The ZOG-43

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

Bill Harvey and Tom Lyon keep their eyes on the rocket they are timing at the OPOSSUM-7 open contest, April 12th. Photo by Tom Ha.

Goddard Model Rocket Sundays Are Back!

By Jennifer Ash-Poole, NAR 61415

Yes, we have permission to have Model Rocket Sundays again. After September 11, 2001, the security around Goddard was tightened, and the Visitor Center was closed. Maurice Henderson, the Visitor Center manager, and DJ Emmanuel, the operations manager, worked to get the model rocket Sundays approved by the Goddard Security Department. They recently received approval to continue the launch program.

The launches will be the on first Sunday of the month ONLY! We all need to get back into the groove of doing these launches, so for the time being we will not be having the 3rd Sunday launch as we have in the past.

The first of the new launches will be May 4, from 1-3pm. DJ has been busy, and we already have a Boy Scout troop that will be coming that day!

We aren't doing enough stuff in May anyway (ha!), so update your calendars and come out to Goddard to support out rocket launches!

The Goddard launch system will get checked out on Take your Larva to Work day (or as the Goddard Public Affairs Office is calling it, Inspire the Next Generation of Explorers Day). Thanks in advance, we welcome any support. If you are going to bring models to fly at Goddard, remember no two-stages, no motors bigger than a D, and your rocket will have to pass muster of the evil RSO, Alan Williams.

UFO Sighting

In preparation for the June meeting/ building session, a selection of Art Applewhite UFO kits has been ordered for purchase by NARHAMS Club Members.

The following sizes and prices will be available:

4", 13mm Delta in colors @ $1.00
6", 18mm Delta in colors @ $2.00
9", 24mm in white @ $5.00

The assorted colors for the 4 and 6 inch models are: Hot Pink, Florescent Green, Florescent Yellow, Florescent Orange, Silver, and White.

The Delta model is Art's latest version. He says they are easier and faster to build than the older model. The 9 inch saucers are the old style. Dick Stafford has agreed to bring his fleet of Applewhite saucers to the building session. You can read his reviews of the kits at EMMR's rocket review site:
http://www.rocketreviews.com/r

May 2003
Vol 25 Issue 5

Inside this issue:

ZOG-43

Volume 25 Number 5

MAY 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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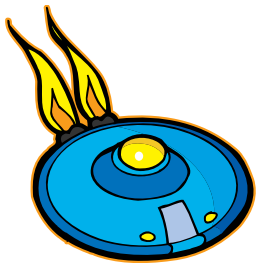
NARHAMS ON THE WORLD WIDE WEB

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

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

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

NARHAMS welcomes all prospective new members to our monthly meetings. They are held on the first 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)

KING ZOG (President)

Don Brown 410-781-7539

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

COLLECTOR OF THE ROYAL TAXES (Treasurer)

Ed Pearson 301-577-7775

KEEPER OF THE HOLY WORDS (Secretary)

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.

King Zog Speaks- May 2003

As I finish just over half of my 2002-2003 term as President, I can look at many good things that we as a club have accomplished. Our sport launches are getting stronger all the time with many new fliers coming to Middletown. NARHAMS has reached out to include Frederick area members and interested rocketeers with club meetings at Hobby Town USA in Frederick. Our outreach programs are introducing many, many new people to rocketry every month. We have interesting technical sessions at our meetings that have been well received. NARHAMSters have donated their time to assist Team America Challenge teams with three of the teams making it to the finals at Great Meadows. We continue to field a solid contingent of competitors on the contest trail. And, our club continues to attract new members.

But, the best achievements of this club are the smiles on the faces of so many new rocket fliers at our launches as they get the thrill of building and flying their rockets with us. I have had many people come up to me and express their appreciation for our club and the ways that we have helped them. At a launch last month a young girl about 7 years old came out with her parents for their first time to fly a rocket. It was a simple starter kit that she had covered with her own stickers. On the first flight, a fin fell off. Luckily, a club member helped out by repairing it with CA adhesive. On the next flight, the rocket went into a tree. With assistance from a 'HAMSter and our trusty retrieval pole, the rocket was recovered. On its third flight the rocket went straight up with a good recovery. As they prepared to leave at the end of the day, the girl's parents stopped by to see me. They expressed their thanks to the club for providing the opportunity for them to get started in rocketry. They also said that although every flight had not been perfect, the helpfulness of the club made it a great day for them. The rewards that come from giving of your time to help others cannot be measured in monetary terms. They are gifts of the heart that make the world a better place for all of us.

