THE ZOG-43

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

MAY 2007 VOL 29 ISSUE 05

ECRM-34 Coverage

By Jim Filler #27862

NARHAMS hosted the 34th East Coast Regional meet at our new home location at Old National Pike Park just west of Mt. Airy Md. on April 21st and April 22nd 2007. We have employed a "shell' game with Mother Nature trying to keep the date of the meet changing from year to year. Previous years have seen some of the better known acronyms for ECRM such as Extremely Cold Regional Meet or Extremely Cold & Rainy Meet etc. and so on. Well, it worked out this year. Both days were near perfect with temps in the low 70's and a very mild breeze. We actually had soccer games going on for parts of both days on the field adjacent to the flying field with only a few models landing in the game.

We had 23 entries representing the regional sections of SPAAR, SOJARS, PSC, and NARHAMS. With both days bringing beautiful weather, we had 149 sport flights. We had a visiting scout troop on Sat and a number of mid-power flyers on Sat burning up the AP motors. I understand at one point we had a wait for launch pads with a ¼' rod. We also had several of the cadets from the annual outreach program show up to participate for the contest events.

Flying got underway a little after 9am on Sat and all the contestants that were flying got started with Random Duration and

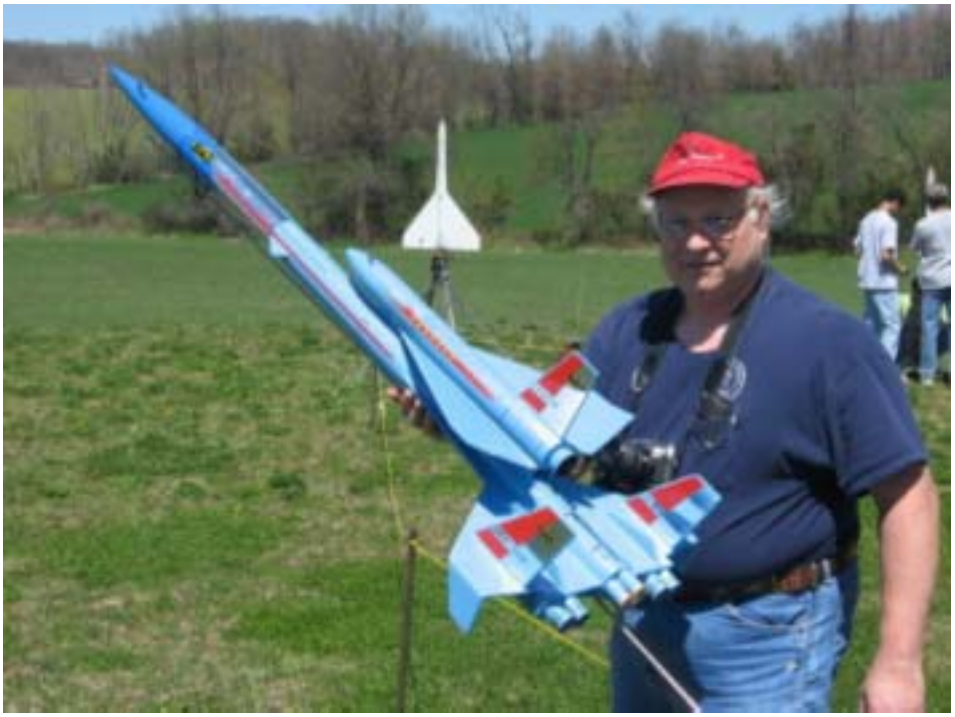

Photo by Jim Filler

a target time of 35 seconds. We had 19 flights and all of them were qualified! When you stop and think about it, that not one flight got DQ'd. Both Daevin and Jeevin Hugh from our cadet program scored zero percent error with perfect 35 second flights. The other duration events followed at the contestant's choice. "B" streamer duration seen some excellent flights. In A division Ryan Beverly combined 2 flights for a total of 130 seconds and a first place. Dr. Chris Kidwell a.k.a. Dr. Data combined two flights for193 seconds and a first place in C division. Steve Foster flying for Team Pittsburgh took first in teams with a total of 192 seconds.

