARHAMS SHIRT ORDER FORM

Name: \_\_\_\_\_

Date of order: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

S	M	L	XL	S tall	M tall	L tall	XL tall	2XL	2XL tall	3XL	3XL tall	printing only	Total	Total	paid cash/check
\$7	\$7	\$7	\$7	\$9	\$9	\$9	\$9	\$9	\$10	\$10	\$11	\$3	pieces	\$	

Sweatshirts and Hoodies also available

Sweatshirt      Hoodies

S-XL    \$14      S-XL    \$18

2XL    \$15.50      2XL    \$19.50

3XL    \$17      3XL    \$21

MORE INFO on website

<http://www.narhams.org>

\* For people providing their own custom shirt (polo, pocket, odd size, etc). Printing includes the same logo locations as the regular order. For other locations, please specify. Shirts must be supplied at the October or November business meeting.

To order, complete an order form and submit with payment at the October or November business meeting.

Order forms may also be mailed with check or money order payable to Maria Ha to:

Maria Ha

512 Chestnut Street

Mt. Holly Springs, PA 17065

The deadline for all orders is November 5. Shirts will be distributed at the holiday party on December 3.

For more information, please email Maria Ha.

# THE 206-43

## C THRU by NEWWAY Space Models - Kit Review

By Tom Ha

The C THRU is a new kit sold by the aptly-named Newway company, using square body, square clear payload section and as many other square parts as possible – including the launch lug! The rocket is a handsome and tall rocket, taller than nearly every other rocket in the current Newway fleet, reaching 2 feet tall with a width of 1.33". The rocket is meant to fly on 24mm engines, and the engine hook is made for the length of the mighty D. It also features through-the-wall fins and balsa nose cone (cube?), bulkhead and laser cut fins.

The kit comes with an instruction sheet that makes liberal use of photos and includes a full-color photo of the parts layout among others. This is a nice feature for us older rocketeers that need all the help we can get in differentiating pieces and parts. The instructions are clear and include appropriate warnings about areas that a newer rocketeer might miss, like not stripping the screws when placing them into the balsa.

There are other features of the kit that show some marked work that went into the design, including a washer and screw that go into the base of the nose cone and another that goes into the base of the bulkhead. It's not clear if the lower one is meant to add weight for proper balance, or perhaps to provide a stronger attachment point for the screw eye. Did I mention the 29 pictures that amply detail nearly every point in the

construction, not just the most complex points? Other detail items are the sandpaper sheets, emery board and paper ruler that makes it more self-contained than most other kits that I've built. There is also a sheet of gold self-adhesive paper with instructions on how to use it to make your rocket shine.



A couple things stuck with me in the end, the body tube was skewed slight from square and wouldn't stay square, leading to fin alignment issues. The body tube also has very noticeable spiral wrap marks – so obvious that I didn't try to sand them down for fear I'd be left with nothing to fly. The engine mount was the most egregious error, since just holding the marked engine mount next to the body tube clearly shows that the markings are quite a bit off from what is needed if in fact you want properly placed through-the-wall fins. Using the markings as indicated would leave you trimming down the TTW tabs on the bottoms of the fins.

The final product is really eye-catching due to its shape and with the yellow paint job I gave it with the gold trim, so it should stand out during the day and at night. I'm sure it will be a great performer in my arsenal. I'm eager to fly this per our club's rules, once in the daytime in night-flight configuration, and then readying it for flying it at night. The clear tube is huge and I'm looking forward to adding multiple LED's in there to really make this rocket glow!

## Goddard Launches by Ole Ed

At the time of this writing NASA was awaiting a waiver from the FAA to resume the GSFC Visitor Center launches in October (through next September). Meanwhile the launches in August and September 2011 went well. In August, we put up about 60 flights for about 100 spectators and gave out 13 new flyer certificates.

September's launch was really different. Approaching launch time, we had three people with rockets ready and more than 20 families there (about 50 people total) expressly there to see the launches.

To make the show work GSFC Visitor Center staff ushered everyone into the auditorium where Alex Mankevich gave a presentation on model rocketry. Afterwards, two-dozen children in the audience were lent models and led outside for the launch. The surprise move was a big hit with those attending which included club members Alan Williams, Alex Mankevich, Ellen and Jeff Fineran, Michael Cochrane and your cub reporter here. We flew for an hour and issued 24 new flyer certificates. The launches continue to be a hit with the public; let's hope the FAA agrees and continues providing a waiver to fly. More to come.