Proud to be in NARHAMS,

King Zog

Women in Space- Valentina Tereshkova (left) 1st woman in space and Sally Ride (right) 1st American woman in space.

Pluto and its moon, Charon. Image from www.kidzworld.com.

June AstroBulletin

by Jennifer Ash-Poole, NAR 61415

June was named after Juno, the daughter of Saturn, wife (and sister) of Jupiter and mother of Mars. We won't see Saturn this month, but you will see the other two planets.

June is also a good month for women in space! June 16, 1963, on a Vostok 6, Valentina Tereshkova became the first woman in space. Twenty years and two days later, Sally Ride became the first American woman in space riding in the Space Shuttle Challenger, for STS-7.

Some other notable events: Twenty years ago this month, the old Soviet Union launched Venera 15 on June 2, and Venera 16 on June 6. These two spacecraft took radar pictures of the surface of Venus. Twenty-five years ago, Jim Christy discovered that Pluto had a moon. They named it Charon, after the ferryman who rowed souls across the River Styx to Pluto's realm. June 29 is George Hale's 135th birthday! George Hale was one of the founding fathers of Caltech, and helped build the 200 inch telescope that is on Mount Palomar. He didn't get to see it completed.

Now let's get to the planets. In the evenings, Jupiter will be up. Look to the west around 9 pm, and you will see the constellation Cancer. Jupiter will be just above it. Watch it slowly set throughout the month.

If you need to get up really early, like 4:30am, then Mars will be half way up if you are facing south. It should look red. You will have to look really hard to see Mercury and Venus on the East North east horizon. The two will be at their highest point in the sky during the early part of the month.

June 21 is the Summer Solstice, the longest day of the year and believe it or not, Earth will be at its farthest point from the Sun. So get outside and enjoy all that daylight. The days will start to get shorter.

Cub Scout Pack #143 Building Sessions and Launch

By Don Brown NAR 70318

Late in 2002 a co-worker approached me with a request to assist his Cub Scout pack in a rocket building program. He was familiar with NARHAMS from my previous conversations with him and knew that we sponsor outreach programs such as building sessions.

So, we made some plans and talked about what type of kit to build. I learned that the group would be ranging from 6 to about 10 years in age. Then I found out that there would be about 30 scouts! At first I thought that a basic Estes kit with a molded fin can and pre-finished body would be easy to do with such a large group. But then I thought that a little more challenge and a chance to finish the rockets themselves would be more meaningful to the children. So we looked at the Estes, Pratt and Quest models and decided on the Estes Baby Bertha. It was not too challenging for a beginner, a good flying model on an A or B motor and would give the builder the chance to paint or finish it to suit their personal tastes.

I decide that two nights would be needed in order to build the kit. We scheduled two 1-1/2 hour building sessions on March 11 and 25, 2003 with launching planned for April 11, 2003 at OPOSSUM. This would allow the scouts to fly their rockets and see our competition and sport range in action.

The pack leaders coordinated the sign-up for the event and we ended up with 45 youngsters! I have to say that I was getting apprehensive about my ability to handle the sessions effectively. But, we moved forward and things went extremely well. Thanks go to Mike Mangieri, Mark Petrovich, Chris Greco and Vince Pearman for assisting me in this project. The scouts were attentive, well organized and a great deal of fun to be with. Many of their parents came out to help, also. We would not have been successful without their help. The building went well and the group went home on March 25th with rockets ready to paint or finish.

On April 12th the group came to fly. There were very creative paint schemes and decals on the models. Every one was different and looked very good. Thirty-five youngsters with their families came out to fly that Saturday, in the middle of the day Middletown field was simply covered with rocketeers. They were each given a plastic bag with three B6-4 motors, igniters, plugs and wadding. We instructed the pack leaders on how to prep the rockets and turned them loose. The results were better than I expected. Out of approximately 105 flights, I only remember 2 or 3 that did not work perfectly. It was a sunny breezy day that was just fine for the launch and we all had a good time.

The sport launch line at OPOSSUM was filled with scouts. Photo by Tom Ha.

OPOSSUM-7 Contest Launch Was a Blast!

By Kevin Johnson NAR 77083, with reporting by Khim Bittle NAR 21773, Jennifer Ash-Poole NAR 61415 , and Tom Ha, NAR 76754

NARHAMS' annual open contest was held on April 12th a Middletown Park, and although the field was soggy in places, the event went very well. In addition to the contest flyers, we had a large group of sport flyers in attendance (see article this page) to make it a busy day at the range head.

Here are some impressions and statistics from the launch. The contest results can be found at the end of the article.

