THE ZOG-43

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

KATIE-1 Contest and Sport Launch Report

by Don Brown NAR 70318

The first contest of the 2003 calendar year was held on March, 8, 2003 at Middletown Park. The field conditions were a real concern since the effects of major previous snowstorms were still evident. Luckily, the snow and ice cover was not bad enough to stop the contest. And, we were very lucky that the morning of March 8th dawned a beautiful day. It was sunny and warm with no wind for a while and low winds later in the day (at least by Middletown standards!)

There was a good turnout of contest and sport fliers. We had 7 A Division contestants, 6 in C Division and 3 teams represented. In addition there were 14 sport fliers and 2 Team America Challenge teams there to fly. Not bad for March! I guess everyone had cabin fever.

The contest was flown with all Estes Baby Berthas (BB's) or scratch built clones. Each event was limited to one flight and a maximum of two models could be used for the contest. The vents were A Parachute Duration, B Streamer Duration, Random Duration, Drag Race and Open Spot Landing. It was very interesting to see some of the subtle modifications that were made to the BB's to make them competitive. The results were good with a large percentage of qualifying flights.

Continued on page 4...

Photo Finish- Kindra Bittle watches her Baby Bertha leave the pad a nose behind of the competition during the drag races at KATIE-1. Photo by Doug Pratt.

News and Notes

A number of teams mentored by NARHAMS club members have advanced to the final round of the Team America Rocketry Challenge. Khim Bittle, Richard Hickok, Kevin Johnson, Steve Humphrey, Jennifer Ash-Poole, and Tom Lyon all took time to volunteer with various TARC teams.

Due to a lack of entries, the ZOG-43 Rocket Design Contest was cancelled.

The submission deadline for articles, photos, plans or anything else you'd like to appear in the ZOG-43 is 5:00 P.M. on the Monday before a club meeting. Next issue's submission deadline is April 28.

APRIL 2003
VOL 25 ISSUE 4

Inside this issue:

ZOG-43

Volume 25 Number 4

APRIL 2003

ZOG FORTY-THREE 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- Forty-Three 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 FORTY-THREE is published monthly and is available to anyone on a subscription basis. Current rate is $15 U.S. Funds for 12 issues a year, payable to NARHAMS

For more information.....

If you have any questions about ZOG Forty-Three 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 Forty-Three
10340 Hickory Ridge Rd, #526 Columbia, Md. 21055 E-Mail ZOG-43 at: zog43editor@yahoo.com

ZOG Forty-Three is edited by Kevin Johnson, and is a six-time winner of the NAR/LAC "Rockwell" Trophy, recognized as the best NAR section newsletter.

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

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

Photographs: by Kevin Johnson, except where noted.

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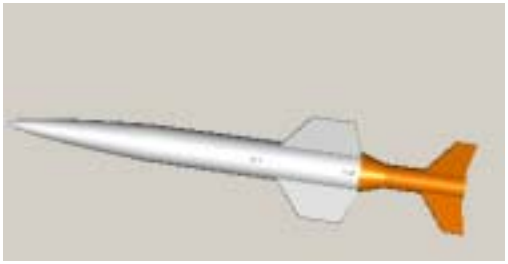
NARHAMS ON THE WORLD WIDE WEB

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 four time winner of the NAR "Section of the Year" award.

Years won: 1997,1998,1999, 2001

Until recently, NARHAMS members have regularly flown their model rockets at NASA's Goddard Space Flight Center on Soil Conservation Rd. in Greenbelt Md. The launches were open to the public and were held every first and third Sundays of every month (weather permitting), starting at 1 PM. We are working hard to reinstate these launches for the general public.

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 Friday of the month from 7:30 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)

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Don Brown 410-781-7539

PRINCESS BUBBLES (Vice-President) Jennifer Ash-Poole 410-674-6262

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Chris Kidwell 571-434-7507

COURT JESTER (Section Advisor)

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.

April 2003 Message from The Prez

Things are really happening now! The snow is gone and we are flying again! KATIE-1 was held on March 8th and the winter doldrums got blasted away. Team America, Rockville Consortium of Sciences, ECRM-30 and OPOSSUM-7 all occur in the next 6 weeks so there is a lot of activity.

