

THE ZOG-43

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

1965-
2005



40th
Anniversary



Forty Years Ago – Part Three by Ed Pearson Senior NAR-5694

Once chartered (1965) our section took flight. In the first year we held section meets, traveled to Cumberland to do battle with La Salle in an area meet, attended our first regional contest, and came loaded for bear and with high expectations at NARAM—our first annual meet for the club and for most of our members.

Our club contests were called HQSMs or Headquarters Section Meets and held at Goddard Space Flight Center's Optical Research Facility. The Sounding Rocket Division performed instrument testing at the facility, and Howard Galloway would get us the field at least one Saturday a month. We were careful not to disturb anything there, leave trash, or otherwise ruin our stay. Later we would do

our launches from the paved runway of Goddard's/BARC's shared airfield or between the towers at GSFC Antenna Range. We didn't charge entry fees for attending an HQSM; Paul Conner expressed it well at an early club meeting: we shouldn't charge club members for club meets; that's what the dues were for.

We attended two Battle of Cumberlands—one in 1965 and one the following year. Both were held at Saint Mary's Picnic Grounds off what I think was called Airport Road outside of town. LaSalle club president Pat Stakem and I made the arrangements over reel-to-reel audiotapes and a couple of rare and highly-prized telephone calls. Long distance phone calls back then carried premium prices, someone had to pay, and you

could always interrupt almost any business or social function with the words, "XX is on the line (loud announcement voice) and (almost reverently) *he is calling long distance.*"

A five-minute conversation on a 3.5" diameter audio reel didn't offer the intended recipient a chance for immediate feedback, but you got a lot across for about 30 cents postage. Am betting I probably still have some of those old tapes from Steve Rosenstein (North Shore Section), Jay Apt (Steel City Section) and Pat.

Anyway, Pat sealed the deal for us by getting permission for us to camp out on the picnic grounds—thus giving us a way to avoid paying hotel costs. No one had a job other than Jan Blickenstaff who worked part-time for a printer. Besides if we got too ripe by

Artist Rendition of NASA's New Moon Rocket

Continued Page 4...



NASA/John Frassanito and Associates

NOVEMBER 2005

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AND MORE!

ZOG-43

Volume 27 Number 11 November 2005

ZOG-43 is the official newsletter of NARHAMS the National Association of Rocketry Headquarters Astro Modeling Section # 139

NARHAMS is the oldest model rocket club in the United States!

ZOG- 43 is dedicated to model rocketeers of all ages, abilities, and interest. We are committed to providing the most current, up-to-date information on model and real world rocketry, and to provide educational material as well as entertaining information. ZOG -43 is published monthly and is available to anyone on a subscription basis. Current rates are \$10 for meeting pickup or email or \$15 for postal mail U.S. Funds for 12 issues a year, payable to NARHAMS Material in ZOG -43 is not copyrighted. Free and unlimited reproduction is granted with the proper credit to the author and/or ZOG-43.

For more information.....

If you have any questions about ZOG-43 or NARHAMS, or if you have any comment(s), correspondence, free merchandise or if you'd like to submit an article, send them to :

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ZOG-43 is edited by Roy Lappalainen, and is an eight-time winner of the NAR/LAC "Rockwell" Trophy, recognized as the best NAR section newsletter.

Years won: 1969, 1973, 1975, 1990, 1991, 1992, 2003, 2004 & 2005

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

Photographs: by Roy Lappalainen, except where noted.

ZOG-43 is produced on a eMachines D2046 PC with a Pentium 4 processor using Adobe PageMaker. Masters are printed on a HP Laserjet 4L printer.

This Edition: 35 copies

NARHAMS ON THE WEB

<http://www.narhams.org>

Send and receive E-mail with other NARHAMS members through NARHAMS Web page grouplist via yahoo-groups.



NARHAMS serves Baltimore, the state of Md., Washington DC and the surrounding Metropolitan areas. The club is a section of the National Association of Model Rocketry (NAR) and we are the oldest continuously active model rocket club in the United States, first established as a high school club in 1963, changing our name to NARHAMS when chartered as a NAR section in 1965. NARHAMS is the only five time winner of the NAR "Section of the Year" award.

