THE OFFICIAL NEWSLETTER OF NARHAMS SECTION # 139

ZOG-43

JUNE 2001

PHOTO: Khim and Kindra Bittle preparing an egglofter at ECRM-28

Photo By : Jim Filler

IN THIS EDITION

THE ONLY NAR NEWLETTER PUBLISHED MONTHLY ! !

From the Editor:

Another contest year is slowly coming to an end. For some clubs this marks the beginning of the heaviest time of the year for activities. NARHAMS is no exception to this either. The contest year (runs from July to June) will end with Ramtec-9. July brings the annual Goddard commemorative contest, August brings NARAM, and September brings all sorts of events, the elections, College Park Aerofare, a night launch, and various other activities. We have had another heck of a year! This edition of ZOG-43 will be the last one to be submitted for the contest year. The NAR LAC trophy given to the best section newsletter will be awarded at NARAM-43. This will be my last opportunity to win this award as your editor. I alluded to my job changing in last months column here in ZOG-43, with the new position will come greater responsibility and longer hours. The search for a new editor has come to an end. Kevin Johnson will be taking over the reigns as your editor here in the near future. Plans haven't been finalized, but I would like to get Kevin onboard as soon as possible. Since I was unable to bring another winning newsletter award to the club up to this point, I feel it is necessary to get Kevin going and into the running for next year. Let there be no mistake, I am in no way bitter about not winning the award; ZOG-43 has been the honorable mention for the last three years. The winners the past few years must have been very good. I would like to take a minute and thank all the club members that have volunteered their time to do articles for this fine newsletter that I have the pleasure of putting together. I could try and name all the names, but I am sure I would forget several people who have contributed some excellent content. So to everyone who has sent me something, THANK YOU VERY MUCH!

The next step for me is still unclear. With my new position, I am hesitant about being the club president for the upcoming year. I am not sure how much time I can dedicate to the club. I plan on being able to attend business meetings, but beyond that, I can't say for sure. I plan on making my decision after NARAM-43 as to whether I will seek re-election this coming election in September. I am hoping we will have two members interested in running for the position. If not, I feel obligated to help the club by running again with the caveat that I simply will not be as active as I have in the past. The past four years as the club president have been very rewarding. Our club has done very well in competition, we continue to excel in the various areas of outreach, we have a large core of active members that are always willing to help, and we have been named the NAR Section of the year three of the four years. So I will leave you with these thoughts. Are you interested in becoming more active within the NARHAMS club? Would you like to be an officer? If so, please contact me or one of the other officers.

King Zog

Jim Filler

LAUNCH WINDOWS

SPORT lAUNCH

Middletown Park
June 9 - 10am-4pm
Contact: Khim Bittle

RAMTEC-9 Hosted by SPAAR
Center Valley, Pa. June 16 & 17
Events: C Egg Dur., D HD, 1/2A BG, A SD, B SR Dur.
Contact: Glenn Feveryear

SPORT lAUNCH

Middletown Park
July 14 - 10am-4pm
Contact: Khim Bittle

Goddard Commemorative Contest
Hosted by GSFC & NARHAMS
Greenbelt, Md. July 15 10am-3:30pm
Non NAR contest , events: "A" altitude ,"A" spot landing.
Only 18mm NAR safety certified motors
Weight limited to 4 oz. at liftoff

NARAM-43 National Meet Hosted by MARS
Geneseo NY Aug. 4-10
Events: ½A BG, ½AFW, A ALT, B SRA,
C SD, C ELA, D HD, SpSc, R&D.
Contact: John Viggiano

SPORT lAUNCH

CANCELLED FOR AUGUST

SPORT LAUNCH / NIGHT LAUNCH

Middletown Park
Sept 8 – 2pm-10pm
Contact: Khim Bittle

DEMO LAUNCH & DISPLAY
College Park Airport
Sep 22 9am-4pm
Contact: Alan Williams

June, Juni, Juin, Junio…

Paul Miller, NAR 51615

June is strictly Mars month Just think Mars! Mars observers have been waiting 13 years for June 2001. On June 21, Mars will be "merely" 42 million miles from Earth. On June 13, Mars will reach opposition. Mars will be brighter than bright. And on June 17, Mars will reach one of its equinoxes so we can see all of him, from pole to pole.