OPOSSUM is shaping up to be a HUGE launch. With the expected contestants, regular sport fliers and several large scout groups it looks like we will easily exceed 100 fliers that day. Extra help will be needed at the range head so that we can effectively keep things running smoothly. Khim Bittle is the contest director and I will assist him by handling the sport range. Please be ready to lend a hand.

Field search continues but the Holy Grail has not been found yet. Keep looking everyone and coordinate your efforts with Khim Bittle or me.

Our first meeting at Hobby Town USA in Frederick did not produce an extra large turnout but we had about 15 attendees and signed up three new members. Not bad for the first time up there. Most people took advantage of the shop's great selection of rockets and accessories at club discounted prices. Look for other meetings there in the future.

King Zog

Miller Picks up Sponsorship

Paul Miller has secured the sponsorship of the Bacardi company in order to defray the costs associated with model rocketry.

"The Missus just wouldn't allow me to pay for any more models," Miller said about the choice to find a sponsor. "Besides, I drink like 3 gallons of rum each day (hic)."

Paul announced the closure of the deal at NARHAMS' Club Meeting in February, where he displayed a rocket with prominently placed Bacardi decals. The rocket featured three 24mm motor mounts, just the right size to hold 3 mini bottles.

"It's very practical," Miller told the club. "You can have a bottle of Bacardi Limon, a bottle of Bacardi Silver Light Rum, and my personal favorite, Bacardi 151, right there at the field and no one would ever notice (belch)."

Paul Miller poses with his Bacardi Rocket. Photo by Kevin Johnson

At this point in his presentation, Mr. Miller seemed to doze off, but he quickly regained his second wind, letting all present know that he "really loved us, man."

Asked whether or not he was looking for other sponsorship opportunities, Miller snarled and took a swing at this reporter, saying, "Nobody tells a Navy man when he's had enough to drink, 'cause only a Navy man knows when he's had enough to drink."

KATIE-1from page 1...

Left: one of the drag race heats gets under way. Right: A familiar sight at Katie-1;a Baby Bertha lifts off. Photos by Doug Pratt.

I personally had never seen a Drag Race event and it was a lot of fun to watch. The hardest part of the entire event was to determine which rocket left the pad first. The contestants worked hard to prepare their entries for each heat and keep them flyable when they advanced to the next round.

Sport flying had 36 flights for the day ranging in motor power from 1/4A to G. The most frequent flier was Jeff Roussel with 7 flights. Jeff flew an Edmonds Tinee on 1/2A twice, an RS-001 3 times on B4 and C6, and an Estes Nike and a Silver Comet both on D12. Mathew Berg brought out his Pencil and Mini Mars Lander and let his Dad fly them. That's being nice to the old man, Matthew! Angela and Chad Blair launched an Alpha, a Quest Totally Tubular and a Blobbo for nice flights. Zach Ha showed us his Mosquito on 1/4A power, a Parrot on A8 twice, and a Big Bertha on a C6. David Jarkey flew a Snitch on C6's twice, an AMRAAM on B6 and a Mean Machine on D12. Ivan Barnsley made the trip to Middletown and launched his Flying Jenny, 4X upscale Gyroc, an Apogee Whirlatron and a scratch built Space Man.