From Jennifer-

I want to say that after not flying rockets since October, and having enough snow to last me a few years, it was great to fly rockets on a sunny day! Khim did a great job running the meet, AND having so many people there to sport fly! I don't think three racks would have been enough for just the sport model flyers!

Thanks Khim, for a great meet and sport launch. (And thanks to Beth Bittle for making sure I got lunch.)

Don Brown did a great job of getting the kids organized at the pads. I think Trip Barber was getting tired of seeing baby berthas (Even if he kept calling them mini-berthas.) Way to go on getting all those Berthas looking different!

Alan Holmes made the mistake of coming up to say hi when we needed a check-in person, so he did duty for a few hours. (Thanks Alan for letting me put you to work.)

Tom Ha showed up just to help. He RSO'd the morning, and timed models in the afternoon. He didn't even bring a model with him (but he did bring the kids). Kudos Tom.

We met some people that want to come to our meetings, and got a lot models in the sky.

From Tom-

While I really looked-forward to flying some rockets (and I must admit Maria was quite surprised to discover we flew not a one), I knew from attending the previous night's build session that Don Brown was expecting quite a crowd of Scouts. So it was a great excuse for not building those darn little 1/4A jobbies and just taking the time to help out the sport flyers.

I know I had several questions from at least 3 local sport flyers about the contest and I suspect that we might pick up some more competitors.

It was great seeing everyone again. I know that my sunburn is well worth it.

From Khim-

66 rocketeers signed the park waiver! This is more than the last 3 launches put together.

There were only 65 sport flights logged so I think many of the kids didn't log their flights, but Don Brown estimated about 105 flights from his Cub Scout pack alone.

There were a total of 104 competition flights.

I have received 3 emails after the launch informing me that new people have decided to join the club.

Open Spot Landing

Place	Contestant	NAR Number	Section	Flight 1	Flight 2	Total	NAR Points
A Division							
1	Bittle, Kris	74626	139	17.29		1729	80
2	Filler, Matthew	71947	139	24.54		2454	48
3	Bittle, Kindra	76125	139	28.34		2834	32
—	Bittle, Kate	79934	139	100.0		10000	8
C Division							
1	Barber, Trip	4322	205	8.0		800	80
2	Harvey, Bill	76228	139	15.34		1534	48
3	Bittle, Khim	17634	139	17.47		1747	32
4	Feveryear, Glenn	24931	503	23.37		2337	16
5	Filler, Jim	27862	139	24.13		2413	8
—	Lyon, Tom	16558	139	100.0		10000	8
—	Bock, Greg	44161	205	SEP		0	0
—	Woodford, Joe	81130	205	SEP		0	0
T Division							
1	Two Marks	T-134	139	11.99		1199	80
2	Mostly Harmless	T-609	139	16.38		1638	48
3	TM2J	T-617	139	27.43		2743	32

1/4A Boost Glider Duration

Place	Contestant	NAR Number	Section	Flight 1	Flight 2	Total	NAR Points
A Division							
1	Bittle, Kris	74626	139	47	23	70	360
2	Bittle, Kate	79934	139	29	13	42	216
3	Bittle, Kindra	76125	139	4	18	22	144
4	Clark, Ester	79588	205	9		9	72
5	Filler, Matthew	71947	139	7	NG	7	36
B Division							
4	Clark, Sam	79584	205	19	5	24	72
C Division							
1	Bittle, Khim	17634	139	33	20	53	360
2	Bock, Greg	44161	205	26	8	34	216
3	Barber, Trip	4322	205	12	14	26	144
4	Woodford, Joe	1130	205	UNS	17	17	72
5	Feveryear, Glenn	24931	503	7	9	16	36
6	Harvey, Bill	76228	139	9	6	15	36
7	Filler, Jim	27862	139	7	UNS	7	36
—	Edmonds, Robert	37700	205	10	NR	0	36
T Division							
1	Mostly Harmless	T-609	139	36	16	52	360
2	Two Marks	T-134	139	16	27	43	216
3	TM2J	T-617	139	23	10	33	144