Unfortunately, Mars will climb no higher than 22° above the Southern horizon at our latitude. Mars has "wandered" to the east or tail end of Scorpius in our Southeastern sky. It will reach its greatest height in the middle of the night. Do not confuse Mars with Antares, the red alpha star in Scorpius. Mars will be east or left of Antares.

Check out Mars after sunset on June 6. He will be just to the right of the almost Full Moon. Telescopically, Mars may prove a challenge locally due to its low position in the sky. Chances are good that pro and amateur astronomers alike will capture some great images of this close encounter.

June 21 is particularly important astronomically this year. A great deal is occurring during this unique 24-hour period. Mark it on your calendar. First and foremost, the summer solstice arrives in the Northern Hemisphere. Those of you traveling near or above the Artic Circle should secure lodging with blackout curtains for sleeping purposes. Shirley and several other members of my family will be in Finland.

The New Moon will climb in the sky the evening of June 21. Mars will be closest to us at the same time.

June 21 also brings a Summer-solstice solar eclipse, a rare event indeed. It is the first total solar eclipse of the new millennium. If you are in eastern South America or sub-Saharan Africa, you will be in a location to experience it directly. All others can find it easily on the Internet. Totality begins off the east coast of Argentina – across the south Atlantic, continuing through equatorial Africa, and ending past Madagascar.

Last year, about this time, my son Michael and myself contemplated a trip to Zimbabwe for the Summer-solstice solar eclipse. Social and political unrest in and around Harare quickly dampened our enthusiasm. Michael will travel to Finland and I will prep for the 43rd NARAM in upstate New York.

Oh well, another eclipse missed. Of course, my lifetime goal is to see the BIG ONE in 2017. Perhaps one of my grandchildren will pack me into their sleek solar speeder and whisk me to South Carolina to travel along the path of totality on Solar-charged batteries. I wonder if Pedro's "South of the Border" will still decorate the landscape?

NAR S&T NEW MOTOR CERTIFICATIONS

The following motors have been certified by NAR Standards & Testing for general use as high power rocket motors effective May 7, 2001. They will not be certified for NAR contest use as they are not model rocket motors.
The following are Aerotech reloadable motors, certified only with the indicatedsize casing and manufacturer supplied nozzle, end closures, delays, and propellant slugs. All use the new "Redline" propellant.

Aerotech:
29mm x 238mm (RMS-29/240 casing):
H210R-10 (220.0 Newton-seconds total impulse, 110.8 grams propellant mass)

38mm x 203mm (RMS-38/360 casing):
I218R-6,14 (330.0 Newton-seconds total impulse, 172.7 grams propellant mass)

The following motors have been certified by NAR Standards & Testing for general use as model rocket motors effective May 7, 2001. All are certified for NARcontest use effective July 6, 2001.

Estes:
13mm x 45mm: A10-PT (2.50 Newton-seconds total impulse, 3.8 grams propellant mass)

24mm x 70mm: D11-P (18.0 Newton-seconds total impulse, 24.5 grams propellant mass)

Jim Cook, Secretary for
NAR Standards & Testing
<JimCook@AOL.COM>
Jack Kane, Chairman

NARHAMS OUTREACH

KittyHawk to the Moon

By: John McCoy NAR # 15731

Two Rivers BSA district, Weblos Cub Scout Weekend "Kittyhawk to the moon" theme was a big success. NARHAMS supported 34 webs and 3 Scouts with 74 A8-3 and 3 B6-4 flights Saturday between 1:00 and 3:30 PM. Most were Quest kits with Estes motors. All the A8-3 powered birds were recovered within the 800-foot square field, two of the B6 flights suffered shockcord separations and one fell victim to the surrounding rocket eating trees. 10 Cub Scout packs and 2 Boy Scout Troops were represented. Per Chris Row the event coordinator for the District; all the Scouts were excited and several of the packs plan to visit GSFC, public launches in the near future, Look out ED. I'm a little sun baked, but had a good time, even managed 5 mirco maxx flights.

NARHAMS OUTREACH

Gunpowder State Park Cinquo de Mayo

By: Ed Pearson NAR # 5694

Kevin Johnson and I helped a Baltimore-area Girl Scouts Camperee on May 5. More than 1,000 young ladies encamped at Gunpowder State Park (motto: pay $2.00 and we'll let you in) off of MD 43 (no fooling) to take part of the weekend event. Fortunately only 60 built rockets which we fired in a 1.5 hour period.