Years won: 1997,1998,1999, 2001, 2004

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 Saturday of the month from 5:30 to 9:30 PM at the College Park Airport Annex Building. Dues are 10 cents a week, with an initial 50 cents up front (good for 5 weeks) as a sign of good faith.

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

ZOG ROYAL COURT

(NARHAMS OFFICERS)

| | |
|------------------------------------------|--------------|
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| COURT JESTER (Section Advisor) | |
| Jim Filler | 301-524-4447 |

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.



Presidential Musings for November

As usual the club had its annual planning meeting in October. This year, it was sparsely attended and cut short due to other factors. However, there was a good discussion between the five there and the one we called about tweaking some things for this next year. A few members emailed in a few suggestions, and everything was discussed.

The biggest change is moving the sport launch from the 2nd Saturday to the 3rd Saturday of the month. A member suggested this, mostly to not conflict with Great Meadows, but the discussion turned to how we (the club) have all of our rocket stuff bunched up towards the beginning of the month. By moving the launch one week, we may be able to get more people to the launch, and more time to finish off any building projects.

We have kept the meetings on Saturdays for another year. We seem to get a few more people to the meetings, and we have a

longer time for any build session. When I polled the people who came to meetings (and those that don't anymore) the Saturdays won out by a majority. We will review the meeting attendance again at the next planning meeting.

There are a few build sessions that haven't been set in stone, but several people are working on whom to contact to fill those in. We also need launch managers for the year. Being a launch manager means you pick up the equipment, set it up, get everyone to sign the waiver, return the equipment, and fax in the waiver to the parks department. Please sign up so that this doesn't fall to the same 5 people. You'll get to see what is involved in getting everything set up, and you'll know how things work.

Another suggestion was a 2pm RC fly at every launch. The group decided to expand that to be 2pm launch of the theme for the launch. This should allow most people who want to fly the theme to be there, and allow spectators to watch.

We have other things we need to work on, but those are yearlong projects.

We'll discuss them at the November meeting, and I'll put in requests in the Zogs. Keep an eye out for them.

Zog Bubbles

New at NASM SpaceShipOne!

SpaceShipOne is now part of the Milstones of Flight exhibit.



Photo by Mark Avino/OIPP, National Air and Space Museum, Smithsonian Institution



NASM Photo Courtesy of Scaled Composites, LLC



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Forty Years Ago Continued...

camping overnight, the YMCA in town offered a hot shower for 50 cents. Our members were enthusiastic about the prospect (flying and camping not showering).

It was only two weeks before our first meet that Pat informed me that the picnic grounds abutted a golf course on one side with a cranky shotgun-toting night watchman, and the town's cemetery laid on the other. There were no fences, walls or other dividing lines between these headstones; we were warned not to stray onto the golf course. I let the club know and our members were even more enthusiastic about the prospect (sleeping near a graveyard and a crazy night watchman, not showering).

We loaded up Jan's VW van (five passengers with gear), and Doug Frost's whatever he was driving that year (he owned some mighty unusual cars—an alleged Presidential limousine, an ex-Navy ambulance with bare wires that shocked you and a hole in the floor where trash could roll out onto the highway, etc.) and made our way via Route 40 to Cumberland. Jan's van couldn't exceed 40 mph while climbing hills, but no one minded.

The two battles there became legend as the results of the contests have been forgotten, but the evening hijinks with LaSalle members Cal Tracy, Bob Pancake, and Pat a thing of awe. The stories of the railway mortar,

the two-stage Prodynes, frightened lovers, the 20 watt amplifier, sleeping in the weeds to avoid the ¼ sticks of dynamite, etc. may best go unwritten. And that was just the first year.

The second year, SSB and Steel City flew with us in a regional contest. The Annapolis Association of Rocketry may have flown with us too—as I kind of remember Bob Atwood's sliced cucumbers being left in the clubhouse's fridge for a year. That Saturday night was one of logs hurled from atop the clubhouse, the grave specter provided by John Connor, raining marshmallows, frightened lovers, and balloon water bombs. Perhaps in another installment of *Forty Years Ago*, we can return to this battle.