A Helicopter Duration

Place	Contestant	NAR Number	Section	Flight 1	Flight 2	Total	NAR Points
A Division							
1	Bittle, Kate	79934	139	52	52	104	400
2	Bittle, Kindra	76125	139	73	7	80	240
3	Bittle, Kris	74626	139	19	37	56	160
4	Filler, Matthew	71947	139	23	NDP	23	80
B Division							
3	Clark, Sam	79584	205	38	28	66	160
C Division							
1	Feveryear, Glenn	24931	503	104	42	146	400
2	Bock, Greg	44161	205	34	38	72	240
3	Woodford, Joe	81130	205	32	24	56	160
4	Bittle, Khim	17634	139	24	28	52	80
5	Harvey, Bill	76228	139	31	NDP	31	40
T Division							
1	TM2J	T-617	139	103	21	124	400
2	Mostly Harmless	T-609	139	62	54	116	240
—	Two Marks Against	T-134	139	44 NR	72 NR	0	40

Jim Berg checks in Joe Woodford for a contest flight. Photo by Tom Ha

1/4A Flex-Wing Boost Glider Duration

Place	Contestant	NAR Number	Section	Flight 1	Flight 2	Total	NAR Points
A Division							
1	Filler, Matthew	71947	139	NDP	15	15	360
2	Bittle, Kate	79934	139	6	5	11	216
3	Bittle, Kris	74626	139	5	4	9	144
4	Bittle, Kindra	76125	139	NG	6	6	72
C Division							
1	Feveryear, Glenn	24931	503	42	56	98	360
2	Woodford, Joe	81130	205	18	40	58	216
3	Bock, Greg	44161	205	30	14	44	144
4	Filler, Jim	27862	139	10	21	31	72
5	Harvey, Bill	76228	139	17	11	28	36
6	Barber, Trip	4322	205	20		20	36
7	Bittle, Khim	17634	139	10		10	36
T Division							
1	TM2J	T-617	139	24	113	137	360
2	Two Marks	T-134	139	14	37	51	216
3	Mostly Harmless	T-609	139	8	16	24	144

Tom Lyon directs traffic around the range head. Photo by Tom Ha

Meet Champions

Contestant	NAR Number	Section	1/4A BG	A HD	1/4A FW	OSL	Total
A Division							
Bittle, Kate	79934	139	216	400	216	8	840
B Division							
Clark, Sam	79584	205	72	160	0	0	232
C Division							
Feveryear, Glenn	24931	503	36	400	360	16	812
T Division							
TM2J	T-617	139	144	400	360	32	936
Sections							
NARHAMS		139					5668
NOVAAR		205					1648
SPAAR		503					812

Shipping Begins at Cedar City, UT Facility

(ROL Newswire) — AeroTech, Inc. is pleased to announce that shipping has begun from its new rocket motor manufacturing facility in Cedar City, UT.

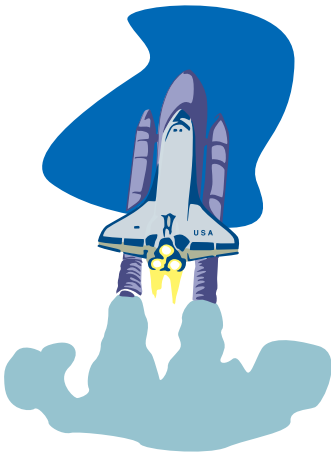
The first products shipped were G64W model rocket reload kits to a major hobby distributor. More G64W and other popular 24 and 29mm model rocket reloads will be shipping in the coming weeks.

In related news, several batches of Redline propellant were cast this week, the first Redline manufactured since October 2001. This propellant will be incorporated into 29 & 38mm high power reload kits, which are anticipated to ship in the next two weeks. Also, AeroTech conducted static tests of a new, improved F20W Econojet single use motor at the new facility on Monday, with the Cedar City Fire Marshal and Fire Chief in attendance.

Additional construction tasks are being completed on the new facility including a perimeter fence, test cell roof and concrete walkways.

Please refer to the AeroTech website for the latest updates on AeroTech's
production and shipping status.

Source: ROL Newswire Service



Calendar of Events for 2003

May 2 -Monthly meeting, altitude prediction talk
May 4 - Sport Launch, Goddard Space Flight Center
May 10 -Team America Flyoffs, Great Meadow
The Plains, VA
May 17-18- ECRM-30 Regional Meet
Jun 1 - Sport Launch, Goddard Space Flight Center
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 3 - Sport Launch, Goddard Space Flight Center
Aug 9 -Sport launch
Aug 15 – Monthly meeting, Night Launch for Newbies
Sep 5- Monthly meeting, elections, pirate building session
Sep 7 - Sport Launch, Goddard Space Flight Center
Sep 13 -Sport/night launch, pirate theme 12:00 pm start
Sep 28 -AIAA launch Columbia, MD
Oct 3 -Monthly meeting, electronics
Oct 5 - Sport Launch, Goddard Space Flight Center
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 2 - Sport Launch, Goddard Space Flight Center
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 7 - Sport Launch, Goddard Space Flight Center
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