Kevin passed out wadding, engines, performed the safety checks, assigned rails and helped load the NARHAMS system 3 rack. He did everything including putting up an Estes (not to be confused with distributors who sell Quest) Mercury Redstone. This was an appropriate nod to the 40th anniversary of Alan Shephard's and America's maiden manned voyage into space. I just gabbed over the PA, fired the rockets and helped with launch preps.

It was an unusual out-reach program in that the time allocated was 3:15-5:15 p.m., it was all Alpha IIIs, and as a testament to Kevin's ability and igniter/system reliability there were no misfires. Only two of the 60 put their 'chutes in the nosecones...but that was about average for a group this size.

The group leader offered us a girl scout–cooked spaghetti dinner cooked over an open campfire after the launch, (yummy), but Kevin and I remembered we had to rake leaves, repair our roofs, paint the cat, build a pipe organ, celebrate our son's birthdays, and otherwise were occupied as we fled the scene and park (motto: we don't charge you to leave).

Seriously, the young ladies were well behaved, it was a great group and as Kevin indicated, a heart warming experience to donate your time helping others in an activity you love.

Hobbytown Frederick
Make-it-take-it

By: Khim Bittle NAR # 17634

Friday night at Hobbytown was a success with 27 super 6's built and many of those flown for the first time at the sport launch on Saturday. Big thanks to club members who attended and helped out (Chris, Kris, Jim, Kevin, Don, Rich) either Fri and/or Sat. A photo of five Super-6 models and fliers was uploaded to the e-group 5-12-2001 folders. Also a BIG THANKS needs to go to Doug Pratt for his extra efforts in delivering the Super-6kits.(Editors note: Doug mailed 25 kits to me , but unfortunately it was my old address, Doug being such a good guy, delivered 25 more kits to the store the day of the build session. I call that great effort for the cause of hobby rocketry ! Three cheers for Doug ! ! !)

Photo: Make it –Take it participants at the May sport Launch
Photo By: Khim Bittle

COMPETITION ROCKETRY

Helicopter Blade Design

By: Mark Petrovich NAR #29160

I'm sorry that I didn't get a chance to attend the last meeting on June 1. I wanted to share my method of making Heliroc blades in the hopes of improving the science and technology up to this point.

When making Heliroc blades, I think back to a book I read about the Wright Brothers. When they wanted to create a propeller, they found very little had been done in terms of the science. They, however, had a new and vast assortment of new ideas and data on how airfoils perform at different angles of attack and wind velocities. They reasoned that a propeller would simply be an airfoil that moves in a rotary path. As such, they could apply their airfoil data to the velocity of the engine (at the shaft hub) and what pitch angle they wanted to use, based on thrust desired. They came up with THE MOST EFFICIENT PROPELLERS that anyone had ever designed. Two men from Dayton! Incredible!

So, what does that have to do with Heliroc? I have seen Heliroc blades that are simple sheets of balsa scored along a ridge (diagonal) that are glued at an angle and expected to be efficient. Its not! If you want to convert vertical sink into lift, you have to be a little more subtle about it. Simple changes in the leading edge angle of attack should be sufficient to achieve rotation and lift. With that in mind, I make 12" long blades from 1/16" balsa, with a 3/4" width. I glue a rectangular section of 1/8" balsa to one edge of the blade in a diagonal fashion. That means at one end, the tip, the bottom of the 1/8" stock is flat to the underside of the 1/16" stock. At the root, the TOP of the 1/8" stock is flat to the TOP of the 1/16" stock (use Jet or your favorite CA for that to make it faster). Using a sharp X-Acto knife, carefully shave the rotor blade profile so that you end up with a nice airfoil at the tip of the blade and a higher camber root chord. Shave on the UNDERSIDE of the blade too to smooth out the airfoil. Curvature is efficiency,

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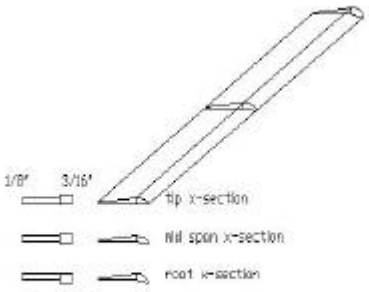
mind you. Finish with your best technique and mount your hinges.