# THE 206-43

## It's NARAM Time! By Tom Ha

Okay, so it's really past. But it's not "passed" as so many grammar-deficient types seem to prefer. I'm guessing even Microsoft Word likes it too, so it gets by all of today's High School graduates. This NARAM was the best one yet for me, because I didn't have to compete but I could take advantage of all the best parts of NARAM's, like the evening events (official and unofficial) plus helping out when and where I liked at the field. I even sport flew two models! My worry/work time for NARAM was before the first weekend, when I assisted in the Treasurer role for the NAR and helped report on all the numbers (I was officially voted Treasurer after the Monday night voting and Town Hall meeting).

This NARAM had a good mix of vendors, a very nice level field and probably the nicest upscale hotel ever for a NARAM. I get to stay in nice hotels when I'm on conference trips for my work, and this one was certainly in that top tier. The staff was very friendly and helpful, there were very few glitches that I knew about and even their onsite security guy didn't care about the coolers of adult beverages rolling through the halls.

One area I did notice was that the vendors have shifted away from working from their hotels rooms. If you wanted to see their product, you had to be on the field when they were (some only stayed part of the week, others got nervous around thunderstorms). There



Top Photo: Kevin presiding over dinner at the steakhouse.

Bottom Photo: Steve groaning over a Kevin joke.

(both photos taken by Tom Ha, on the sly.)



were still lots of things to do in the evenings, and I took full advantage of not running NARTS anymore by hanging out at the auction, the FAI turn-in room and other places. I'm not sure my attendance in the East Coast Strategy Room really made any difference unless it was in the brands and amounts of beverages I brought in, but it was good to be a part of it. I also got out of the heat one day by going to a movie theater and watching Harry Potter and then Captain America back-to-back.

In family news, Zachary took first place for B Division and won \$1000 for his R&D project about Estes A8-3 rockets engines, in which he static-fired over 200 engines and captured (and then analyzed) lots of information about them. Maria was at NARAM also and enjoyed the milkshakes from the United Dairy

Farmers store and also did her share of helping out around the event. I worked range crew for the one crew that seemed to lose half their members partway through the week.

Zachary has one year left in B division and may do more on his engines, and I'm looking forward to competing next year solely to fly the G egglofter (with altimeter) event. All in all it was a great time, made that way by the family atmosphere and convivial company.

# THE ZOG-43

## NARAM SCALE AND PMC PICTURE PAGE

I was able to get pictures of the scale and PMC without people in the room, due to me being an R&D judge (a last minute change due to a family emergency.) So I used my excuse of having to listen to C& Team R&D as a reason to be able to take pictures before pickup (since I was going to miss the viewing). - Jennifer



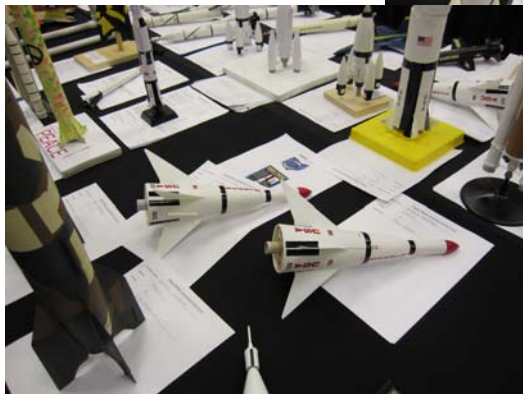
1.



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1. Jim Filler's PMC
2. Qualified Flight's PMC
3. Murphy's Lawyers PMC (Bell)
4. The Hardebey family PMCs (lying down)
5. Chris Kidwell PMC
6. Michela Alexander's PMC
7. B Alt scale models



5



6



7



# THE 20G-43

## Cannon Fund Auction

Every year, the NAR has a Cannon auction at NARAM. The money raised for this goes to grants for teachers using rocketry in the classroom. This year, Estes Industries sent 6 mystery boxes. Tom Lyon, the auctioneer, wisely allowed people to bid and win, but they couldn't get the box or open it until the very end. Kevin Johnson and the Hardebeys of Pittsburgh bid and won a box each. Here are pictures from Kevin on the fun stuff that was in those mystery boxes! Kevin will be busy for quite a long time. (Or, if you are looking for an Estes part. Kevin may have a spare to sell you.)