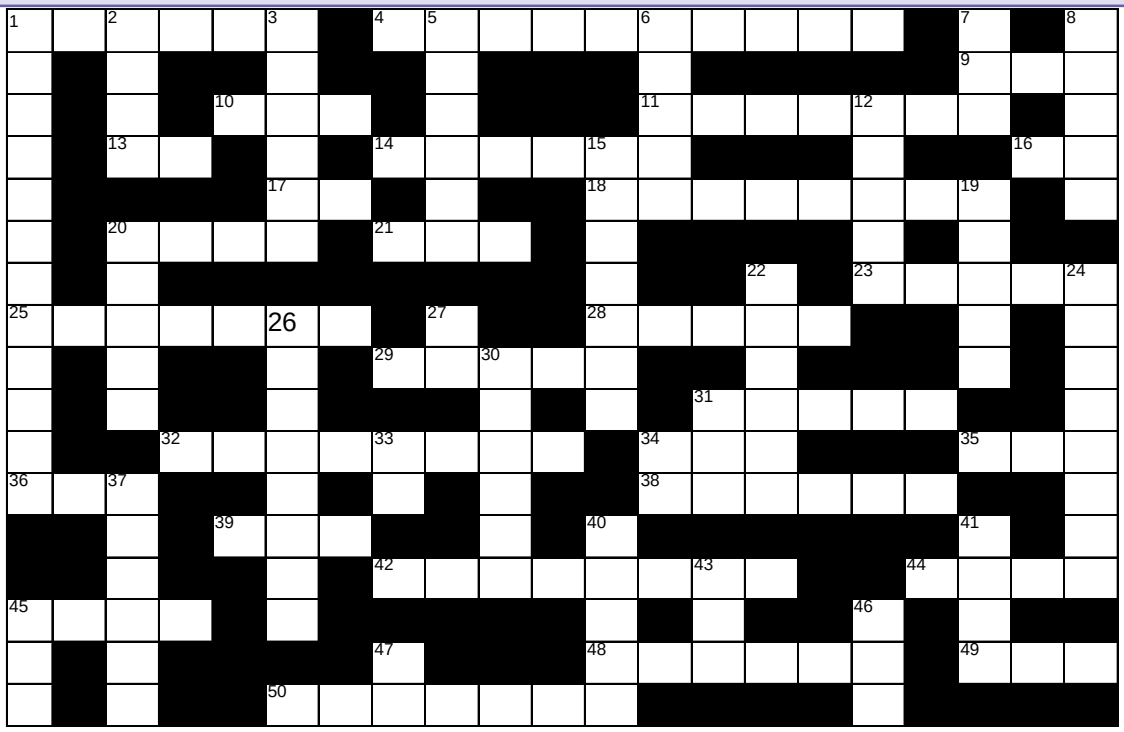
For a special treat we got to see two Team America teams trying out to be qualified for the finals in May at Great Meadows. The group from Boonsboro High School and the Applications and Research Laboratory High School of Ellicott City were there and they were looking good! These youngsters have built some very fine rockets to compete against other entries from across the country. Unfortunately the ARL team got their payload bay stuck out on the frozen park pond. When our retrieval pole wouldn't reach it, their mentor Mr. Johnson assisted with a radio-controlled vehicle rescue. Yaaaaaaaayyyyyy, Mr. Johnson!! (he's cool).

Overall it was a great day. Good competition, plenty of sport flights and a look at some fine Team America entries made for a fantastic March day. (Note: even when it is cold outside don't forget your sunscreen).

Tom Ha preps his rockets. Photo by Doug Pratt.

KP Chandhok and Conn Dickson prep their team's TARC entry for a test flight. Photo by Mark Petrovich.

NARHAMS Crossword Puzzle



ACROSS

1. Zog 43 comic hero
4. New 4-in-1 contest
9. Automatic Picture Transmission (abv)
10. President of NARHAMS (Title)
11. Used to start engines
13. Opposite of Pa
14. The propulsive unit of a rocket
16. Center of Gravity (abv)
17. Los Angeles (abv)
18. Canada's first satellite
20. Microwave reflection satellite
21. Orbiting Solar Observatory (abv)
23. NAR Technical Services (abv)
25. One man space mission
28. Booster of the answer to #25
29. National meet
31. Path of a satellite
32. Cone shaped leading end of a rocket
34. Orbiting Geophysical Observatory
35. National Aeronautic Association (abv)
36. Launch _ _ _
38. We fly model _____s
39. Liquid Oxygen (abv)
42. Lunar soft lander & surface analyzer
44. Tel_____ communications satellite
45. #36 fits over the ____
48. Farthest point of an orbit
49. Leader Administrative Council (abv)
50. Cape _____