1/4A PD Multi round was flown both days with some outstanding flights. Tyler Schafer put in three good flights to take 1st place in A division. Glen Feveryear of the SPAAR section managed three maxes to take first in C division. Glen was picking some great air; he had one flight just at 6minutes and another at just over 7 minutes. Talk about some booming thermals, the models were only boosting about 100' on a 1/4A then the up elevator effect would take over. The last duration event was A helicopter and again some great flights were turned in. Matt Filler combined two flights for 134 seconds and first place in B

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ZOG-43

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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 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 :

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ZOG-43 is edited by Roy Lappalainen, 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 & 2005

Photographs: by Roy Lappalainen, except where noted.

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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 and 2006

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 Pike Recreation 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 third 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.

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.

ZOG ROYAL COURT

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PRINCE ZOG (Vice-President)

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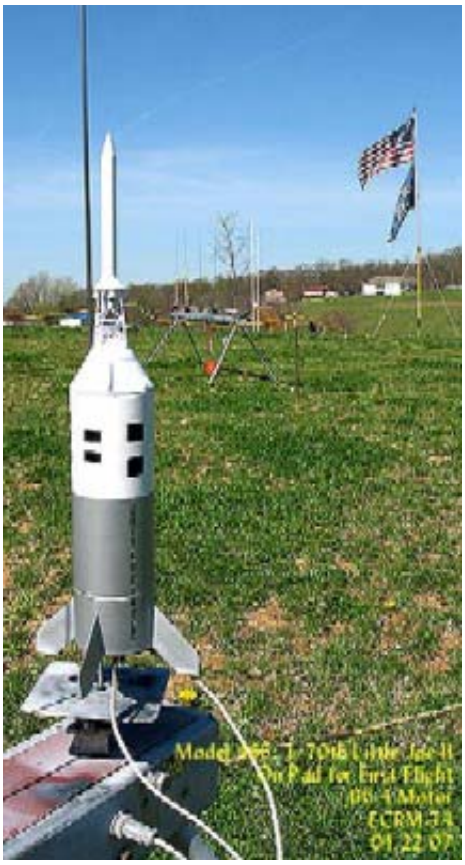
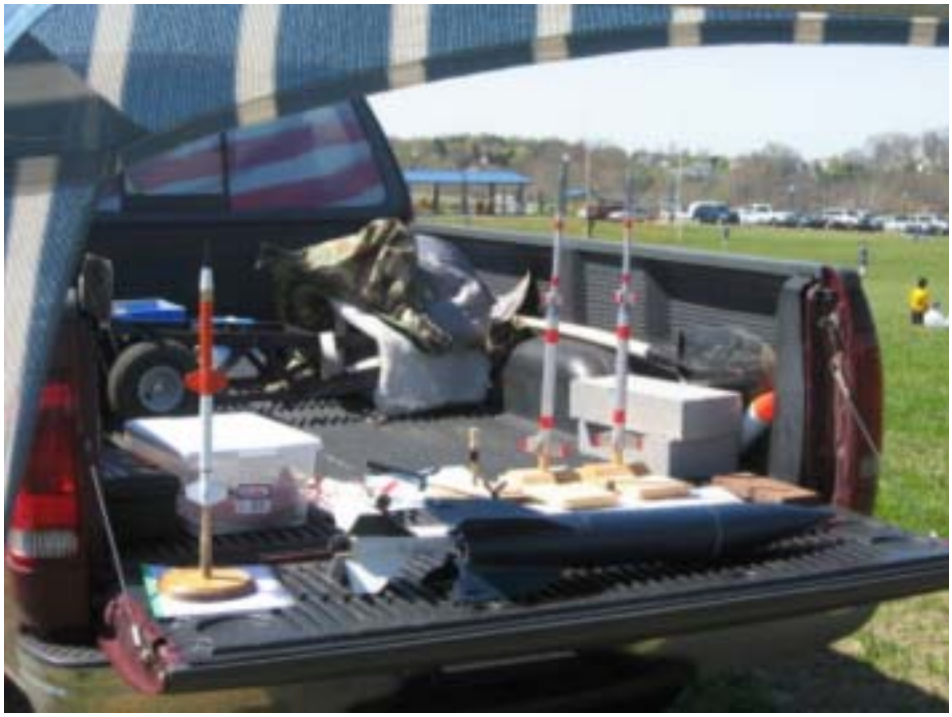


Photo by John McCoy

"What is in the sky?"
Photo by Jim Filler



Scale Models at ECRM-34 Photo by Jim Filler

division. Bruce Canino from the SOJARS club combined two flights for a total of 167 seconds and 1st place in "C" division.