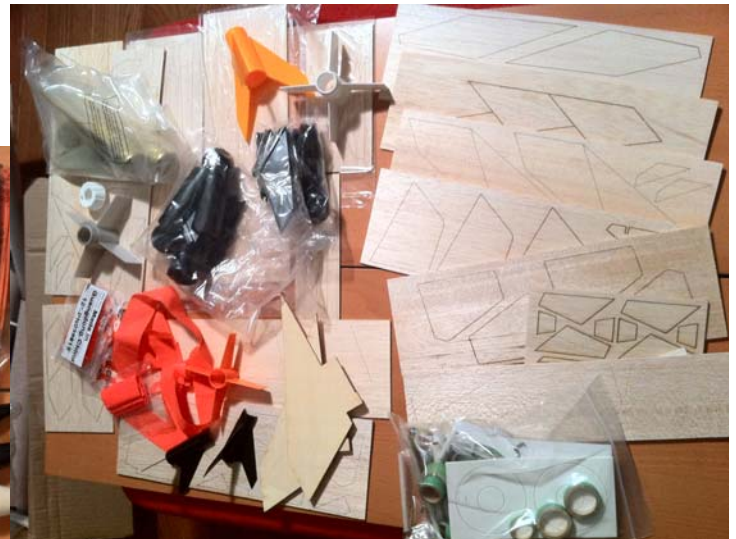
The Mystery box as it was first opened!



Look at all those tubes!



Nosecones and complete kits!



All the different fins and rings

# THE ZOG-43

## Ship Models of the U S Naval Academy Museum; a Second Look

By Alan Williams

Sometime before 2003 I wrote an article for the Zog about the Rodgers ship model collection at the USNA Museum at Preble Hall. This is a gathering of British Admiralty dockyard models privately collected in the 1920's by Col. Henry H. Rodgers, an associate of the banker J.P. Morgan, and later acquired by the Museum. Previously about 35 could be found in a crowded room near the museum's gift shop. I recommended viewing them not just as an example of how scale modeling's techniques and aims have changed through the centuries, but also as astounding works of historical art. Although they have absolutely nothing to do with rocketry, they will speak clearly to anyone among us who cares to listen.

The reason I bring them up again is that the Museum's total remodeling was completed last year. Part of that process greatly expanded the space available to the ship model collection. For the first time, the largest collection of its type in North America is displayed together in one area. Over one hundred models can be seen, dating from 1650 to shortly after the War of 1812, together with relevant paintings, full size dioramas and artifacts, and explanatory videos. They range from admirals barges to First Rate (over 100 guns) "Ships of the Line". One little gem is the Henrietta Maria, one of King Charles II's armed yachts; named for his mother (also the woman Maryland is named for). It is in one of about 1/2 dozen contemporary custom display cabinets also seen here. Most of the ships are represented in 1/4"=1 ft scale. All are mounted in fitted Plexiglas displays that protect, yet still let you get really close.

The collection is bordered by a group of special exhibits. As you enter the hall, the "Ship Modeler's Art" explains the purposes and manner of their construction, very often by the same shipwrights who made the actual vessels. You get some hints on how to spot the astounding detail that awaits your pleasure. Then, three areas present scenes of sailor's life: below decks, training young midshipmen in navigation, and using their sailing ships as weapons platforms.

Finally, there is an extraordinary collection of Napoleonic War Prisoner Bone Models. Not the horror show the name might imply, rather these are models made by (not from!) Dutch and French sailors aboard prison ships while awaiting release. (Prisoner exchanges were terribly few and far between during this era.)

During the years below decks, they began slicing strips off boiled beef and sheep bones from their meals. These were carefully worked into the ship models we see today. The rigging was made from strands of their own

hair. The results display a range from meticulous accuracy to total fantasy. (Cut these guys a break; they were making models from table scraps!) Eventually the models became a huge "collectables" commodity. The income from selling them often tipped the balance of life or death for these poor sailors over their decades of imprisonment

I have only one quibble. For the Prisoner Bone Models, I would have preferred the dark blue velvet background previously used to highlight their ghostly elegance. The display designers instead chose the brushed-steel backing common to most of the downstairs exhibits. I think this jarringly modern touch breaks the effect of the large unified paintings and dioramas showing what life was like for these prisoners. But what do I know?

