



RENDEZVOUS

The NASA/Houston Rocket Club

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NHRC Wins Hearts and Darts Regional 2002

Well, the home field advantage does count for a lot in these things, but the club did have an excellent turnout with several competitors in each division. The competition was strong, however, with top rocketeers from three other clubs in Texas and Louisiana in attendance.

The following is a report from Bob Supak with photos and captions from his web report. There is not room to include all of the photos here, but I've included the captions as they are pretty much tell the story of Hearts and Darts in their own right. Link from the NHRC web site to see the rest of the photos – ed.

The NASA/Houston Rocket Club (NHRC) hosted a two day, NAR Sanctioned model rocket contest this past weekend. The launch was held on the grounds of the Johnson Space Center in the large field just North of Rocket Park, and in the shadow of the mighty Saturn V.



Miriam Mooney gets some help setting up a contest flight. Below, Mike Rangitsh's Doorknob stages perfectly and completes a flawless flight for first place in sport scale

Despite the cool to cold weather and high to higher winds, a large number of rocketeers turned out to participate in the contest, including competitors from our home club, and out of town flyers from Dallas

(DARS), Austin (AARG) and South Louisisana (SOLAR).

Mission Control

A lot has happened since the last newsletter and a lot is planned over the next few months. A new club Constitution was passed on second reading in March. A big thanks to Glen Swanson for writing the basic draft. Others adding substantial help were Mike Clayton, Martin Rogoff, Andy Eng, Tom Lanier, Dan DeHart and Harry Stenvall. Thanks also to everyone that came out to the meetings to discuss this very important update.

A new Member Handbook including the new constitution is also available. Pick up your copy at any NHRC launch or meeting, or download your own color copy from the club web site (try printing front and back to save trees)

The Hearts and Darts contest in February was a complete success. The NHRC will be competing in regional contests in Dallas and Austin in April and May and NARAM, the National Meet outside of Waco in August.

A new club was formed to better serve rocketeers in the North Houston Area. The Northwest Houston Rocketry Association will concentrate on high power launches and plans to work closely with the NHRC in those endeavors.

Finally, NARCON was held in Austin and attended by seven NHRC members. This was an excellent convention that served to inspire and educate rocketeers from around the nation (and even England!).

The next few months will be busy as well with LDRS happening near Amarillo in July, NARAM, The Team America Rocketry Challenge, Texas Aerospace Scholars Program and (hopefully) the Ballunar Festival



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Hearts & Darts 2002 Meet Champions

NHRC would like to thank all those who participated in Hearts & Darts 2002 and making it a "chilling" success.

Andy Eng: Contest Director, registration, score keeper and contest organizer.

Chuck Webb: Launch Control Officer both days.

Bob Supak: Launch announcer.

Scott Johnsgard Sr., Bill Schoolmeyer, Jeff Supak: Continuous timer duty and LCO assistant.

James Duffy, Steve Murphy and Mike Rangitsch: Sport Scale judges for A, B, and Team divisions.

Sam Saenz, Brittain Fraley and Frank Mooney: Sport Scale judges for C division.

Rob Ellis, Linda DeHart: Registration, Motor check-in and Model return station.

Dan DeHart: Ran the sport range and even managed to proctor a Level 1 Certification flight for one of our members. Great job Dan.

We also want to thank all those who helped with timer duty during the contest.

Contestant	Section	Total Points
A Division		
1Rangitsch, Andrew	SOLAR	1386
2Mooney, Miriam	NHRC	876
3Prasek, Erin	NHRC	246
4Johnson, Holly	AARG	108
B Division		
1Stenvall, Jonathan Charles	NHRC	1968
2Prasek, Steven	NHRC	744
3Johnsgard, Scott	NHRC	396
C Division		
1Murphy, Steve	DARS	2073
2Strother, Ernest	NHRC	768
3Salinas, Luis	AARG	744
4Rangitsch, Michael	SOLAR	696
5Graham, Robert L.	SOLAR	378
6Johnson III, Carl	AARG	372
7Hein, Fred II	DARS	252
8Alston, Willie	NHRC	48
8Gaudier, Dale	NHRC	48
9Prasek, Mike	NHRC	27
T Division		
1 Saenz, Saenz, Everywhere Saenz	NHRC	1632
2Team, Sod Miners	AARG	1338
3Team, Throttle Up	NHRC	1212
4Team, Jeckyll & Hyde	IND	396
5Team, Scoobie & Shaggy	NHRC	132
Sections		
1NASA/Houston	365	8097
2AARG	585	2562
3SOLAR	596	2460
4DARS	308	2325
5IND		396



(01) . Many thanks to Chuck Web for bringing his 12x20 cover for launch control center. And a nice touch with the trio of display flags Chuck!! Also a BIG thanks to Chuck for filling the role of LCO all weekend (02) The range

was open for business at 9:00 AM sharp. Launch control center to the far right and registration and model check-in to the left. Man, look at those flags - makes one proud!!