DOWN

1. _____ Units (AU)
2. Inter-continental Ballistic Missile (abv)
3. Three man space mission
5. Seventh planet from the sun
6. First international satellite
7. National Association of Rocketry (abv)
8. The booster is in a lower _____
12. Booster for the two-man mission
15. Name of this NAR section
19. Opposite of late
20. Third planet from the sun
22. Batman's rocket
24. Long recovery device
26. Booster of the first successful NASA flights
27. Bachelor of Arts (abv)
30. Soft landing moon probe
31. Orbiting Geophysical Observatory (abv)
34. Word used to express a choice
37. Two man space mission
40. The non-burning powder in a M.R. engine
41. Vertical Take-Off and Landing (abv)
43. Orbiting Astronomical Observatory (abv)
45. Pink minus (-) white
47. Opposite of off

This puzzle was originally printed in the March 1968 Zog 43, Vol 3, No. 4. Thanks to Andy Elliot, NAR 7419, for giving the NARHAMS Library his copy.

The ZOG-43 may Astrobulletin

By Paul Miller, NAR 51615

Before we grab some stardust in our eyes, a word of warning to the Chick-fil-A bovine: Stay in the barn! May is National Hamburger Month!

May announces a new Moon at apogee; add a dust storm and we have a really DARK night. A waxing crescent Moon joins Saturn just after sunset on may 4th. Soon Saturn will be too close to the Sun to observe. An evening in early May should provide a ringed reward if your 'scope finds it in Taurus.

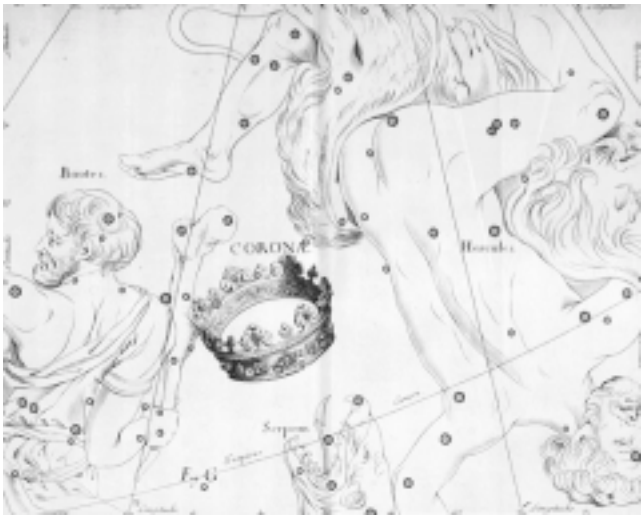
The waxing crescent Moon also promises an excellent opportunity to spot some Eta Aquarid meteors, radiating from Aquarius of course. They peak on the night of May 5th with as many as 60 per hour to be seen with optimum viewing conditions. Maybe you can make a constellation of Alan Shepard with the stars. He became the first American in space on May 5th.

Jupiter, in the constellation Cancer, will pass 4º south of the Moon on May 8. Look on the southern horizon on the morning of May 21 to find Mars 3º north of the Moon. Venus is bright in the east. On the 28th, Venus will join Mercury, a dim companion, 2º south in the pre-dawn sky.

The best May event is the midnight total lunar eclipse on May 15. The umbral eclipse begins at 10:03 followed by totality at 11:14. Totality continues for about 50 minutes, ending at 12:07 A.M. The Earth's shadow leaves completely at 1:18 A.M. If orange is your favorite color, you will love this Tropicana Moon during totality.

Since we can count on a second new Moon on May 31, is this a "Black" Moon? Please recall that the second full Moon in a month is a "Blue" Moon… You could say this May will be a heck-of-a moonth. If you happen to be in Iceland or central Greenland on May 30 you can catch an annular solar eclipse!

Our constellation this month is Corona Borealis, the Northern Crown. Lying between Boötes and Hercules, these eight naked-eye stars represent one of the smallest, yet most beautiful of the 88 constellations. This circlet of stars actually looks like a crown. The alpha star is called Gemma, the gem. Since the prominent stars are third and fourth magnitude, you will need a clear, dark night free of light pollution for a best view. The Shawnee saw dancing star-maidens instead of the crown of Ariadne. To Australian aboriginals, this star-group was a boomerang. Ad Astra!