The main museum below shows the history and contributions of Academy alumni to Naval and world history. Many excellent ship and aircraft models are seen as you wander the serpentine display floor. The layout actually makes sense now. During the remodeling displayed items were carefully weeded and redistributed to remove the clutter of previous decades. Many areas are now lit more theatrically. There is a compact area that highlights the remarkable USNA contribution to spaceflight. All in all, a much more coherent and effective experience waits for you.

So, your tour guide recommends another trip through the US Naval Academy Museum at Preble Hall. There be treasure there me' boys, aye!

Located on the first three decks of Preble Hall, 118 Maryland Ave.

Open 9-5 each day except certain holidays.  
Admission is free.

The gift shop in the basement features publications of the Naval Institute Press.

Come in the Maryland Avenue Academy gate (#3) with photo I.D. for all over 16; All personal belongings subject to search. The Museum is the first white hall in the left.

Be prepared to hoof it; the city parking garages are a bit of a hike. Ask me about options!



# ***THE ZOG-43***

## **Capitol Cup Pictures**

Several members of NARHAMS went to the Capitol Cup. Some competed, some supported. Here are some pictures taken by Ole Ed. (technical assistance in getting pictures off of the camera, the Zog Editor.)





# THE ZOG-43

## Roving Reporter finds builders with an iron and monokote

(pictures and articles by your Zog editor)



With 2 sport launches cancelled due to weather and corn, this Zog-43 roving reporter went in search of club members building different kinds of stuff to fill the pages. I had heard that there may be monokote ironing nearby. At a Wisconsin NARCON, there was a demo by the HPR guys on monokoting their large models. They used an iron, and some used the sticky type. Still, from afar, their models looked good, and they were water proof (useful when you launch at Bong and land in lakes.)

I ended up in Jim Filler's basement one Tuesday evening, while he and Kevin Johnson were working on their Phoenix RCRG birds. They have been working on this once a week for the past year, with build breaks for NARAM and the Capitol Cup.

*Kit: SkyKing RC Phoenix (Jim)*

*Mostly Aerotech Phoenix with some SkyKing parts (Kevin)*

*Kit out of production, but occasionally comes up on e-bay.*

*Engine: 32-mm Aerotech reloads*

When did you and Kevin start building?

**Jim:** 2 years ago?

**Kevin:** (looking up an old email on the Filler iPad)  
November 6, 2008 was the first mention of a building session for this model.

**J:** Both models survived a couple of moves.

**K:** I was still in the apartment then, so 2 moves for me.

**J:** one move for me.

What was the hardest part of the build?

**J:** attaching the tail feathers

**K:** All the sanding to round the fuselage.

**J:** I should have taken pictures. Kevin had the dremel to do the sanding, and by the time he was done, he was covered in balsa dust, the top of his head was so covered, he looked like he was a survivor of a nuclear blast.

How did you choose your monokote colors?

**J:** I went with orange and light blue, like the old Gulf Oil sign.

**K:** I went pink and dark blue. Jim wanted to use all the chrome silver in my stash but I said no.

You have a heat sealing iron and a heat gun. What are you using?

**J:** We used the heat sealing iron for the tail. I think we are going to tack on the monokote with the iron, and then use the gun when we do the body.

**K:** We don't **HAVE** to tack it on first. We can just blast.



(Reporter note: they used the heat sealing iron for the wing, which is what they started working on while I was there.)

# THE ZOG-43

What are you going to do on the wing?

**J:** We have this nice pattern here. (Kevin had a color copy of a pattern for the top.) I think I will use black on the bottom, since I don't think sky blue is really going to help with the visibility.

**K:** I am going with my dark blue.

I observed these two putting the monokote on their wings. Kevin had to chastise Jim for continuing to sand his wing, rather than just monokote it. Jim went first, doing a rough outline in black. Kevin reminded Jim to iron in the middle and work your way out. Jim ironed like he was getting one of his work shirts ready. Jim did not iron his monokote over the edge of the wing. He trimmed it down after letting the wing cool.