Our first regional was called First Free State Meet. It pitted SSB, NARHAMS and NOVA. It was the first Maryland-held NAR regional contest and took place at the Optical Research Facility. The contest director was Herb Honecker, a sounding rocket engineer; friend of Howard's; the fellow who got the plans and drawings of the Astrobee 1500 to the NAR for scale modelers; the father of Steve Honecker (a great modeler for the Wheaton Association of Rocketry); and a man of impeccable, unimpeachable character.

SSB's Kathy Pinkerton, Cathy Maxim and the rest of the girls of SSB flew Estes kits in the multi-event contest. Kathy put a ring

as a payload in a Mars Snooper and freaked when she thought she lost the ring when the model crashed.

NOVA was the first Virginia NAR section and its acronym stood for NORthern Virginia (duh). They only had two members or so there led by club president Frank Bittinger, but their presence made a regional possible and their models were more competitive than standard kits.

NARHAMS used no kits and we must have had a dozen flyers. We were known by all as a self-regulating group rather than an adult-led section, and our models were testing what we knew about rocketry. We tried what we thought would be the lightest most effective birds, and we won the contest hands down with 441 points.

That was a remarkable score as the national championships back then could be decided by the club with 3,000 or so accumulated points (including NARAM). Flight points were a Pink Book revision away or two so all points were hard earned. Neither SSB nor NOVA garnered a 100 together I think. We just cleaned up. Herb added up the points, signed the cards and sent all the results to NAR HQ (he may just have given them to Howard who gave them to Casey).

NARAM-6 occurred at NASA's Wallops Island; Howard secured

Continued Page 10...

OCTOBER SPORT LAUNCH REPORT

by Jim Miers

The NARHAMS October, 2005 Sport Launch was held at Middletown on October 15, a week delayed on account of heavy rains on the scheduled Saturday.

Turnout was light, but reasonably enthusiastic; NARHAMS members present included Jim Miers, Kevin Webster, Alex Mankevich, Thomas Henderson and Jim and Tracy Berg and family. NARHAMS Friends Dick Stafford and Sonny Crum put in a number of successful flights, as did several non-members; Ryan Kinzie and his dad got up five flights with four different models. Kevin's TARC team, Team Ramraven was also present with models for testing.

Temperatures were mild, the sky sunny and mostly clear and the winds brisk from the northwest (hey, it's Middletown). Recovery area was downwind from the trees, which contributed to highly successful recovery rates.

Owing to the light turnout, we set up only a single rack; with 1/8" rods on pads one through four, 3/16" on number five and a remote 1/4" pad powered through an extension feeding from number six. The set up was simple, efficient and more than enough to handle the forty four flights logged for the day.

Launch activities commenced a bit after ten a.m., Jim Miers acting launch control and occasional RSO. Kevin generously took over the reins for the afternoon.

Our usual NOTAM was posted for the day, but the high winds discouraged the larger, mid-power flights.

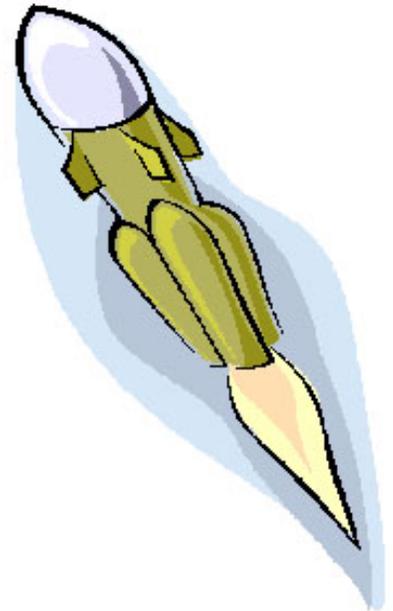
Highest impulse model was Dick Stafford's *Hat of Death* on an F23; followed closely by Team Ramraven's *Space Oddesy*, which put in a less than wholly successful showing on a 3xD12 cluster. At distant third (but reaching substantially higher altitude) was Alex Mankevich's cleverly designed *Firebolt* staging a 2xD12 to C11.