NASA's Space Place

In Search of Alien Oceans

by Patrick L. Barry and
Dr. Tony Phillips

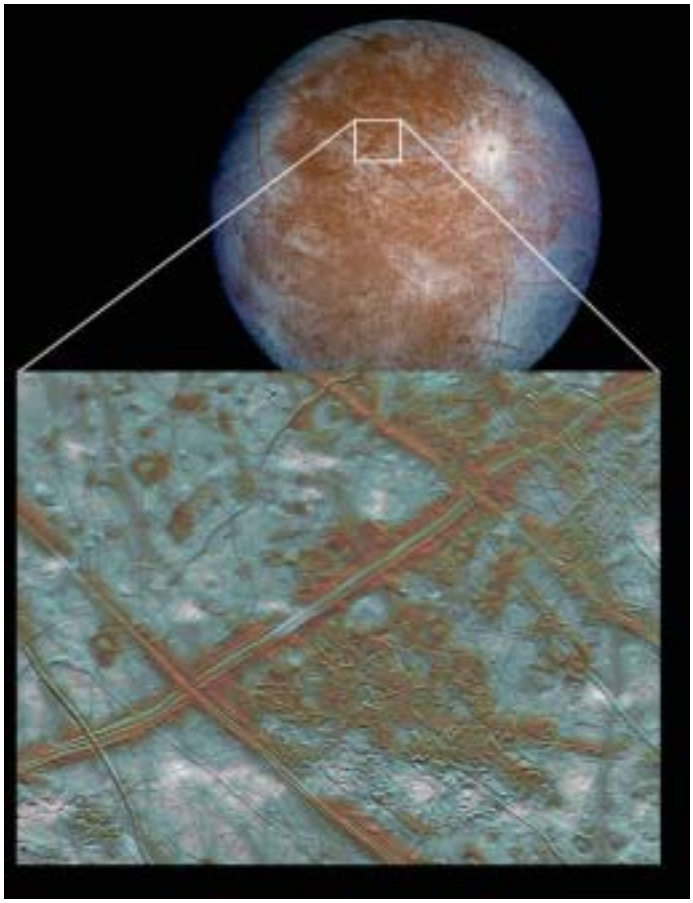
A robotic submarine plunges into the dark ocean of a distant world, beaming back humanity's first views from an alien ocean. The craft's floodlights pierce the silty water, searching for the first, historic sign of extraterrestrial life.

Such a scenario may not be as fantastic as it sounds. Many scientists believe that Jupiter's moon Europa conceals a vast ocean under its icy crust. If so, heat from the moon's interior-which would keep the ocean from freezing solid-may also drive subaquatic volcanoes and hydrothermal vents. On Earth, such deep-sea vents provide chemical energy for ecosystems that thrive without sunlight, and some scientists even suggest that Earthly life first got started around these vents.

So a warm Europan ocean spotted with thermal vents could be a natural incubator for life. That's why some scientists hope that someday we will send a probe to Europa that could bore through the ice and explore the ocean below like a submarine.

To plan for such a mission, scientists would first need to put a camera in orbit around Europa. By looking for places where water has welled up to fill the spindly cracks that riddle Europa's surface, scientists can estimate where the ice is thinnest-and thus easiest to bore through.

That mission scenario presents a problem, though. Europa orbits Jupiter inside the giant planet's punishing radiation belts.



Cracks on the icy surface of Jupiter's moon Europa give evidence of a liquid ocean below.

Continuous exposure to such high radiation would damage today's scientific cameras, making the information they gather less reliable and perhaps ruining them completely.

That's why NASA is designing a more radiation-tolerant CCD that could be used on a mapping mission to Europa. A CCD (short for "charge-coupled device") is a digital camera's chip-like core, which converts light into electric signals.

"We've seen the effects of this radiation during the Galileo mission to Jupiter," says JPL's Andy Collins, principal investigator for the Planetary Imager Project. "Galileo has orbited Jupiter for many years, dipping inside the radiation belts only for brief intervals. Even so," he says, "we've seen clear signs of damage to its instruments."

By using the hardier CCD's developed by the Planetary Imager Project, a future probe could remain in Jupiter's radiation belts for many months, gathering the maps scientists will need to finally get a peek behind Europa's icy veil. And who knows, maybe there will be something peeking back!