With NARAM this year flying "C" Scale altitude, we decided to get some practice in and fly this event for ECRM as well. Modelers turned in their models on Saturday and got them back Sunday to fly. Chief Scale Judge Kevin Johnson did a great job of doing the overall judging. We had a scale judging party back at the hotel Saturday night. Kevin filled out the judging sheets, Doc Kidwell entered all the measurements into a spread sheet, Jennifer Ash-Poole and I did the actual measuring.

On Sunday we had a repeat of the weather from Saturday much to every ones delight. We opened with scale flights and only had seven entries to track. Matt Filler and Steve

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Plans

Red Varmint

"Yeah, it's got tubes instead o' balsa. Ya wanna make sumtin' of it?"

Design MH-07 by Alan Estenson, NAR 69539 SR

Length: 635 mm (25 in.)
Diameter: 25 mm (0.98 in.)
Weight: 66 grams (2.3 oz.)
Recommended engines: A8-3, B4-4, B6-4, C6-5

Parts list

A. One (1) 864 mm (34 in.) piece of t-50 body tube.
B. One (1) 70 mm (2.75 in.) piece of t-20 tube
C. One (1) eb-20 engine block.
D. Two (2) 20/50 centering rings.
E. One (1) 1/8" launch lug, 60 mm (2.375 in.) long.
F. One (1) 102 mm (4 in.) ogive nosecone, plastic or balsa, to fit t-50 tubing.
G. One (1) 12" plastic or mylar parachute.
H. One (1) elastic shock cord – about 1220 mm (48 in.) long.
I. One (1) 560 mm (22 in.) length of Kevlar cord (optional).

Building Notes

1. Cut three 51 mm (2 in.) lengths and three 64 mm (2.5 in.) lengths of t-50 tubing.

2. Glue the tubes together into three pairs with one short and one long tube in each pair. Center the shorter tube on the longer one. The remaining piece of t-50 should be about 521 mm (20.5 in.) long. This will be the main body tube.

3. Glue the engine block 64 mm (2.5 in.) up inside one end of the short piece of t-20. Glue the two 20/50 centering rings onto this tube. One ring should be about 13 mm (0.5 in.) from the bottom end and the other about 6 mm (0.25 in.) from the top end (end with the engine block.) If you'd like, tie one end of the Kevlar cord around the upper centering ring to use as a shock cord mount.

4. Glue the completed motor mount inside one end of the main body tube. Leave about 13mm (0.5 in.) of the motor mount tube extending outside the main tube. If you didn't use a Kevlar shock cord mount, make a folded paper shock cord mount and glue it inside the opposite end of the main tube

5. Glue the pairs of tubular fins onto the main tube such that the long and short tubes alternate. The ends of the longer tube fins should be spaced about 10 mm (0.375 in.) up from the end of the main tube.

6. Glue the launch lug on the main tube about 165 mm (6.5 in.) up from the bottom end. Align the lug such that the launch rod will pass between two of the tube fins.

Reprinted from Volume 8, Issue 6 of the MASA Planet Newsletter

NASA PROVIDES ADDITIONAL INFORMATION ON AGREEMENT WITH VIRGIN GALACTIC

MOFFET FIELD, Calif. - NASA officials signed a memorandum of understanding Tuesday with a U.S. company, Virgin Galactic, LLC, to explore the potential for collaborations on the development of space suits, heat shields for spaceships, hybrid rocket motors and hypersonic vehicles capable of traveling five or more times the speed of sound.

The memorandum is only a framework to explore potential collaborations. It does not include training of NASA astronauts, an agreement to buy seats on a Virgin Galactic flight, or provision of technical advice by NASA to Virgin Galactic.