At the other end of the scale (not counting a couple failed attempts on an MM2) were the three 1/2A3 flights launched by Jim Berg. Jim logged five flights total with his kids making up an energetic recovery crew.

The strangest model flown (even beating out *The Hat*) was Dick Stafford's *Whirlygig-24* on a plugged E9. This design featured a horizontal body and only two fins.

Some other memorable flights included Dick Stafford's *Deuces Wild* and Sonny Crum's beautifully finished *Patriot*.

Jim's final comment. This was my first time running a NARHAMS launch, but hopefully not the last. The whole thing went without a hitch thanks to Khim Bittle (for the detailed written instructions) and the other club members who helped out, especially Kevin Webster and Jim Berg who stayed after to help pack it all up.



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PHOTOS BY Z





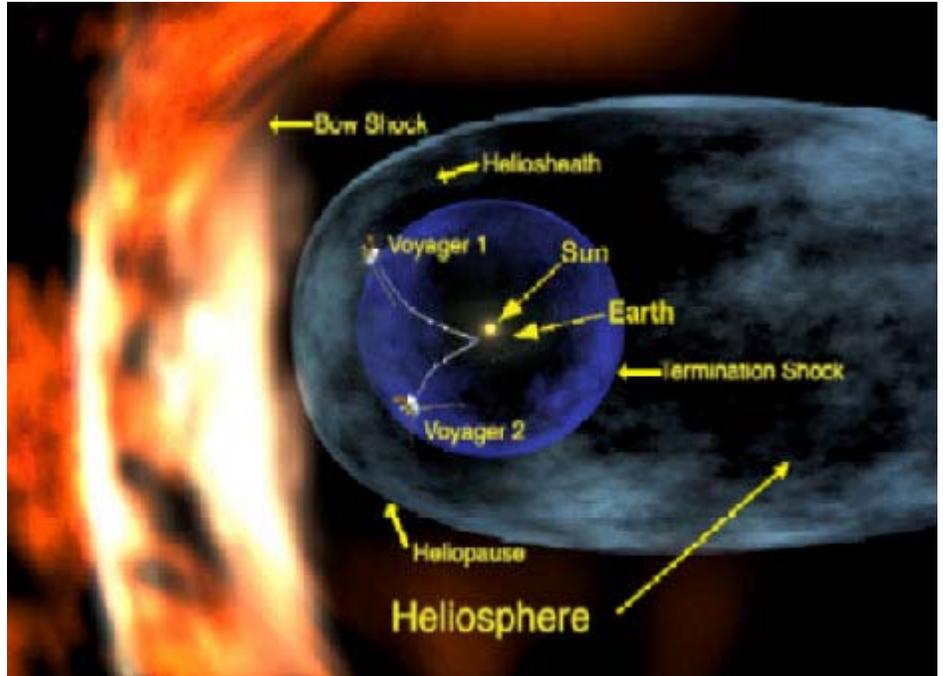
ZOG BUBBLES



Where No Spacecraft Has Gone Before

by Dr. Tony Phillips

In 1977, Voyager 1 left our planet. Its mission: to visit Jupiter and Saturn and to study their moons. The flybys were an enormous success. Voyager 1 discovered active volcanoes on Io, found evidence for submerged oceans on Europa, and photographed dark rings around Jupiter itself. Later, the spacecraft buzzed Saturn's moon Titan—alerting astronomers that it was a very strange place indeed!—and flew behind Saturn's rings, seeing what was hidden from Earth.



Voyager 1, after 28 years of travel, has reached the heliosheath of our solar system

Beyond Saturn, Neptune and Uranus beckoned, but Voyager 1's planet-tour ended there. Saturn's gravity seized Voyager 1 and slingshot it into deep space. Voyager 1 was heading for the stars—just as NASA had planned. Now, in 2005, the spacecraft is nine billion miles (96 astronomical units) from the Sun, and it has entered a strange region of space no ship has ever visited before. "We call this region 'the heliosheath.' It's where the solar wind piles up against the interstellar medium at the outer edge of our solar system," says Ed Stone, project scientist for the Voyager mission at the Jet Propulsion Laboratory.