Then Kevin started getting his monokote rough cut. He did warn me he would bite if I tried to help. He did growl a bit at me when I got too close, and then whined that I took more pictures of Jim working than I did of Kevin. I was mesmerized by how Kevin was ironing on the monokote. He started in the center and worked his way out, using small circles to get a smooth finish. He then trimmed the monokote about 1 inch from the edge, and cut slashes perpendicular to the wing. Carefully he ironed the monokote, in sections, over the edge, to make it smooth round edge. There was a conversation about the leverons and whether they should have been glued in. Jim had glued, Kevin did not. Much discussion ensued.

**K:** Jim waits until I do something and then when I [mess] it up, he won't do it.  
Jim nodded in agreement.

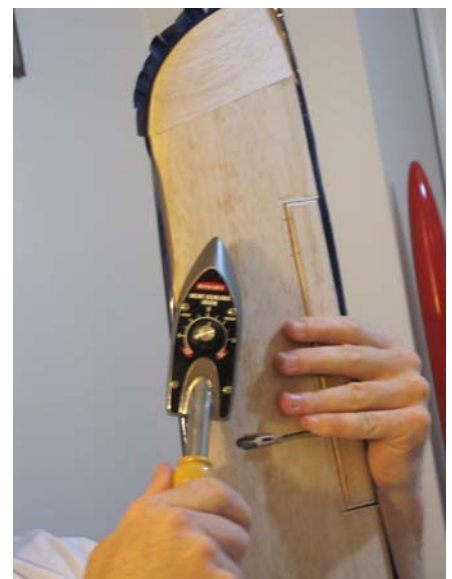
When are you planning on having these finished and flying?

**K:** I will fly it when it's done.

**J:** I am aiming for the November Sport Launch.

(Note: this will be the anniversary month of when they started building the model.)

I left them in the basement, with Jim preparing to do the second half of the wing on the bottom. The Big Bang Theory was playing on the TV, Matt was in the other room shooting something, and the basement was warm with the heat of the iron. Be on the lookout for the models in the next few months.





# THE 20G-43

## NARAM PMC LAUNCH PICTURES

I only got pictures of the Qualified Flight and Murphy's Lawyers flights. I tried to put them in order. Enjoy some of the carnage.



1



2



4



3

1. Steve and Kevin putting the model on the pad.
2. Kevin holding it for adjustments, while Jack Hagerty, PMC judge looks on.
3. Ooh, look! Parts everywhere!
4. The carnage! The pilot is here somewhere....
5. Finally! We (Qualified Flight) can get the pad to launch our V-2! (top part lost. Awesome flight!)

5





## The Search for a Field: Success at Last!

Mark Wise

For those of you who like your bottom line up front: *We have another field!* You don't have to read any further unless you want details.

It seemed like a simple enough job when Big Jim asked me to find another flying field. Ideally, it would be suitable for high power, wouldn't be located too close to busy athletic fields or amber waves of grain, and wouldn't cost us too much. I'd just Google every sod farm between Baltimore and Cumberland, and we'd be all set. It shouldn't take more than a couple of weeks, right?

That was in January 2009.

After months of phone calls and e-mails, I had to conclude that no sod farm was interested. Liability insurance and references from other sod farms didn't matter. Occasionally a NARHAMster would send a suggestion my way, but nothing ever quite panned out. Correspondence with the Farm Bureaus of Howard, Carroll, and Frederick counties led to some hopeful e-mails and a great meeting with the Carroll County folks, but nobody had open acreage that would quite work for us. We also looked over a winery near the Mount Airy site, but we were never quite able to close the deal.

Then, in August, I had a note from John Hochheimer asking if I'd checked out the Carroll County Agricultural Center, in Westminster. I'd driven up there last winter to meet with the folks from the Farm Bureau, but the meeting was at night and what I could see didn't look too promising. Having nothing to lose, I gave the area a look on Google Maps. It had possibilities. There was a field behind the main buildings, the dimensions looked to be good for G power, and there were no soccer/lacrosse/football fields anywhere to be seen! This was definitely worth exploring.