Johannes Hevelius' Corona Borealis from Uranographia (1690)

The Myth Behind the Stars

Corona Borealis, or the Northern Crown, is the crown Ariadne wore at her wedding. It was made by the supreme goldsmith, Hephaestus, at his underwater smithy.

The story is connected to a more notable myth, of the Minotaur and of Theseus, who was destined to kill it. To do so, he needed Ariadne's help. This beautiful young maiden was the daughter of Minos, king of Crete. She was also the half-sister to the Minotaur, the half-man half-bull which lived at the centre of a labyrinth.

As he arrived in Crete, Theseus was met by Minos, who challenged the young man to prove he was indeed the son of Poseidon. Minos threw a gold ring into the sea, and told Theseus to fetch it.

Theseus dove into the deep, and was met by dolphins which escorted him to the palace of the Nereids. Thetis, one of the Nereid sisters (or sea nymphs), gave Theseus a jewelled crown that Hephaestus had made. With the gold ring and the crown, Theseus swam back to Crete. This feat received the loving admiration of Ariadne.

She promised to help Theseus kill the Minotaur if he would marry her and take her back to Athens. Theseus agreed, so she gave him a magic ball of twine that would unroll itself to show the way through the Minotaur's maze. Theseus followed the rolling twine to the centre of the labyrinth and promptly killed the Minotaur.

Unfortunately he forgot his promise. Or, some say, he did marry Ariadne, giving her the jewelled crown as a wedding present. And then he later abandoned her on the isle of Naxos, on the way to Athens.

Others have it that Theseus sailed off, leaving a sleeping Ariadne to pine for her loss. She implored her father, Zeus, to make amends. Zeus took pity and sent Dionysus to comfort his daughter.

Another version has Dionysus visiting Naxos and falling in love with Ariadne, so he cast a spell on Theseus. Theseus then forgot all about Ariadne and sailed off for Athens. In any case, Dionysus took her for his bride and placed the jewelled crown of Hephaestus on her head.

They raised four sons and 'lived happily ever after'. When Ariadne died Dionysus took the wedding crown and placed it in the heavens between Hercules and Bootes.

From www.dibonsmith.com/crb_con.htm

Doug Pratt caught this great sequence of a TARC flight at Katie-1 using his binocular/digital camera combo.

Calendar of Events for 2003

Apr 4 Monthly meeting, 1/4A BG building session
Apr 12 -OPOSSUM-7 Open Meet
Apr 27 -Rockville Consortium of Sciences Rockville, MD
May 2 -Monthly meeting, altitude prediction talk
May 10 -Team America Flyoffs, Great Meadow
The Plains, VA
May 17-18- ECRM-30 Regional Meet
Jun 6 -Monthly meeting, making decals
Jun 14 -Sport launch
Jun 21-22 – MARS 29 Regional Meet, Great Meadow
The Plains, VA
Jun 27 -Monthly meeting, UFO building session
Jul 12 -Sport launch, UFO theme
Jul 20 - Centennial of Flight launch
Jul 26 -Short meeting then building session, Hobbytown USA
Frederick, MD
Aug 9 -Sport launch
Aug 15 – Monthly meeting, Night Launch for Newbies
Sep 5- Monthly meeting, elections, pirate building session
Sep 13 -Sport/night launch, pirate theme 12:00 pm start
Sep 28 -AIAA launch Columbia, MD
Oct 3 -Monthly meeting, electronics
Oct 11 -Sport launch, Oktoberfest V-2 day, picnic launch
Oct 11-12 -SCST-3 Jonesburg, PA
Oct 17 -Short meeting then Skywriter building, Hobbytown USA Frederick, MD
Oct 25- Planning meeting College Park Airport
Nov 8 -Sport launch, writing implement theme
Nov 14 -Monthly meeting, finishing techniques
Nov 22 - Centennial of Flight display College Park Airport Museum
Dec 5 -Monthly meeting, pot-luck holiday party
Dec 13 -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, **except where noted above**. Meetings begin at 7:15pm with building sessions or presentations and last until 9:00pm or so. Regular Business meetings follow until 10:00pm. If no presentation or building session is scheduled, please bring whatever project you are working on currently.