Out in the Milky Way, where Voyager 1 is trying to go, the "empty space" between stars is not really empty. It's filled with clouds of gas and dust. The wind from the Sun blows a gigantic bubble in this cloudy "interstellar medium." All nine planets from Mercury to Pluto fit comfortably inside. The heliosheath is, essentially, the bubble's skin.

"The heliosheath is different from any other place we've been," says Stone. Near the Sun, the solar wind moves at a million miles per hour. At the heliosheath, the solar wind slows eventually to a dead stop. The slowing wind becomes denser, more turbulent, and its magnetic field—a remnant of the

sun's own magnetism—grows stronger.

So far from Earth, this turbulent magnetic gas is curiously important to human life. "The heliosheath is a shield against galactic cosmic rays," explains Stone. Subatomic particles blasted in our direction by distant supernovas and black holes are deflected by the heliosheath, protecting the inner solar system from much deadly radiation.

Voyager 1 is exploring this shield for the first time. "We'll remain inside the heliosheath for 8 to 10

Continued Page 10...



photo by Jennifer-Ash Poole

NARHAMS DOMINATES SCST-5!

By Roy Lappalainen NAR-83317

The SCST-5 Regional meeting got off to a soggy start with delayed launch on Saturday. Not to be put off by the wet and inclement weather, attendees included: Matthew Fuller, Jim Fuller, Bill Harvey, Steve Humphrey, Roy Lappalainen, and the Mostly Harmful Team. Chilly weather prompted meet attendees to demand hot chocolate and our vendor's delivered the goods by making a quick dash to the local grocery store. After being warmed up with hot chocolate and treats, the meet was able to pull off the random duration event despite the inclement weather. After deliberation, most contestants decided to surrender to the whims of Mother Nature and postpone flying other events planned for that day.



Disappointed by the uncooperative weather, dinner began as a rather subdued affair, but after consuming the home-cooked meals, our spirits quickly rallied with anticipation and talk of the next day's competition.

The weather improved on Sunday as we got off to an ambitious early 8:00 a.m. start on the launch pad. Although the sun remained mostly out of sight, we were able to complete all the scheduled events.

Matthew Fuller started his B Division career by taking first place in every event, establishing the record for 1/8A Flex-wing BG Duration and smashing the 50s E Dual Egg Duration record held by Scott McNeely and by contributing 2058 points towards the NARHAMS total making Matthew the NARHAMS MVP for the event.

In C Division Steve Humphrey pulled firsts in 1/8A Flex Wing, 1/2A Super-ROC Altitude, second in E Dual Egg and a third in A Altitude. Jim Filler took first in E Dual Egg (Jim and Steve were the only C Divisioners to get successful flights), seconds in 1/8A Flex, 1/2A Super-Roc and third in Random Duration. Roy Lappalainen tied for first in Random Duration and was ooched out in the tiebreaker.

Mostly Harmful team grabbed a first in Random Duration and a third in A Altitude and seconds in all the other events.

For the other sections Mark Beever of SPAAR (the only other B Divisioner) qualified in 1/2A Super-Roc, A Altitude and Random Duration. NOVAARs' Greg Bock gets a first in A Altitude, third 1/8A flex and Bruce Canino SOJAR section a first in Random Duration. Mike Hardobey PSC pulled a solid third in 1/2A Super-Roc rounding out the C Division top places. The infamous *Flying I-Beam Kids* take top honors in the Team Division taking firsts in all but Random Duration and 1/2A Super-Roc and setting a new record for 1/8A Flex-Wing Duration.



photo by Jennifer-Ash Poole

Where No Spacecraft Continued ...

years," predicts Stone, "then we'll break through, finally reaching interstellar space."

What's out there? Stay tuned...

For more about the twin Voyager spacecraft, visit voyager.jpl.nasa.gov. Kids can learn about Voyager 1 and 2 and their grand tour of the outer planets at spaceplace.nasa.gov/en/kids/vgr_fact3.shtml. 