For information about NASA and agency programs, please visit:

http://www.nasa.gov

Calendar of Events for 2007

Jan 06	05:30 – 10:00 pm	Monthly meeting, Helicopter Building
Jan 07	01:00 – 02:00 pm	Goddard public launch
Jan 20	10:00 – 02:00 pm	Sport Launch
Feb 03	09:30 – 01:00 pm	Cadet building session
Feb 03	05:30 – 10:00 pm	Monthly meeting, Scale discussion
Feb 04	01:00 – 02:00 pm	Goddard public launch
Feb 17	10:00 – 02:00 pm	Sport Launch
Mar 03	09:30 – 01:00 pm	Cadet building session
Mar 03	05:30 – 10:00 pm	Monthly meeting, Streamer/Spot Landing
Mar 04	01:00 – 02:00 pm	Goddard public launch
Mar 08-11		NARCON
Mar 17	10:00 – 10:00 pm	Sport Launch, HSQM-40
Apr 01	01:00 – 02:00 pm	Goddard public launch
Apr 07	09:30 – 01:00 pm	Cadet building session
Apr 07	05:30 – 10:00 pm	Monthly meeting, C-RG building
Apr 21-22	10:00 – 04:00 pm	ECRM-34, Sport Launch
Apr 29	09:00 – 04:00 pm	Rockville Science Consortium
May 05	05:30 – 10:00 pm	Monthly meeting
May 06	01:00 – 02:00 pm	Goddard public launch
May 19	06:00 – 06:00 pm	Team America Finals, Great Meadows, VA
May 19	10:00 – 40:00 pm	Sport Launch
Jun 02	05:30 – 10:00 pm	Monthly meeting, missile building session
Jun 03	01:00 – 02:00 pm	Goddard public launch
Jun 09	10:00 – 05:00 pm	NOMAGM Open Meet , Great Meadows, VA
Jun 16	10:00 – 40:00 pm	Sport Launch, C-Cargo Copter fun event
Jun 16-17	09:00 – 05:00 pm	SCST-7, Camp Lutherlyn, PA
Jul 01	01:00 – 02:00 pm	Goddard public launch
Jul 02	05:30 – 10:00 pm	Monthly meeting, UFO building
Jul 15		Goddard Contest
Jul 21	10:00 - 04:00 pm	Sport launch
Jul 28 -		NARAM-49
Aug 03		NARAM-49
Aug 04	05:30 – 10:00 pm	Monthly meeting
Aug 05	01:00 – 02:00 pm	Goddard public launch
Aug 18	10:00 – 04:00 pm	Sport Launch
Sep 01	05:30 – 10:00 pm	Monthly meeting, build “A rocket”
Sep 02	01:00 – 02:00 pm	Goddard public launch
Sep 15	10:00 – 10:00 pm	Sport Launch, night launch, R/C fun fly 2 pm
Oct 06	05:30 – 10:00 pm	Monthly meeting, Sputnik building session
Oct 07	01:00 – 02:00 pm	Goddard public launch
Oct 20	10:00 – 04:00 pm	Sport launch, FAI Practice
Nov 03	12:00 – 05:00 pm	Planning meeting
Nov 03	05:30 – 10:00 pm	Monthly meeting, glider building session
Nov 04	01:00 – 02:00 pm	Goddard public launch
Nov 17	10:00 – 04:00 pm	OPOSSUM-12, Sport launch

Sport launches are held at Old National Pike 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. Questions? Call Club President Jennifer Ash-Poole at 410-674-6262 or visit NARHAMS online at http://www.narhams.org

Cherokee 3-D Photo by Jim Filler

Foster both got no close on their flights but Steve was so far ahead that Matt took the official flight and second place with his Kappa model. Steve flew a beautiful Aerobee 100 JR model that scored very high in static, but was not tracked successfully. The fight was on in C division. Jennifer Ash-Poole tried to stage her Fulmar and failed on the first flight, she came back with a single stage flight good enough for third place. Dr. Kidwell flew a Terrier Nike that he got to stage on the first flight but suffered some tip off that hurt his altitude. His second flight was unstable. I flew a Kappa single stage and managed to hold on with a good straight boost combined with a good static score for first place.

We closed the range down at 2:00 on Sunday and proceeded to the shelter facility for the traditional BBQ and awards presentation. For those that attended ECRM this year, we had a special treat for the BBQ. I asked my mom and dad to take care of the picnic and boy oh boy did they ever. Mom made home made sides of macaroni salad and coleslaw plus homemade brownies and cakes for dessert. Dad made up fresh hamburger patties and worked the grill for dogs and burgers. Everyone seemed to really enjoy the BBQ this year. Once again I would like to say thanks to my mom and dad, Bill and Mary Harvey. Big thanks also go out this year to another ECRM constant. Each year we solicit vendors for door prizes and every year we have asked, Andy Jackson of Aerospace Specialty Products comes through graciously. So with great food and door prizes too, we handed out trophies for all the first place winners and ribbons for second through fourth places. NARHAMS would like to thank all that attended and especially those that helped out with making the meet run so smoothly.