With all of that said, I am sure someone is not sure what I am intending so give some feedback if you like and I will respond likewise. I present this technique because years ago....before this BAR experience....I LOST a Heliroc on an A engine on a model I named Spintacular. It featured this technique and a sliding piston actuation for rotor deployment, the latter similar to Trip Barber's report in the MIT Rocket Society Design Guide. Lose a Heliroc? Yep, it really happened.

I think that a small angle of attack is needed to begin the autorotation. I also think that once the rotation begins, you need a nice airfoil to keep it going versus making a pinwheel that drives the Heliroc into the ground. The diagram provides a view of the blade cross section.



SPACE NEWS

Compiled By: Jennifer Ash-Poole NAR # 61415

Shuttle solid rocket booster test firing successful
NASA NEWS RELEASE
Posted: May 26, 2001

A full-scale Space Shuttle Reusable Solid Rocket Motor was test fired for 123.2 seconds on Thursday, in Promontory, Utah, at Thiokol Propulsion, an Alliant Techsystems, Inc., company.

The test is part of the flight qualification process of a new insulation design on the motor's nozzle to case joint that will improve flight safety and helps reduce costs on the motor. Support motors are used to evaluate, validate and qualify changes proposed for the Shuttle's Reusable Solid Rocket Motor. The motor tested was built using the same controls and documentation requirements as that of flight motors. On this motor, there were 93 objectives and a total of 576 instrumentation channels being tested. The two-minute test duration was the same length of time that the motors perform during Shuttle flights.

There were four major certification objectives for the test of Flight Support Motor-9. One of the more important tests was a change in insulation design on the nozzle-to-case joint J-leg. The proposed design change improves the thermal barrier protecting the O-rings on the motor by eliminating polysulfide, a putty-like material applied to the joint surface as the motor is assembled. The new design incorporates a J-joint - a joint shaped like a J - made of rubber for a better seal and a carbon fiber braided rope. The rope, which is downstream of the J-joint, is another safety addition because it absorbs heat should gas seep past the joint. The new design will enhance the primary thermal barrier and will add another thermal barrier with the rope.

The upgrade is slated to fly on the Shuttle in late 2004. The firing also retested a new adhesive that bonds metal parts to phenolic parts in the nozzle; new environmentally friendly solvents; and demonstrated a new nozzle ablative insulation for the motor. The test was conducted in the T-97 bay of the Thiokol test facility, located north of Salt Lake City. During the next several months, the data will be analyzed and the results for each objective provided in a final report. The metal case segments and nozzle components will be refurbished for reuse.

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Upcoming Launches

June 7 Pegasus XL * HESSI
Launch window: 1405-1500 GMT (1005-1100 EDT)
Launch site: Cape Canaveral Air Force Station, Fla.

An Orbital Sciences air-launched Pegasus XL rocket will carry NASA's High Energy Solar Spectroscopic Imager satellite into space. Launch delayed from July because the satellite was damaged in March during a testing accident. Delayed from March 28, then April 14; May 15 and June 4 to redesign part of interstage separation system after a "hang" was seen on the last Pegasus launch.

June 8 Ariane 44L * Intelsat 901
Launch window: 0644-0744 GMT (0244-0344 EDT)
Launch site: ELA-2, Kourou, French Guiana

Arianespace Flight 141 will launch Intelsat 901 communications spacecraft for the InternationalTelescommunications Satellite Organization. Built by Space Systems/Loral, the satellite will be parked in geostationary orbit at 12 degrees West. Launch date had been advertised as June 7 but it is actually in the early morning hours of 8th.

June 19 Atlas 2AS * ICO A1
Launch window: 0441-0641 GMT (1241-0241 EDT)
Launch site: SLC-36B, Cape Canaveral Air Station, Florida

Lockheed Martin's Atlas AC-156 will launch a spacecraft for the New ICO satellite mobile communications constellation. The satellite is built by Boeing. Launch pushed back from June 5.

June 30 Delta 2 * MAP
Launch window: 1946:46-1956:00 GMT (1546:46-1556:00 EDT)
Launch site: SLC-17B, Cape Canaveral Air Force Station, Florida

Boeing Delta 2 will launch NASA's Microwave Anisotropy Probe into space. The rocket will fly in the 7425-10 vehicle configuration. Launch date reset from May.