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



Calendar of Events for 2005

Nov 5- 5 - 10 pm Monthly meeting, glider building session (Robert Edmonds)

Nov 6- 1 - 2 pm Goddard Public Launch

Nov 12- 10 am - 4 pm OPOSSUM-10

Dec 3- 5 - 10 pm Monthly meeting, holiday party

Dec 4- 1 - 2 pm Goddard Public Launch

Dec 10- 10 am - 4 pm 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 Questions? Call Club President Jennifer Ash-Poole at 410-674-6262 or visit NARHAMS online at <http://www.narhams.org>

Forty Years Ago Continued...

the Parade Grounds at the U.S. Army's Aberdeen Proving Grounds in Aberdeen Maryland for NARAM-7. Howard was the designated contest director but he never stepped foot on the field. Shortly before the event, Howard suffered a heart attack and was hospitalized.

G. Harry Stine stepped in and became the CD. Harry knew how to run a NARAM having run at least three of the first four (I think Bill Roe may have run one of them).

Our club by now had overcome any section that we flew against and we put a mighty contingent into NARAM. Sometimes people tell me I have a low NAR number; at NARAM-7 I almost had the highest; a late entry by club member John Newquist (of Brickyard 400 fame) garnered that honor.

We stayed in barracks at the base and hooped and hollered all night until the adults staying there could take no more and would come in an raise cain with us. Uncle Bob

Atwood was undoubtedly my favorite. In one memorable night, he stormed in and shouted something to the effect, "Okay you want to play games, well I've been in the Army and I know how to play games too, and if I hear another peep from you, we'll sit up all night and you really won't think it is so funny." (suppressed and muffled giggles erupting from under pillows throughout the floor).

The club clobbered all competition at the meet and came in first at the contest. However when tallying the overall points, NARHAMS came in as reserve champion. Our 441 points from the First Free State Meet were never counted. These points would have made us National Champion Section. Casey had brought the cards/forms to the NARAM, but the results were supposed to have been sent a month or two earlier to the Contest Board, not NAR headquarters. Harry wouldn't accept the results saying they were late, even if the NAR had them months before the deadline. Despite this, those who flew at NARAM-7 knew who were the real champions and sections that had never seen NARHAMS before learned all about those kids from Maryland.

Ironically, forty years later NARHAMS may have won NARAM-47 but ended up Reserve Champion again, and in another twist of irony, the DART section may have been Section of the Year if only their application had made it to Rod in time for judging.

In Part Four, the last installment of Forty Years ago, we'll introduce Jim Barrowman into the Club and tell what happened at NARAM-8; for this we'll wait another year.





McCoy's Micro Wonder Works

Full and Micro Maxx Twin Motor Spin-Ring Thing

Drawing Complete: 07-23-05 - Original Design by Scott Branche

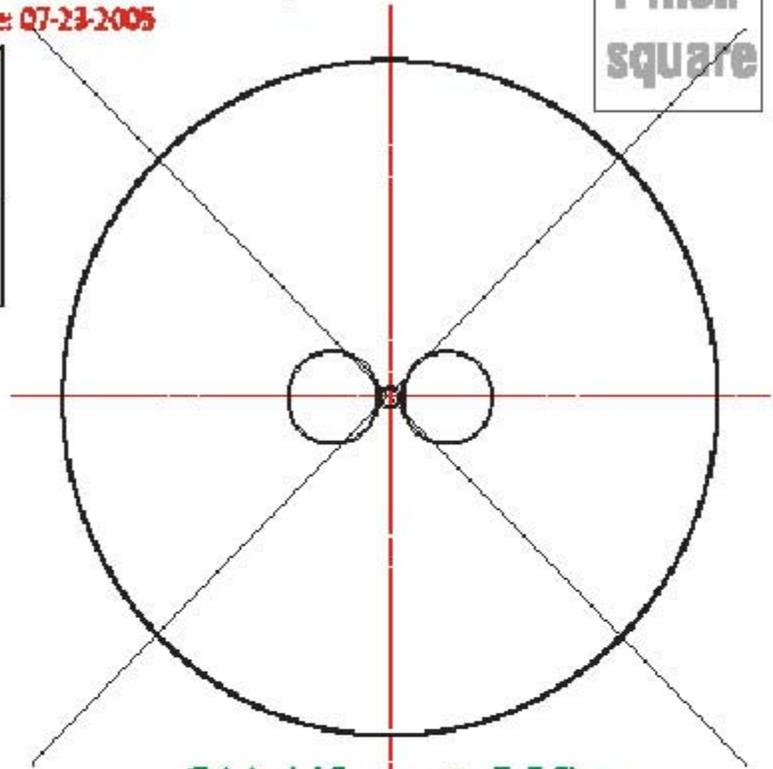
Down-Scale by John McCoy 1.936 Down-Scale - Multiplier .55165