Questions? Call Club President Don Brown at 410-781-7539 or visit NARHAMS online at http://www.narhams.org

Musical Satellites

By Tony Phillips

If light were sound, then chemicals would play chords.

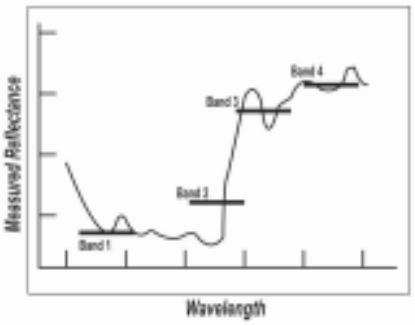
Water: C major. Cyanide: A minor. Chlorophyll: G diminished 7th. (Please note that the choice of chords here is only for the sake of illustration, and not meant to reflect the actual spectra of these chemicals.)

It's a loose metaphor, but an apt one. Musical chords are combinations of frequencies of sound (notes), while chemicals leave unique combinations of dips in the frequency spectrum of reflected light, like keys pressed on a piano. Spectrographs, machines that recognize chemicals from their "chords of light," are among the most powerful tools of modern chemistry.

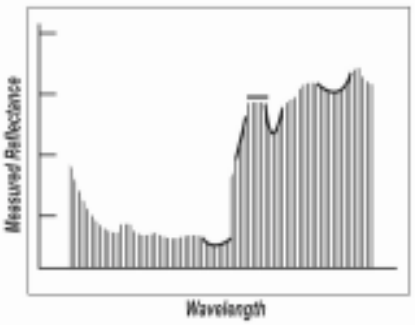
Most earth-watching satellites, like the highly successful Landsat series, carry spectrographs onboard. These sensors measure the spectra of light reflected from forests, crops, cities, and lakes, yielding valuable information about our natural environment. Current satellites do this in a fairly limited way; their sensors can "hear" only a few meager notes amid the symphony of information emanating from the planet below.

EO-1 could change that. Short for "Earth Observing 1," EO-1 is an experimental NASA satellite in orbit since 2000. It's testing out a more advanced "spectrometer in the sky"- the Hyperion hyperspectral imager.

The Hyperion instrument distinguishes hundreds of wavelength bands, while the current Landsat instrument images only a few.



Multispectral Imaging
(few bands)



Hyperspectral Imaging
(hundreds of bands)

How good is it? If Landsat were "chopsticks," EO-1 would be Gershwin's "Rhapsody in Blue."

The Hyperion sensor looks at 220 frequencies in the spectrum of visible and infrared light (0.4 to 2.5 microns) reflecting off Earth's surface. Landsat, in contrast, measures only 10. Bryant Cramer, who manages the EO-1 project at the Goddard Space Flight Center, puts these numbers in perspective. "If we flew Landsat over the northeastern United States, it could readily identify a hardwood forest. But using hyperspectral techniques, you probably can . . . tell the oak trees from the maple trees."

Future earth-watching satellites may use Hyperion-like instruments to vastly improve the environmental data they provide. EO-1 is paving the way for these future missions by taking on the risk of flight-testing the sensor for the first time.

For farmers, foresters, and many others, this new remote sensing technology will surely be music to the ears.

Read about EO1 at http://eo1.gsfc.nasa.gov . Budding young astronomers can learn more at http://spaceplace.nasa.gov/eo1_1.htm

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

The 14th World Spacemodeling Championships

Sazena, Czech Republic
October 11-20, 2002

By Mark Petrovich, Sr, NAR 29160
Part 5: Conclusion

The closing banquet was on Saturday and all of the participating teams were in attendance. Food was consumed, wine was shared and the Polish team received the cup to signify their hosting the next Championships in 2004. They filled it with champagne and passed it around the tables in a gesture of goodwill towards the competitors whom they hoped they would see in two years. Pins and patches, stickers and booklets were given out by one country and received by another. Conversations were struck up and pictures were taken to mark the event. It was a celebration of what we share, the sport that is common language to all, with nationalities meaning very little. Some partied into the night but others, like myself leaving the next morning, went off to bed to rest and prepare for departure. It was a wonderful experience!