July 12 Ariane 510 * Artemis & BSAT-2b
Launch window: TBA
Launch site: ELA-3, Kourou, French Guiana

Arianespace Flight 142 will launch the European Space Agency's Advanced Data Relay and Technology Mission satellite, called Artemis for short, and the Japanese Broadcasting Satellite System Corp.'s BSAT-2b telecommunications spacecraft. Artemis was supposed to be bumped to the next Ariane 5, but Eutelsat's Atlantic Bird 2 was not available to fly on Ariane 510 as originally planned, allowing the shuffle.

July 15 Atlas 2A * GOES-M
Launch window: 0659-0824 GMT (0259-0424 EDT)
Launch site: SLC-36A, Cape Canaveral Air Force Station, Florida

Lockheed Martin's Atlas AC-142 will launch the Geostationary Operational Environmental Satellite-M weather spacecraft for NASA and NOAA. Launch date pushed back from July 12 in favor of launching shuttle on that day.

July 21 Titan 2 * DMSP 16
Launch window: 1353-1408 GMT (0953-1008 EDT)
Launch site: SLC-4W, Vandenberg Air Force Base, Calif.

The Air Force Titan 2, known as G-9, will launch the Defense Meteorological Satellite Program 5D-3-F16 weather satellite into polar orbit. Launch date delayed from Jan. New date is pending replacement of Controls Interface Unit and testing of all electrical paths in the spacecraft; mid-July is targeted. See earlier Mission Status Center.

July 22 H-2A * Demo Flight
Launch window: TBD
Launch site: Tanegashima, Japan

The inaugurual flight of Japan's H-2A rocket will launch an instrumented satellite simulator known as Vehicle Evaluation Payload No. 2 (VEP-2). This will serve as a demonstration mission for NASDA's newest rocket, which is an advanced version of the troubled H-2.

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July 22 Taurus * OrbView 4 and QuikTOMS
Launch window: 1838-1916 GMT (1438-1516 EDT)
Launch site: Area 576-E, Vandenberg Air Force Base, Calif.

The sixth Orbital Sciences Taurus will launch the OrbView-4 Earth-imaging satellite for OrbImage and NASA's QuikTOMS ozone monitoring satellite. OrbView-4 will acquire one-meter resolution panchromatic and four-meter resolution multispectral imagery. QuikTOMS will continue daily mapping of the global distribution of the Earth's total column of the atmospheric ozone with Total Ozone Mapping Spectrometer Flight Model 5 (TOMS-5), which was originally to have flown on a Russian Meteor-3M satellite. Launch date reset from March, then from May 23; May 30; June 27 and July 18.

ECRM-28

By: Jim Filler NAR # 27862

The twenty-eighth rendition of the " East Coast Regional Meet" was held on May 19th and 20th this year. The annual event hosted by NARHAMS #139 was held at the Middletown Park in Middletown Md. Through the years this regional contest has taken on many different characteristics. The actual abbreviation ECRM, has been used to explain some of these various meanings. For example, Extremely Cold Regional Meet, which precipitated it being moved from April to May. East Coast Rainy Meet, no explanation needed, Extremely Cold Rainy Meet etc. I could go on and on. This year's edition of ECRM was once again a battle with the weather. The forecast changed daily the week prior. As the Contest Director, it was my decision to hold the meet or postpone it.

Saturday morning came with some mixed sunshine and clouds. As people started to arrive, I was told of varying weather conditions encountered upon the way. Most people coming from the south, told me of rain as little as 10-15 miles south of Middletown. I decided to go for it and proceed with the meet. The range was set up in the usual location with the McCoy satellite system and the addition of rack #1 taking the first six pads. We had 16 pads overall with no waiting at any time over the weekend for a lack of pads. We had a total of 24 registered competitors for the meet with all age divisions represented.

Since we had two altitude events, we started with altitude first. A engine payload and C engine eggloft were chosen because they are generally easier events to track. Over the course of the day, several flights were "track-lost" due to poor sky conditions. We had some for the best trackers in the country, yet they were having difficulty seeing the flights. Speaking of trackers, a Big Thank You goes out to Glenn Feveryear. Glenn decided not to fly at the contest due to family commitments; however, he did come to ECRM to handout information for RAMTEC-9 being hosted by SPARR in June. Glenn volunteered to track and filled two tracking window slots for us. Thanks Glenn !

In A payload, Matthew Filler was the winner in A division with the best flight of any competitor in all divisions. Matthew flew a 13mm model with a transition for the payload bay and used an EstesA3-4t for his motor and a 68 meter flight. Ellis Langford took 1st in B division, Chris Kidwell took 1st in C Division and Snowballs Chance took 1st in T Division.