To learn more about the Galileo mission to the Jupiter system, visit http://www.jpl.nasa.gov/galileo/ . For children, a fun, interactive "Pixel This!" game at http://spaceplace.nasa.gov/p_imager/pixel_this.htm introduces CCDs and how a really tough one will be needed for a future mission to Europa.

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

HobbyTown USA at Frederick, MD Building Session and Launch

By Don Brown NAR 70318

Richard Benjamin, the Owner of Hobby Town USA, Frederick, requested assistance from the club with a Hobby Town nationwide promotion to build a rocket on April 11, 2003 and fly it. Richard has been supporting the club with store discounts and has allowed us to hold meetings there this year. His store is located off Route 15 at the Eight Avenue shopping center in Frederick.

We were glad to help them in this project. On Friday, April 11th we had ten rocket builders to assist. I was there with Tom Ha and Bruce. Estes generic E2X kits were supplied by the store and we brought the NARHAMS building supply box. The session went very well and we finished the rockets in about an hour and a half.

On April 12th the group came to fly at Middletown and they had a very good time. Thanks go to Richard Benjamin and Hobby Town USA for assisting us in this event and supporting our club. Be sure to stop by and check out their great selection of rocket kits and supplies.

NAR Top Tens as of April 01, 2003

compiled by Tom Lyon NAR 16558

# Div	Contestant	NAR #	Sec	Points	CF
1 A	Matt Filler	71947	139	2046	3
2 A	Katherine Humphrey	81367		804	3
3 A	Michael Humphrey	75192		708	3
4 A	Laureano Andrade	79766	581	624	4
5 A	RobertPijanowski	81159	473	588	3
6 A	Thaddeus V.Kiparski	81208	606	585	5
7 A	Zachary Schafer	80750	473	498	3
8 A	Andrew Taylor	79890	606	480	2
9 A	Randy Chambers	76048		338	2
10 A	Dan Flynn	75281	439	324	2
1 B	Mike Jarvis	77369	523	556	2
2 B	David Tietz	65139	113	506	2
3 B	Elise Coit	76241		264	2
4 B	Scott McNeely	79800	624	98	3
5 B	Marian Taylor	79891		0	2
5 B	Eric Johnson	75516	585	0	3
1 C	Jeff Vincent	27910	471	2236	4
2 C	Carl Johnson 3rd	75513	585	1320	3
3 C	Alex DeMarco	76979	471	1280	4
4 C	Vincent Giovannone	44085	471	1164	4
5 C	Mark Fisher	78298	624	1124	3
6 C	Ed Romani	79677	593	1117	5
7 C	Steve Humphrey	17888		1080	3
8 C	Larry Rice	33323	113	1040	4
9 C	Jay Calvert	71767	581	1034	6
10 C	Mark Hoffman	78055	113	1000	4

# Div	Contestant	NAR #	Sec	Points	CF
1 T	Shovel Recovery	T-321	585	2400	3
2 T	The Flying I-Beam Kids	T-473	473	1896	3
3 T	Throttle Up	T-365	365	1440	3
4 T	The Krispy Kremers	T-890	473	1140	3
5 T	Bumbling Bros. Fly.Cir.	T-011	463	936	3
6 T	Dizzy Dog	T-033	523	896	2
7 T	Polit & Aero Incorrect	T-952	606	800	2
8 T	Calvin & Hobbs	T-721	205	739	4
9 T	Deadeyed Missles	T-210	523	660	2
10 T	Mostly Harmless	T-609	139	654	3

# Div	Section	Sec	Points	CF
1 S	AARG (TX)	585	5862	3
2 S	PSC (PA)	473	5172	3
3 S	NARHAMS (MD)	139	4962	3
4 S	CATO (CT)	581	4838	6
5 S	ASTRE (NY)	471	4680	4
6 S	MTMA (OH)	606	4510	5
7 S	UROC (UT)	523	3520	2
8 S	SOJARS (NJ)	593	3225	6
9 S	CSAR (OH)	113	3222	4
10 S	COSROCS (CO)	515	2526	2

Adventures of a Team America Mentor

By Tom Lyon NAR 16558

By the middle of December I got the final entry list of over 800 teams registered, there were now 42 teams in Virginia. Looking at the list of registered mentors, most are concentrated in Northern VA. There is one mentor in Tidewater area (Norfolk), with just me in the central area of the state. Most of the teams registered are also in the Northern VA area. For those out in the western part of Virginia, the best I could do is to offer help via email. With the help of Stine's book, this was an easy accomplishment. The hard part was where could these western teams find NAR members to act as witnesses for their qualification flights. There I couldn't help them, I wasn't planning on driving THAT far. Did you know that if you are standing at the farthest western tip of Virginia, you are closer to St. Louis, Missouri than you are to the Atlantic Ocean?