I wish I could show you all that I have seen on this trip. From sight-seeing to frantic building in the team tent, it was such a magical event. Unfortunately my camera did not make it back to the States with me. Somewhere in the world ,my camera, with all of those visual memories, is residing with someone who claimed it from the team tent as spoils during Friday's awards ceremony at the field. Eventually, the team will post images to the Internet and I'll tell you where they are so you can see some of what I saw. You'll just have to be patient!

I could not have lived this dream without the support of so many who are close to me and believed in me. My thanks go to the Team Selection Committee who chose me to fly for the US in S3B.

My thanks also go to Ed Pearson, Team Manager, for helping to find an alternate event, S1B, that I could fly when S3B was withdrawn by the organizer.

I want to thank Dr. Bob for refusing to take S1B back once S3B was reinstated late in the game. His sacrifice is greatly appreciated especially since he took a harder event to fly, S5C, as a result.

My thanks go to David O'Bryan for teaching me how to fly S1B and letting me learn from one of his models that he left in my care.

Thanks to Kevin Kuczek for giving me the inside details behind the operation of an S1 and how to make it work, not just how to make it. His input was indispensable.

Also, my thanks go to Dr. Bob who was wise enough to talk to me about my alternatives if floating head was disqualified. Without his input, the US would have gone without a qualified flight entirely in that event.

I want to thank Jennifer Ash-Poole and NARHAMS for contributing to my overseas fund. I gave this effort all I had and feel satisfied with the results; I hope you do too.

I want to thank my parents who helped me take this dream trip to the Czech Republic. Their generosity is the example that I live by and without which this would not have happened. Thank you both!

Thanks to Mark Jr. for listening to the daily report on "this model and that model" and for understanding when I made a mess of the house, for the sake of Spacemodeling, in so many building sessions. I appreciate your support during my quest for this dream. Find a dream of your own and reach for it; I will support you all the way.

Last, but not least, I want to thank my sweetheart, Trisha, for putting up with all of this rocket stuff. You willingly gave up our time on so many occasions so that I could pursue this dream. But, your love and support during this time has been wonderful and I sincerely appreciate it. Thank you for being my wheels on my way out and on my return. Thank you for the smiles and hugs and kisses that sustained me for 11 days.

Next stop, Muncie, Indiana in 2003 to qualify for the 2004 Team. Then, Poland 2004! God Bless America!

Thanks Mark! Reading your descriptions of the Internats gave us a glimpse into what international competition is like.

If you have a story about a contest or a rocket launch that wasn't held by NARHAMS, I'd sure like to hear it. I'm pretty sure your fellow club members would, too!
--Kevin

Adventures of a Team America Mentor

By Tom Lyon NAR 16558

I would like to relate to all the others the experiences I had while "mentoring" several Team America Challenge participants. I really found it rewarding most of all. Initially, it was a learning experience. When I was first informed about it, I quickly volunteered for both mentoring, and as "help" for the actual challenge in May 2003. First, I needed to find out what the Challenge was all about. The rules seemed simple enough... launch two eggs with an altimeter in a multi-staged model rocket to a set altitude of 1500 feet. Okay, sounds like a combination of Dual Egg Loft and Set Altitude (using the altimeter to record altitude). Both of those events are EACH rather challenging. Flying a single egg is not too bad, but when flying two eggs, you double your chances to crack at least one of them. Flying a model to 100... 200... or 300 feet is not too bad, but 1500!?!?.... whew, sounds easy but in actual attempts, it's really pretty hard. Even a 1% error doesn't look all that good in the final tally. When the entry also HAS to use a multi-staged model, then things get really interesting. So... education step #1, How would I approach this challenge with a design? And then I would have to keep in mind that I have 40 years experience with model rockets and these teams can have next to nothing in experience... I may even have more experience than most of the parents have been alive! Talk about feeling old.