C Egg loft altitude did not see any improvement of tracked flights. Skies remained hazy and very difficult to track. The trackers still deserve a big thank you for their efforts. Kris Bittle easily won A division with a flight of 197 meters. Ellis won B division with a 193-meter flight. Khim Bittle took 1st in C division with the meets best flight of 253 meters. Calvin & Hobbes team took 1st with a 217-meter flight.

While everyone was busy flying the tracking events, Doug Pratt and John McCoy were busy doing the static judging for Sport-Scale. All 24 contestants entered the event keeping Doug and John busy into the late afternoon. A big thanks to both Doug and John for taking care of the tedious task of static judging.

At 4pm tracking closed and the range opened up for a window of duration flights. Conditions were breezy, yet sunny. Jennifer Ash-Poole chose to fly ¼ A Flex-wing and had a whopping 202-second flight, which would have been good for a new C division record, but she was unable to return it. It was last seen headed for King-Zog's place in Jefferson some 7 miles away. I looked in the front and back yard thinking it might have homed in on the castle, but no luck. Some people took advantage of the late afternoon by flying sport models for fun. I guess these folks didn't lose sight of the fact that Rocketry is Fun Damn it!

Sunday morning arrived with nice weather to start the day. Since most of the range equipment was left up from Saturday, only electronics had to be hooked up and we were under way. Contestants could fly either duration or Sport Scale. Kris Bittle flew his very nice Kappa model for 1st place in A division. Ellis Langford flew his veteran Javelin for 1st in B division. Chris Kidwell flew a Wresat for 1st in C division. Paul Horning brought out his veteran Little Joe for 1st in Team division. Paul cursed himself prior to the flight announcing that he was going to retire the model and it would be it's last flight. Well, Paul managed to land it near the top of one of the tallest trees. Not to worry though, Paul must have a little grizzly bear in him, because he was able to climb the tree and retrieve his model with the addition of the club's new retriever pole (extends to 30+ feet).

¼ A Flex-wing was flown with mostly the same strategy. Most used 13mm boosters with Estes motors. Some brave souls used the Apogee ¼ A, and some even used 10 mm tubes. Matthew Filler took 1st in A division with a combined time of

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50 seconds. Ellis Langford took 1st in B division with a single flight of 83 seconds and good for a pending US record. Jennifer Ash-Poole took 1st in C division adding a second flight on Sunday to her 1st flight that flew away on Saturday for a combined total of 231 seconds. The SPAAR guys, Over 40 Victims of Fate, took 1st in team division with a combined total of 81 seconds.

The other duration event A Streamer was also held Sunday with some flights late on Saturday afternoon. Fritz Langford took 1st in A division with a combined total of 192 seconds. Mike Filler took 1st in B division with a combined total of 180 seconds and thus keeping Ellis from sweeping B division. Snowballs chance took 1st place in Team division with a combined total of 227 seconds.

The range was scheduled to remain open until 2 PM however, Mother Nature had other plans. About 1 PM the rain moved in pretty hard. With one last call for flights the range was shut down. Most everyone at the meet chipped in and help tear down the range in the driving rain. Since the bulk of the equipment is stored at my house, I was very thankful that everyone who helped, stayed until it was all packed up. I took an informal poll and it was decided we would all go back to our place for the planned BBQ. It was a good thing we did. The rain didn't let up any the rest of the afternoon. Everyone caravanned over to our house, helped me unload the truck and then proceeded inside where it was nice and dry. I pulled the gas grill out of the garage and proceeded to cook up some goodies. Several people brought side dishes. We all ate and chatted until it was time to give out the awards.

Having Chris Kidwell as an active core member and officer of the club, pays off when it is time to run a contest. Not only did Chris spend most of the weekend at the results table processing data, he also tabulated the overall results with his software "Contest Manager". I handed out awards for all that finished 1st through 4th. Trophies were given out for all 1st place finishers with ribbons for 2nd through 4th.We also handed out the coveted "Dead Last But Finished Ole Ed Roving Trophy". This year's lucky winner was Richard Hickok. To be eligible, you have to be either a C or Team division flyer for NARHAMS, and finish last in points amongst those who are present at the awards presentation. The award is given to coerce the recipient to do better next time. The trophy also serves as a time capsule. For each winner has their name engraved on the trophy, the year they won it, and are to place a piece of memorabilia in the secret compartment. We also had some nice door prizes to give out as well. Our sponsors this year graciously donated kits and gift certificates. Aerospace Specialty Products, Edmonds Aerospace, Hobby Works of Laurel, and Pratt hobbies all deserve a big Thank You for supporting NARHAMS and ECRM-28. Thanks to all that came out and participated at the 28th annual edition of ECRM.