Now comes the qualification flights. Because of the weather Virginia has been experiencing (rain, snow, COLD) just about all of the flights were done in the last 3 weeks before the deadline, and even a few of those were flown in inclement weather. Just about all the flights were conducted on school grounds on the athletic fields. None of these fields I would have considered for a 1500 foot altitude dual egglofter. But with the designs and the engine selection, things were pretty safe. Only one school I acted as a witness had a model and design that would have rivaled as one of the best chances, actually had to travel about 30 miles from their school to find a suitable field, and even then it wasn't what they needed. Their flight attempt was picture perfect from launch, staging, chute deployment, only to have their prize land in the woods and could not be recovered. They had 3 weeks to build and try again, but no budget to purchase another altimeter, or find another school willing to "loan" them one. The bummer for my entire experience was NOT a single team completed a totally successful flight. Either eggs were broken, stages didn't ignite, rockets lost in the trees, no recovery deployment, construction failures (shreds)... even one (well they tried twice) altimeter failure.

One entry was constructed using plastic PVC 3 inch sewer pipe, heavy, but flight worthy. I told them they'd maybe get 300 feet at best. They did, visually. But the altimeter failed on the first attempt, which I assumed because only one booster engine ignited and the speed was really slow, maybe not enough to activate the altimeter. They tried again, this time getting all three boosters to light, but again the altimeter didn't respond. Their eggs survived both flights. However the rocket "body" had started to melt and warp from the ejection charge. Other construction materials I saw used by others included mailing tubes, styrofoam, rubber weather seal tape, brass piping (something like for carburetor lines, used as a launch lug), paperboard, and wire (to make engine clips). When the list of the top 100 teams were posted, it was noted that a little more than 240 forms were submitted. I do NOT believe that over 400 schools didn't attempt to qualify. I know of several Virginia teams that attempted but never submitted their form because of some sort of failure. Something tells me that there is a problem in communication. Looking at the form, one can fail and still submit the form and get a score of zero. Something should be made clear on this. Should a team submit their form even if they failed???

On a positive note... I was pleased to see that Northern High School in Owings, MD make the finals. This school is from Calvert Co., and the same school my kids had gone to. Also, 5 Virginia teams made the finals, all but one from Northern VA. Also 3 of the alternates are from Virginia.

Also, even with failure to make a successful flight, all of the teams I have been associated with have already made plans for next years Challenge. All of the kids showed absolute excitement and exuberance just seeing their creations flying. Even though all had failed in one way or another, they remained upbeat and felt they had made an accomplishment. Teachers are submitting their budgets to participate again. I know of one school team that will be planning to finish this school year by having the class build a model rocket from scratch and have a spot landing contest. This will be graded and will count as a test score.

Trireme

A sport rocket plan by Kevin Johnson, NAR 77083

The triremes of ancient Rome plied the waters of the Mediterranean Sea powered by three rows of oars. The Trireme class star cruisers follow the trade routes of interstellar space using three hyper-motive engines housed in the pods arrayed around the aft of the ship.

To build a model of the Trireme you will need to gather the following parts:

Tubes:
BT60 - 4 inches
BT50 - 10inches
BT 20 - 3x 10 inches
BT 20 - 2.75 inches

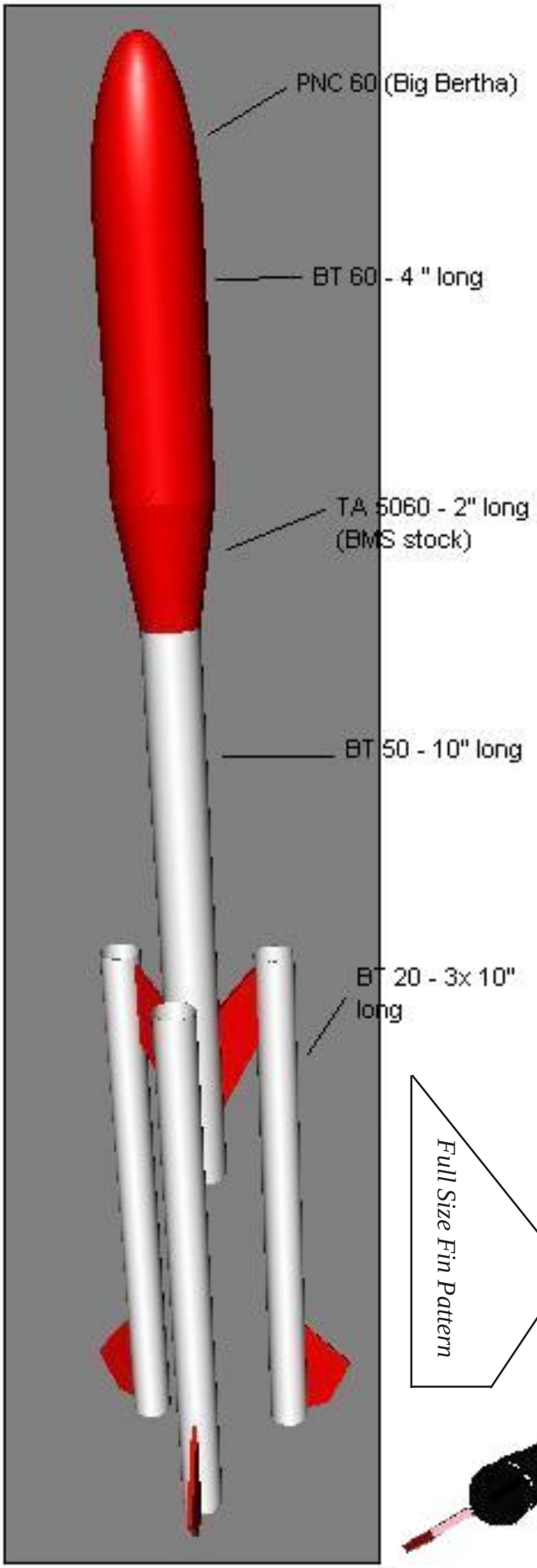
Nose cone:
PNC 60 (Big Bertha style)
BNC 20 - 3 (Optional for pods)

Transition:
TA 5060 - 2 inches
(can be ordered from BMS)

Centering Rings:
CR2050 - 2

Fin Stock:
3/32 inch balsa or basswood

Misc:
Launch lug
Shockcord
12 inch chute
Nose wt (as needed)
Motor hook
Screw-eye

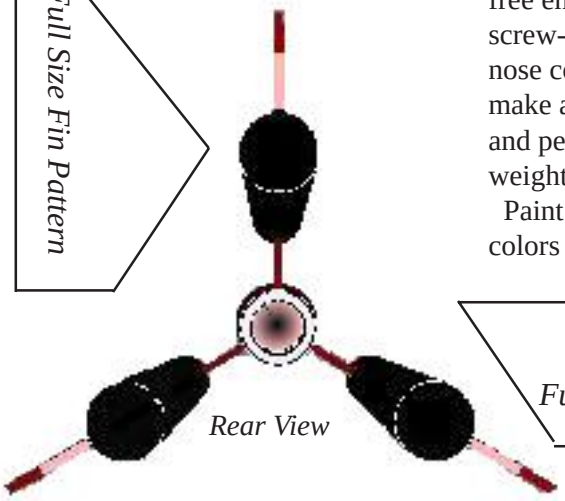


Build your motor mount from the 2.75” BT20, motor hook, and the 2 centering rings. Glue the mount into the BT50 so the ends are even. Mark the BT50 for 3 fins. Cut out the pylons from 3/32” fin stock and glue them to the marked lines, 1” from the end of the tube. After the glue on the pylons has dried, glue one of the 10” BT20’s on each one. Cut out the fins and glue them to the pods with the trailing edge even with the aft end of the tube.

Glue the BT60 tube to the transition. Screw the screw-eye into the shoulder on the other end and remove. Squirt glue into the hole and then reinsert the screw-eye. Cut your launch lug into 2 parts, each 1/2” long. Glue one lug on the BT60 even with the aft end. Glue the other lug on one of the pylons so that the 2 lugs line up. Use your favorite shock cord attachment technique, and then tie the free end of your shock cord to the screw-eye. You can either glue your nose cone to the BT 60 or use tape to make a payload bay. Prep the rocket and perform a swing test, adding nose weight as needed for stability.

Paint your Trireme in contrasting colors and set sail!

Full Size Fin Pattern



Rear View

Full Size Pylon Pattern

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ZOG-43

NARHAMS Model Rocket Club Newsletter

Launch Schedule

SPORT LAUNCH
Goddard Space Flight Center
Visitor's Center
1:00PM-2:00PM

May 4

CONTEST/SPORT LAUNCH
ECRM-30 Regional Meet
Middletown Park

May 17-18

SPORT LAUNCH
Middletown Park

June 14

Next Issue's submission deadline is June 2!

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