(03) 12 launch pads and 4 towers were setup to provide non-stop action.

(04) Willie Alston (NHRC competitor) coming through model check-in, headed for launch control.

(05) Steve Murphy (DARS) setting up his B Streamer Duration model. Big thanks to Steve for bringing down his tower for all competitors to use during the contest.

(06) Andy Eng (Contest Director) barely has time to stop and pose for a photo. Great job Andy!

(07) Sport Scale models were judged at the field Saturday afternoon.

(09) While folks were off working on their NARAM models, we were able to get surpassingly good participation in the Sport Scale event.

(10) Sam Saenz, an out of town competitor came all the way from Katy Texas to fly.

(11) To all those who attended - did you know you were flying rockets in the shadow of the mighty Saturn V?

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In Touch

Be Sure to stay in touch with late breaking news regarding the NHRC and model rocketry in general through the club web site at nhrc.homestead.com or e-mail list server at <http://groups.yahoo.com/group/NHRC-General>

You can read messages or join the NHRC General List Server after you have created your Yahoo! ID and password.

(12) Sport Scale judges for C division, Brittain Fraley and Frank Mooney are shown hard at work. A big thanks goes out to these two guys for helping out with judging duties. Both are long time rocketeers with a lot of model building experience.

(13) Sport Scale judges for A, B and Team

division models hard at work. James Duffy on the left is from the AARG club in Austin, Steve Murphy in the center is from the DARS club in Dallas, and Mike Rangitsch is from the SOLAR club in Louisiana. (14) Warren Benson (NHRC president) preps his C Rocket Glider model for flight. Warren's model was built using a unique slide/flop wing design.

(15) NHRC club members again setup the contest range early Sunday morning. Sunday brought colder weather and higher winds out of the North. Because of the 180 degree wind shift, we had to also turn the range around.

(16) By noon on Sunday, the sun started to warm things up. However, it did not last long, and by 1:00 PM, it started to get gloomy and cold again. Despite the colder weather, there was still a respectable turnout on Sunday.

(17) Did I mention something about flying in the shadow of the mighty Saturn V?

(18) Warren Benson prepares his scratch built Gemini Titan Sport Scale model, complete with dual motors and clear fins, for flight.

(19) Ernest Strother prepares his Mercury Redstone Sport Scale model for flight. Between Warren & Ernest, we've got the race to space nearly covered.



Photo # 05



Many of the scale models displayed with their owners - from left - Frank Mooney, Andy Eng, Brittain Fraley, Ernest Struther, Scott Johnsgaurd Jr., dan Minor, Jonathon Stenvall, James Duffy, Steve Murphy, and Louis Salinas

Awards Section

(20) Andy Eng has really improved NHRC contest sponsorship by provided real-time score keeping during the contest. This allows him to declare contest winners immediately when the contest is closed and hand out awards. A really nice contest service provided by NHRC.

(21) Andy Eng (far right) prepares to hand out awards to those contestants and teams that placed.

(22) Young Andrew Rangitsch from Southern Louisiana, receives a special prize for his static score in Sport Scale. An A division flier, Andrew managed to score more static points than any of the B & Team Division entries. Way to go, Andrew!

(23) The Newcomer Award went to the Johnson family from Austin, Texas. They've just recently gotten themselves into the contest flying game and have been making a pretty good run at it in what limited events they've flown. We're looking forward to seeing more of the Johnson family down the road. Fred Hein from Azle, Texas came in a close second for this award but had to leave early.

(24) Here's a picture of Dan Miner picking up a fun award for James Duffy, an out of production Estes Master Series Space Shuttle kit. We'll have to see if James actually gets it. We've been watching James Duffy come to Houston for quite a few years now. When he enters the mainstream contest events, he does pretty good. Fortunately for us, he rather spend his time building scale models leaving no time for the rest of the events. James has a bad habit of crashing and damaging a lot of his fine pieces of work. We've never before seen him leaving Houston unscathed. This time around, he exercised considerable restraint and held back flying his humungous Little Joe II as the weather would've made a safe flight questionable. Because we've enjoyed seeing James's work over the years and because he didn't get a chance to fly, Andy decided he at least deserved a "Best of Show" award. Andy was later heard muttering "Man, had I known he split early, I would've hung onto this award for myself !#\$%. : And again, a big thank-you to James for helping organize the judging for A, B and Team divisions. (Andy)

(25) In addition to picking up the newcomer award, Holly Johnson also went home the Fourth Place winner in A Division.