Model 310 Complete: 07-23-2005

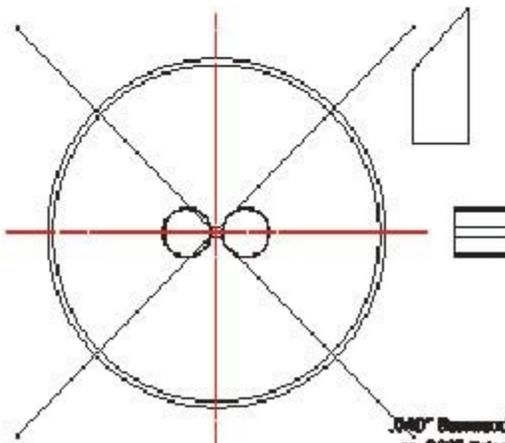
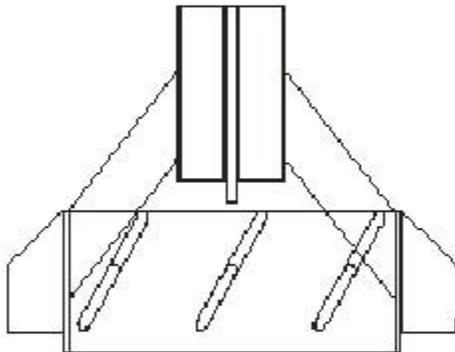
1 inch
square



Micro Maxx Spin Ring Thing
1.936 Down-Scale
2.005" coupling with tube
2.281" motor tubes
2.246" motor tubes
1.125" launch lug
1/16" Balsa stock for 8 fins & struts

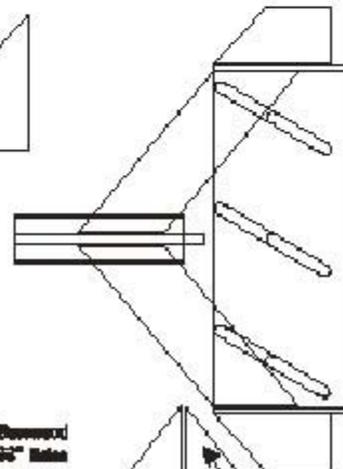


Original 13mm motor Full Size



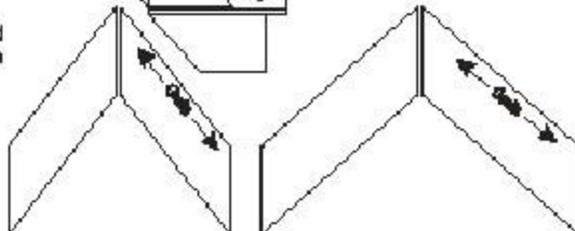
Down-Scale Full Size
2.0055" OD 1.8355" ID Coupling as Ring
.283" OD MM Motor Tubes
.083" OD Featherweight tube Launch Lug

.080" Downward
or .063" Balsa
Main 8



Parts List

- 1 ea - 13/16" x 2.005" dia coupling
- 2 ea - 1.0" x .281" dia. Motor tubes
- 2 ea - 3/16" x .246" dia Motor stops
- 1 ea - 1-1/8" x .063" dia Launch Lug
- 1/16" Balsa stock for 8 fins & struts



NEXT ISSUE'S SUBMISSION DEADLINE IS NOVEMBER 18!