The idea for supplying the teams with electronic altimeters seemed like the best choice, considering how difficult it could be for anyone to build and use their own tracking scopes, AND have the experience to actually rack a model. Use the altimeter, make it the same model for everyone... that way everyone will have consistent use and results. The model of altimeter that was selected was the Adept A1, something I don't have, and have no experience with. So... education step #2, find out about the Adept A1, How it works, and how to operate it.

L.S. Byrd High School's Columbia Crew give the thumbs up for their TARC rocket. Photo By Tom Lyon.

The first list of participants I received had about 400 names on it, from all over the country. I was able to narrow down the Virginia entries, as well as several from Calvert County Maryland (my old stomping grounds). I sent off a group email introducing myself, explained about my level of experience, offered my services for advice, parts locating, and construction tips, even could travel locally to give a demonstration.

The first school I visited, was truly a learning experience for everyone, mainly for me. I had no idea what the team had received in their "pack" other than knowing there was an Adept altimeter. I found out they had also received Apogee's RocSim CD, a copy of Stine's Handbook of Model Rocketry, also a copy of American Spacemodeling, as well as the Team handbook. A majority of the questions the students had asked me was what I expected. Here I had a bunch of teens that had virtually no experience at all. So I was prepared by showing them what a model rocket looked like, out of my box comes my trusty Big Bertha. I also showed components and engines. I used the chalk board to show flight paths. Felt pretty good doing all this explaining. But then I realize that everything they were asking and dying to see could be found in Stine's Handbook. Obviously no one took the time to do any reading... so then I have to change the way I was thinking. Now I need to be the teacher, instead of me giving out the answers, these students had to learn for themselves. And the best thing they had received in their pack was a book that contained all the answers, they just had to find it. Here I learned something, instead of telling them the way to cut out fins... I can just say that everything about FINS can be learned starting on page

51 in the handbook.

When I got home from that first school, I got out my latest copy of Stine's Handbook of Model Rocketry and started labeling the important sections, so I can easily refer others to help them locate answers to their questions. The most popular question... "Where can we get egg compartments?". My answer was to refer them to Pratt Hobbies if they wanted to spend the money for a official Dual Egg Capsule, or the easiest-cheapest alternative, using a jumbo plastic Easter egg (or two) available from just about any store in town. For 99 cents, you can get a bag of 10, or better yet, look around the house, I'm sure there has to be some left over from previous Easters. Even the plastic grass makes nice cushioning material. But all the schools were working with a very limited or non existent budget.

The next demo was easy. I was equipped with my copy of Stine's book this time. This school had a mix of boys and girls where the boys had a little experience already. Everyone had built a simple model rocket either from kits or from the bulk material found in an Estes Designer's Special pack. First I gave each the POSITIVE points for their models, and how nice it was to see everyone getting some experience before building and designing their team's Challenge entry. Where ever I found a problem with construction techniques, I pointed them to Stine's book and what page to start reading. There were only 2 instances where I had a pointer to help them that is not in the book. One is how to make a straight line around a body tube (wrapping a piece of paper). The other was how to make a tube coupler from a piece of body tube. All the rest, how to cut out fins and shape them together, sanding a leading edge on a fin, fin alignment guide, how to draw straight lines for fins and launch lugs, shock cord attachment... etc, could be found in Stine's book. This school had also a design for their entry. It was feasible, would actually work, but seemed bulky. It was a straight diameter of 3 inches nose to tail, quite large, with futuristic styling in their fins. After they saw what I brought to show them what a competition egglofter looked like, I could see the light bulb light up. I could tell they wanted to redesign.

Next Month.. The Flight Reports.

TARC Teams from Colonial Beach, VA, Petersburg, VA, Boonsboro, MD, and Burke, VA were mentored by NARHAMS members. Photos by Tom Lyon and Kevin Johnson.

ZOG - FORTY THREE
10340 HICKORY RIDGE RD, #526
COLUMBIA, MARYLAND 21044

Launch Schedule

CONTEST/SPORT LAUNCH
OPOSSUM-7
Open Meet
EVENTS:
1/4 A Boost Glider Duration
A Helicopter Duration
1/4 A Flex-Wing Glider Duration
Open Spot Landing
CD- Khim Bittle
April 12th