(26) Miriam Mooney has been a regular at our club sport launches and flew her first contest with us this weekend. Flying in the 1/2A Parachute, B Streamer, and C Helicopter, Miriam was able to do something all weekend that many of the big boys couldn't do and that was to fly without a single disqualified flight. For her efforts, she received Second Place in A Division.

(27) By winning C Helicopter by a mere combined time of three seconds and with a solid showing in Sport Scale, Andrew Rangitsh wraps up the A Division Meet Champion award. Nice job Andrew!

(28) Unable to attend the awards ceremony were Scott Johnsgard and Steven Prasek who stopped by to give the B Division Winner, Jonathan Stenvall a run. Oddly, Jonathan (shown above) has been scoring consistent flights in the more difficult events (CHD and CRG) using kits from QCR, often matching up well with fliers in the C & Team Division. With a little bit more work in the other events, a good Sport Scale project, and even an R&D project, Jonathan could do well this summer. We'll have to see how well he balances his busy schedule and wish him the best.

(29) Mike Rangitsh from Louisiana wasn't able to make our autumn Gulf Coast Regional so he was essentially flying several designs for the first time in the heat of the battle this past weekend. While fighting to keep attrition to a minimum and entering his proven Doorknob in the Sport Scale event, Michael was able to go home with the Third Place award for C Division.

(30) After building up a healthy lead in C Division after day one, Ernest Strothers essentially forced Steve Murphy into executing a series of second day flyaways and could only watch as Steve stormed on win C Division outright. Nonetheless, Ernest was able to survive a rough Sport Scale landing to hold off Mike Rangitsh and win the Second Place award for C Division.

(31) Steve Murphy has been coming to Houston for several years now. He has a bad habit of having stuff fly away. Gliders, helicopters, and dual egg lofters it doesn't matter. Funny thing about it is that he never seems to mind. Weird... For the past several years, Steve has almost always ran in the upper end of the C Division hunt but this time, he ran away with nearly everything and a whopping 2073 points to show for it. The Dooooo!!!!

(32) The Throttle Up Team won third place in the Team Division. Team member Chuck played it smart and worked the LCO table the entire meet letting team mate Warren Benson do nearly all of the building, flying, and fetching. Just goes to show that it's good to volunteer.

(33) Dan Miner of the Sod Miners Team accepts the Team Division Runner-Up award. Dan's been paying close attention and getting stronger each meet we see him. Had they placed with their sport scale model, they might possibly have won Team division. He's smiling in the photo but you can tell he really wants his helicopter back.

(34) Several folks earning awards had already left by the time this picture was taken. Hopefully, they'll get their awards. Otherwise, a nice shot of the brave fliers left standing at the end of a grueling meet. These folks are tough! "Other winners not shown included Fred Hein, Erin and Steven Prasek, Scott Johnsgard, Luis Salinas, Robert Graham and the Saenz Saenz Everywhere's Saenz Team."

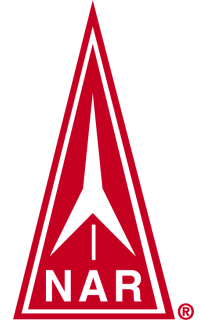
(35) After the contest, several NHRC competitors gather at a nearby Fuddruckers for a high level, top secret engineering meeting to inspect and dissect two of our competitors models. Note that we can not divulge our method for acquiring these models. : On the left, Ernest Strother, our top reverse-design engineer attempts to pry the secrets of Dan Miner's (Team Sod Miners from Austin) high flying, wind-beater C Helicopter model. On the right, Andy Eng along with Jonathan

Stenvall, attempt to understand the awesome flying characteristics of Steve Murphy's (DARS member from Dallas) B Streamer Duration model. Both Andy and Jonathan were bewildered by the non-earth smoothness of the streamer model and strange fin offset. Final determination was that the smooth red outer cover was of alien material and may have Roswell origins. After the meeting, both models were stored in a secret undisclosed location.





TEAM AMERICA ROCKETRY CHALLENGE



- A modern rocketry-based aerospace design and flying challenge competition for high school teams, commemorating the 2003 Centennial of Flight.
- Sponsored by the Aerospace Industries Association (AIA) and the National Association of Rocketry (NAR).
- Conducted during the 2002-2003 school year, leading to a competitive face-to-face fly-off among teams April 12-13, 2003, at a location near Washington, DC.
- Recognized by a total of approximately \$50,000 in U.S. savings bonds divided among students of the top teams, and approximately \$9,000 cash to the teacher sponsors' departments.

CONCEPT - A TEACHING TOOL FOR AEROSPACE SCIENCE

The purpose of the Challenge is to teach students the practice of aerospace system design by having them design and build a safe and stable two-stage model rocket flight vehicle, and then use it to lift a fragile payload (2 raw eggs) to exactly 1500 feet and return this payload safely and undamaged.