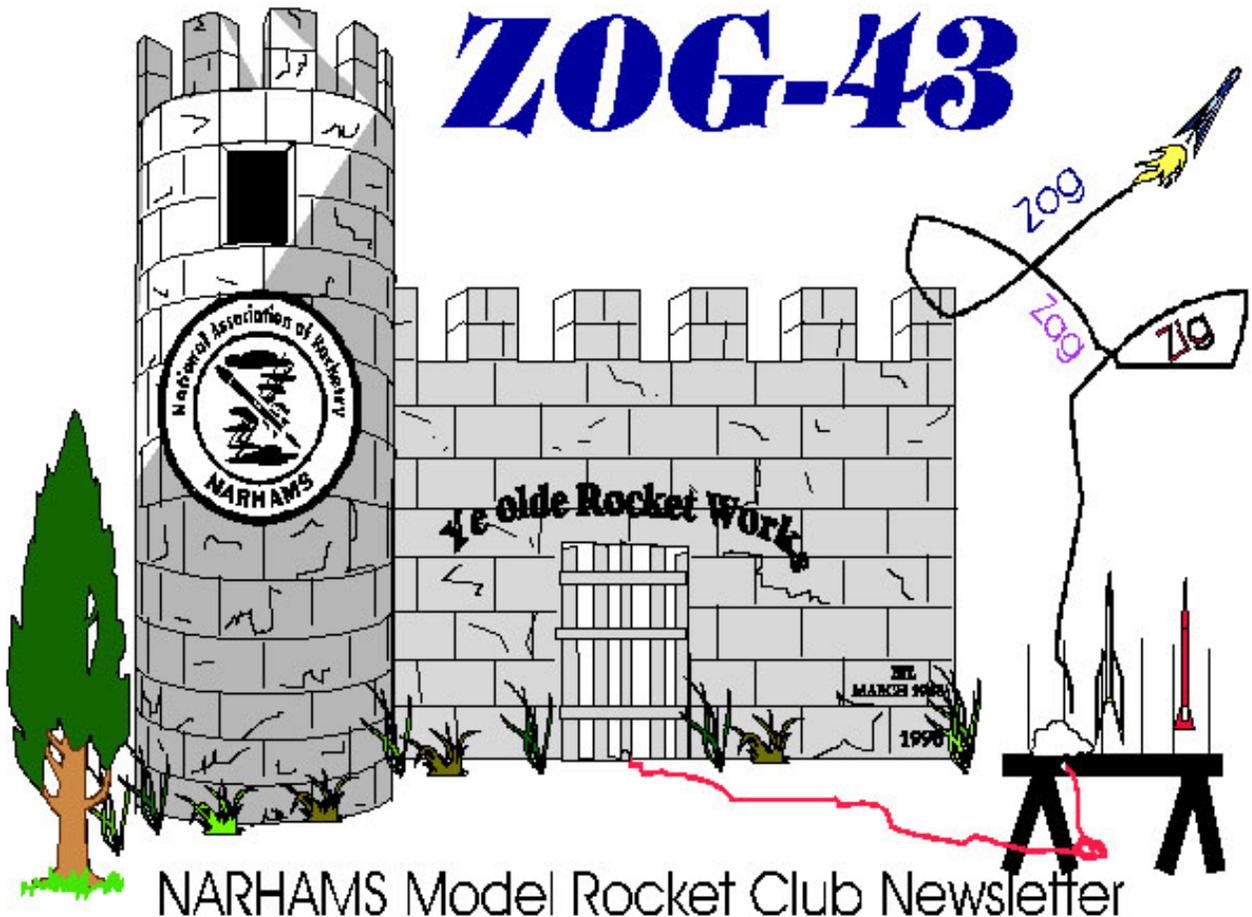
December 4th
Visitors Center
Goddard Space Flight Center
PUBLIC LAUNCH

November 12th
9:00AM-4:00PM
Middletown Park
OPPOSSUM-10 CONTEST LAUNCH

November 6th
Visitors Center
Goddard Space Flight Center
PUBLIC LAUNCH

Launch Schedule

ZOG - FORTY THREE
700 CLIVEDEN ROAD WEST
BALTIMORE, MD 21208



NARHAMS Model Rocket Club Newsletter