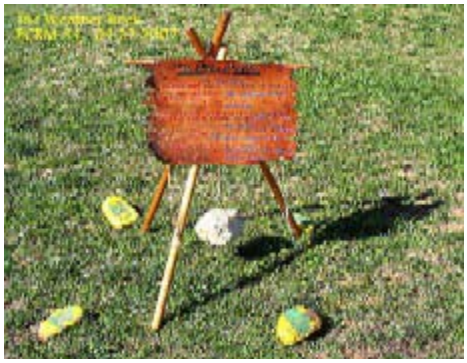
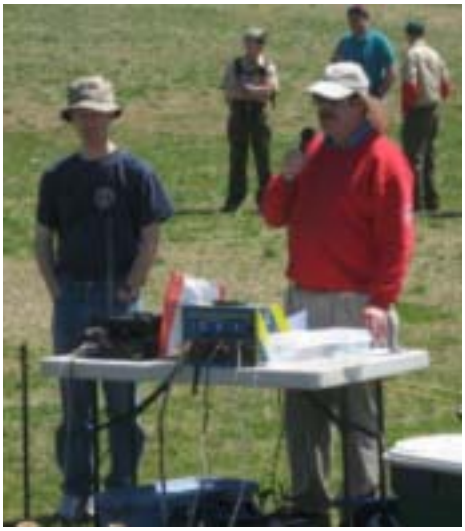


Photo by John McCoy



RSO table Photo by Jim Filler

Photo by John McCoy

NASA Space Place

Clouds from Top to Bottom

By Patrick L. Barry

During the summer and fall of 2006, U.S. Coast Guard planes flew over the North Pacific in search of illegal, unlicensed, and unregulated fishing boats. It was a tricky operation—in part because low clouds often block the pilots' view of anything floating on the ocean surface below.

To assist in these efforts, they got a little help from the stars.

Actually, it was a satellite—CloudSat, an experimental NASA mission to study Earth's clouds in an entirely new way. While ordinary weather satellites see only the tops of clouds, CloudSat's radar penetrates clouds from top to bottom, measuring their vertical structure and extent. By tapping into CloudSat data processed at the Naval Research Laboratory (NRL) in Monterey, CA, Coast Guard pilots were better able to contend with low-lying clouds that might have otherwise hindered their search for illegal fishing activity.

In the past, Coast Guard pilots would fly out over the ocean not knowing what visibility to expect. Now they can find out quickly. Data from research satellites usually takes days to weeks to process into a usable form, but NASA makes CloudSat's data publicly available on its QuickLook website and to users such as NRL in only a matter of hours—making the data useful for practical applications.

"Before CloudSat, there was no way to measure cloud base from space worldwide," says Deborah Vane, project manager for CloudSat at NASA's Jet Propulsion Laboratory.

CloudSat's primary purpose is to better understand the critical role that clouds play in Earth's climate. But knowledge about the structure of clouds is useful not only for scientific research, but also to operational users such as Coast Guard patrol aircraft and Navy and commercial ships at sea.

"Especially when it's dark, there's limited information about storms at sea," says Vane. "With CloudSat, we can sort out towering thunderclouds from blankets of calmer clouds. And we have the ability to distinguish between light rain and rain that is falling from severe storms." CloudSat's radar is much more sensitive to cloud structure than are radar systems operating at airports, and from its vantage point in space, Cloudsat builds up a view of almost the entire planet, not just one local area. "That gives you weather information that you don't have in any other way."

There is an archive of all data collected since the start of the mission in May 2006 on the CloudSat QuickLook website at cloudsat.atmos.colostate.edu. And to introduce kids to the fun of observing the clouds, go to spaceplace.nasa.gov/en/kids/cloudsat_puz.shtml.

Photo by Jim Filler

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

ZOG-43, THE *ONLY* NAR SECTION NEWSLETTER PUBLISHED *MONTHLY*!

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Launch Schedule

PUBLIC LAUNCH
Goddard Space Flight Center
Visitors Center
1:00PM - 2:00PM

May 6th

SPORT LAUNCH
Old National Pike
10:00AM - 04:00PM

May 19th

PUBLIC LAUNCH
Goddard Space Flight Center
Visitors Center
1:00PM - 2:00PM

June 2nd