ECRM-28 Sponsors

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HOBBY WORKS LAUREL

At the Laurel Shopping Center on Rte 1 in Laurel Md.
See Scott Branch.
Also at Federal Shopping center in Rockville on the Rockville Pike
NARHAMS members: Show your club card for a 20 discount!

Photo: Scale gallery at ECRM-28
Photo By: Matthew Filler

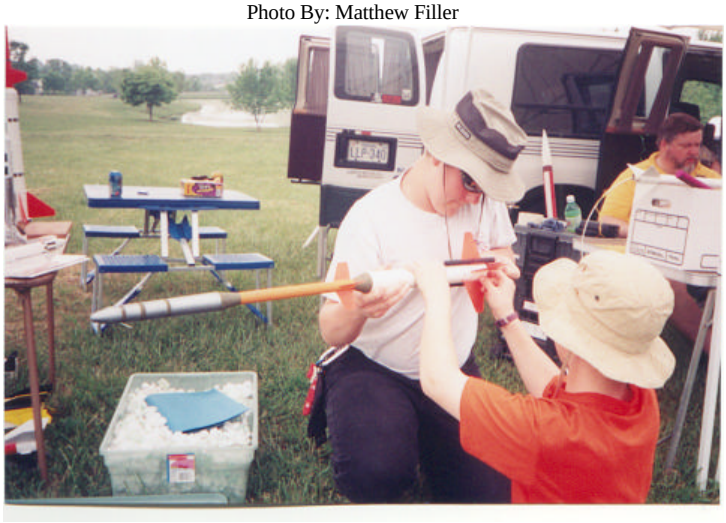

Photo: Ellis Langford assists his brother Fritz wth his Trailblazer II
Photo By: Matthew Filler

US Team Practice

By: Ed Pearson NAR # 5694

While the club concurrently supported ECRM and a Sunday GSFC launch (the latter supervised by Jim Miers and Alan Williams), three former and long-time NARHAMsters (see what footwork you have to go through to avoid saying, "OLD"?) attended the U.S. Spacemodeling Team in Muncie, Indiana, May 19-20.

The practice was held in anticipation of the flyoff competition, September 28-29, on the same site (AMA Headquarters). The flyoffs will feature eight events (altitude, scale altitude, PD, SD, BG, E class RC R/G with a precision landing component thrown in, scale, and for world championships–helicopter duration. Members of both seniors and juniors flying divisions will be chosen and the expected contingent of more than 20-participants will attend the XIV World Space Modeling Championships near Prague, Czech Republic in fall, 2002.

Did I say first for helicopter? Actually since a major rule change (FAI rule change tsunamis occur every five-years) every event is slightly new due mainly to higher required engine classes, body lengths and body diameter sizes...so many of the old timers and a few newcomers wanted some experience together before the level-playing-field flyoffs competition.

The NARHAMsters there alluded to were David O'Bryan (joined in 1988), Dale Windsor (joined in 1970 and now runs Lawn Dart Rocketry out of Atlanta and is with another section) and myself (joined in er, well uh, say let's just move on...). Others at the practice hailed from Alabama (George Gassaway), Boston (Bernie Biales), CA (Ross Hironka), Chicago area (George Riebesehl and Ben Roberto), Colorado (Kevin Kuczek), Indiana (Chad Ring), Florida (Nick Rivieccio), New Jersey (Bob Kruetz), North Carolina (Jay and John Marsh), Michigan (Andy Tomasch), Virginia (Bob Biedron), and apologies to all my feeble memory has forgotten...you get the point, the practice was well represented from a distributed area across the states.

The practice itself was laid back. New mandrels to make the newly sized body tubes hadn't been made so the modelers tried out B/Gs, hand tossed gliders, helicopter concepts and dethermalizer timers and otherwise socialized, gathered and exchanged ideas.