After some phone tag, I reached Nichole McLaughlin, manager of the Ag Center. She sounded enthusiastic, and we discussed possible dates for a demonstration launch. Finally, a ray of hope! I sent an e-mail out to a few club members to see when they might be available, and our vice president and newsletter editor committed to a launch on the afternoon of August 30<sup>th</sup>. A quick e-mail to John Hochheimer resulted in a NAR insurance certificate with the Ag Center as named insured, and we were ready to go.

We couldn't have asked for a nicer day than the 30<sup>th</sup>. The weather brought very light winds, clear skies, and temperature in the mid-80's. Jennifer, Alex, and I met Ms. McLaughlin in her office, and she directed us to our launch area. We would be flying from a gravel parking lot, with trees about 100 yards to one side. While Google Maps showed that the field would definitely be big enough for G power, we wouldn't take this demo past a D12-3.

The field behind the main Ag Center buildings is somewhat hilly, something that doesn't show up on a

Google Maps image, and the parking lot from which we flew the demo sits at the higher elevation. On a calm day, that will be sufficient for low-power models. On the lower level, there are two horse arenas. Looking at the dimensions of the field, we'll pretty much have to fly the mid-power from one of the arenas.

Ms. McLaughlin had never seen rockets fly before, so the whole experience was new to her. We wanted to create the most favorable impression we could, so we did our best to make it look like a regular club launch, with safety vest, trash cans, and fire equipment. First, we flew a rack of 1/2 A through D, which went pretty well. Jennifer's C bird hung up in a tree (her competition streamer worked just a little too well!), but the rest of the rack was uneventful. Next we flew a rack of less-traditional models. I flew a Deltie B/G, which came down in Red Baron configuration for a little while, then it finally separated for a nice glide. The nose separated from my Quarc two-stager at staging, which didn't look too good, but we could point out to Ms. McLaughlin that even when things go wrong, there's very little hazard to the rocketeers or spectators. We shut down the range for the three minutes it took to review the mishap (probable cause: drag separation), then pressed on. Jennifer flew one of Jim Filler's beautiful helicopters, which didn't deploy (ouch!), then Alex flew an oddroc on a C11-3 that closed out the demo very nicely.

We all drove back up to the office to look at the Ag Center and NARHAMS calendars. We agreed that our first couple of launches should be NARHAMS only (no outreach), until we get used to the field and make sure that there won't be any problems. As of this writing, we have the field reserved on November 26, 2011 and March 24, 2012. We deliberately kept them away from our regularly-scheduled launch weekends. Our agreed rent is whatever we receive in donations that day – it's hard to see how we could do any better than that!

There are indoor bathrooms in the Shipley Arena, up the hill from the launch area. If someone else is using the arena that day, the arena will be open and the bathrooms will be available for our use. Some events also have concession stands open, which wouldn't be a bad thing, either! I could definitely use some coffee or hot chocolate during a November launch....

Special thanks to NAR Section Activities Chair John Hochheimer for arranging for an insurance certificate on short notice. The Ag Center does require insurance, and it didn't hurt our cause to let her know that they'd already been added as a named insured. Heartfelt thanks also to Jennifer Ash-Poole and Alex Mankievich for volunteering to help stage the demo launch.

See you in Westminster!

# **THE ZOG-43**

## **Dark Clues to the Universe**

By Dr. Marc Rayman

Urban astronomers are always wishing for darker skies. But that complaint is due to light from Earth. What about the light coming from the night sky itself? When you think about it, why is the sky dark at all?

Of course, space appears dark at night because that is when our side of Earth faces away from the Sun. But what about all those other suns? Our own Milky Way galaxy contains over 200 billion stars, and the entire universe probably contains over 100 billion galaxies. You might suppose that that many stars would light up the night like daytime!

Until the 20th century, astronomers didn't think it was even possible to count all the stars in the universe. They thought the universe was infinite and unchanging.

Besides being very hard to imagine, the trouble with an infinite universe is that no matter where you look in the night sky, you should see a star. Stars should overlap each other in the sky like tree trunks in the middle of a very thick forest. But, if this were the case, the sky would be blazing with light. This problem greatly troubled astronomers and became known as "Olbers' Paradox" after the 19<sup>th</sup> century astronomer Heinrich Olbers who wrote about it, although he was not the first to raise this astronomical mystery.

To try to explain the paradox, some 19th century scientists thought that dust clouds between the stars must be absorbing a lot of the starlight so it wouldn't shine through to us. But later scientists realized that the dust itself would absorb so much energy from the starlight that eventually it would glow as hot and bright as the stars themselves.

Astronomers now realize that the universe is not infinite. A finite universe—that is, a universe of limited size—even one with trillions of stars, just wouldn't have enough stars to light up all of space.

Although the idea of a finite universe explains why Earth's sky is dark at night, other factors work to make it even darker.

The universe is expanding. As a result, the light that leaves a distant galaxy today will have much farther to travel to our eyes than the light that left it a million years ago or even one year ago. That means the amount of light energy reaching us from distant stars dwindles all the time. And the farther away the star, the less bright it will look to us.

Also, because space is expanding, the wavelengths of the light passing through it are expanding. Thus, the farther the light has traveled, the more red-shifted (and lower in energy) it becomes, perhaps red-shifting right out of the visible range. So, even darker skies prevail.

The universe, both finite in size and finite in age, is full of wonderful sights. See some bright, beautiful images of faraway galaxies against the blackness of space at the Space Place image galleries. Visit <http://spaceplace.nasa.gov/search/?q=gallery>.

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



*This Hubble Space Telescope image of Galaxy NGC 4414 was used to help calculate the expansion rate of the universe. The galaxy is about 60 million light-years away. Credit: NASA and The Hubble Heritage Team (STScI/AURA)*

# THE ZOG-43

## NARHAMS 2011 CALENDAR

Oct 1	5:30 - 9 pm	Monthly meeting	College Park, MD	Ole Ed Movie Festival (Ed Pearson)
Oct 2	1 - 2 pm	Goddard Launch	Greenbelt, MD	
Oct 15	12 - 9:30 pm	Sport Launch	Mt. Airy, MD	Halloween Theme
Nov 5	5 - 9 pm	Monthly meeting	College Park, MD	Planning meeting
Nov 6	1 - 2 pm	Goddard Launch	Greenbelt, MD	
Nov 19	10 am - 4 pm	Sport Launch	Mt. Airy, MD	Military Theme
Nov 24	10am - 4pm	Sport Launch	Westminister, MD	New site, Ag Center
Dec 3	5 - 9 pm	Holiday party	Greenbelt Community Church, Greenbelt, MD	
Dec 4	1 - 2 pm	Goddard Launch	Greenbelt, MD	
Dec 10	11 am - 3 pm	Sport Launch	Mt. Airy, MD	

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### Mock Pierogies - A favorite at the holiday party!

(submitted by Maria Ha)

6 c. mashed potatoes (I used instant)  
1 8oz pkg cream cheese (I use the 1/3 fat variety)  
1 tsp salt  
1 lb Velveeta cheese (or cheese whiz)  
1 lg onion sliced (or more)  
1/2 stick butter (original recipe calls for 2 sticks)  
1 lb lasagna noodles

Saute onion in butter.

Cook Lasagna noodles. while they cook -

Make mashed potatoes. add cheeses to potatoes. (I used instant, heat milk, water and butter, add cheeses to melt, then mixed in the instant flakes.)

Layer like a lasagna, start with onion, then noodle, then potato, end with noodle then onion.

Bake at 300 degrees for 20 minutes.

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### Planning the next year is coming up at the November meeting!

Want to see something demoed or taught at a meeting? (i.e. glues, gliders, altimeters, etc).

Have an idea for a fun fly at a sport launch? (example, Halloween theme, Baby Bertha Theme, Alien payload)

Have something you want to teach everyone or demonstrate?

Think everyone in the club ought to build the same sport model and decorate it then fly it? (for example, a Big Betty or a new kit by SEMROC?)

Sedn your ideas to Chris Kidwell (kidwell@narhams.org) and/or come to the meeting and help plan the next year.



SPORT LAUNCH  
November 19, 2011  
Mt. Airy, MD

PUBLIC LAUNCH  
Goddard Space Flight Center  
Visitor's Center  
*November 6 2011*

PUBLIC LAUNCH  
Goddard Space Flight Center  
Visitor's Center  
*October 2, 2011*  
SPORT LAUNCH  
October 15, 2011  
Mt. Airy, MD

## Launch Schedule

206 - FORTY THREE  
1909 SWEET CHERRY COURT  
SEVERN, MD 21144