The hand tossed gliders were interesting. They are smaller than the gliders that will be used for competition say four foot instead of six-foot wingspans and a bit heftier. A small peg penetrates the end of one wing tip to allow the modeler the grasp the plane like a boomerang and toss the model skyward like a discus. Bernie used a laser spotter to range the tosses...Ben could regularly throw his model above 31 meters (about 100 feet). Then the modelers could practice low level control, thermal properties of various topography, and precision landing techniques without having to resort to mechanical (e.g., hi-starts) or rockets for lift. The modelers could then get off a hundred or more flights in a six hour practice and effortlessly stay trim!

George and Andy tried out some paper models. George's printer gave the models a red, white and blue motif, whereas Andy's paper tiger 5 velum models were really lightweight....as light as the eventual fiberglass models will be when people start getting mandrels. While there, I build and flew (yes, Virginia there is a Santa Claus) an Andy velum model...George provided me a nose cone he vacuum formed. It was impressive and has real possibilities for NAR competition although it tends to be fragile. The flimsiness can be corrected with matt spray, doping, or epoxy lacquering but the trade off is weight. I'll bring the one flown to a club meeting and you can look at it. Andy gave me permission to reproduce the rocket as an article, so look for that soon too.

In all the practice was fun. To learn more about the U.S. Spacemodeling team, international rocketry and the flyoffs, check out the website: http://www.spacemodeling.org/new/

NARHAMS CALENDAR OF CLUB EVENTS

The YEAR 2001

Jun 1 - Meeting, D Helicopter building
Jun 9 - Sport launch Middletown Park
Jun 16 - Goddard Open House/ Community Day
Jun 16-17 - RAMTEC-9 Regional Meet, Center Valley, PA
Jun 30 - Club building session, Filler house Jefferson Md.
Jul 6 - Meeting, Apollo 12, 14, 15 discussion
Jul 13 - Open building session, Hobby Works, Laurel
(may move to Jul 14)
Jul 14 – Sport Launch Middletown Park
Jul 15 - Goddard Contest
Aug 3 - No meeting, moved to Aug 17
Aug 4-10 - NARAM-43 National Meet, Geneseo, NY
Aug 11 - Sport launch Middletown Park
Aug 17 - Meeting, NARAM review and night launch discussion
Aug 25 - Crab Feast II, Filler house, MicroMax contest event
Sep 7 - Meeting, Streamer and parachute technology
discussion
Sep 8 - Sport/night launch
Sep 8 - Prince George's County 4-H Fair launch?
Sep 22 - College Park AeroFair?
Sep 29 - AIAA launch
Oct 5 - Meeting, Goddard's birthday party and historical movies
Oct 13 - MATTHEW-5 Section Meet
Oct 27 - Planning meeting for Calendar year 2002 College
Park Airport, open to all members
Nov 2 - Meeting, Radio controlled gliders
Nov 9 - Open building session, Hobbytown USA, Frederick
(***Pending***)
Nov 10 - Sport launch Middletown Park
Nov 16 - Open building session, HobbyWorks, Laurel
(may move to Nov 17)
Dec 7 - Holiday party
Dec 8 - Sport launch Middletown park
Dec 15 - Club building session, College Park Airport

Photo: Liftoff ! The Mighty Estes D bird is away

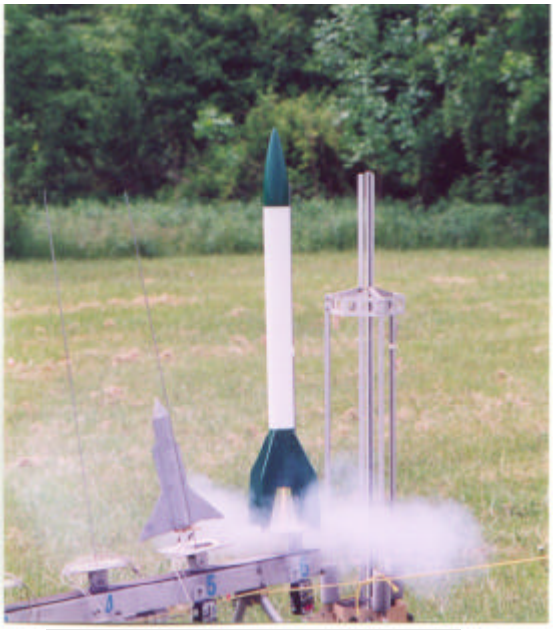

Photo By: Jim Filler

Photo: The Nutty Professor aka Grumpy Old Man # 1, looks happy, he must be sport flying at ECRM-28
Photo By: Matthew Filler