- Models must weigh no more than 3.3 pounds (1500 grams) at liftoff and must use two or more commercially-made, NAR safety-certified model rocket motors with a maximum combined propellant weight of no more than 4.4 ounces (125 grams).
- Altitudes will be determined by a small, accurate commercially-made electronic barometric altimeter provided to each team, carried within the rocket, and read after the flight.
- Winner is the team whose rocket comes closest to exactly 1500 feet in a safe, stable flight with both stages operating, and returns both eggs undamaged -- in a single attempt at the "fly-off."
- Teams must demonstrate a successful flight in front of a local-area adult NAR member observer by February 23, 2003 to be eligible for the "fly-off"; the top 100 successful teams will be invited.

ELIGIBILITY

- Teams may be made up of 3 or more students who are currently enrolled in the same U.S. public or private high school, under the supervision of a teacher sponsor from that same school.
- Each student member must make a contribution to the designing, building, and/or flight of the team's entry; no part of any of these may be done by an adult or by any person not on the team.
- No individual may be on more than one team.
- Two teams may be entered from a single school; both may be sponsored by a single teacher.

ENTRY

- Visit the AIA website <www.aia-aerospace.org> to register, between April 1, 2002 and November 15, 2002. Visit the NAR website <www.nar.org> for more information on the event.
- Team entry fee of \$160 includes an electronic altimeter, a CD-ROM with a sophisticated rocket design computer program, a copy of the Handbook of Model Rocketry, and lots of other material.

January 19 launch report – Warren Benson

Nobody lost or even dinged any rockets today! Even better, the weather was a perfect 70 degrees, calm winds and good ceilings - when we showed up at 9AM.

By 9:10 however, things would change drastically. Low clouds poured in and winds picked up. At one point we were seeing 50 mph gusts on my little plastic wind gauge.

The late morning Cheeseburgers at Fudruckers were good.

Jan 19 Meeting Report from Casey Smith

We had our first meeting under the new administration, and everyone was present except for Jon Ruehle, the new secretary. I filled in as interim, and by looking at what Mike Clayton did, I hope I can organize the minutes as neatly as he did.

We read and accepted the old minutes, said hello from the new officers, and went down the report list. The treasurer Linda Dehart welcomed a new member, Phil Robinson, a new BAR to the club, and reported on the donation of monies of around \$1030 that Tom Lanier had collected from previous HPR launches and such. We had a motion and an acceptance of adding the monies to the High Power Fund in general. I did not have much of VP report since I took office, and we discussed about the upcoming Wacky Wockets in April, where Ballunar may be held due to NASA security, and the other festivals. Tom brought up the good point of rocket safety, a large rocket on a fast high impulse motor may be more safe than a small Estes rocket on a D12 in certain conditions, and based upon what we are allowed to fly at Ballunar, if we are allowed, we need to consider this. I direct people to look at wacky wockets on EMRR, under the scratch built section for some fun.

The president reported on his view on Ballunar, and no progress noted in the ATF suit. LEUP storage and rules were discussed, as well as Chuck Cummins having questions about him getting an LEUP. Hearts and Darts was announced for Feb. 9th, and Bill Schoolmeyer won the door prize of an Estes Sidewinder kit! There was no report from the bylaws committee, and a motion was made to disband the bylaws committee. The last report of progress from the bylaws committee was from the club's January 20, 2001 meeting in which Mike presented a summary of Dec. 17, 2000 meeting and plans for

follow up meetings, no info on those meetings or outcome recorded in the minutes I have.

There was then a lengthy discussion about the issue of amending the Bylaws, or even changing the name to Constitution. There was a discussion of if there had been a separate administrative bylaws committee set up and what had been discussed. There was discussion about allowing the general body of the club access, more directly, Tom Lanier, access to the list server to obtain or disseminate information about any such committee or meetings. There was a discussion about what committee's are actually in existence and who is on them.

From the minutes from Mike Clayton, I see that these are the committee's:

>>HPR committee (formed 12/2000) chartered by Tom Lanier-Casey Smith, Jon Ruehle, Danny Cantu, Clifford Cheedle, Chuck Webb.

>>Contest committee- Any Eng, Warren Benson, Gary King, Rob Ellis, Jim Jares.

>>Safety committee, I can find no record of who is on it.

>>Communications committee-discussed if there is even one, I seem to remember Jon talking about wanting to be the head of one, or made the communications officer.

I don't see any other mentioned committee's, if you are on one I failed to mention, let us (everyone) know.

There was a discussion about term limits and a small discussion about it, and a straw poll about if it would be accepted. There was a discussion about what type's of limits need to be put on proxy voting, age limits, or just a set number per family.

There was a discussion about, and motion by Tom Lanier that passed-all official club business to be done by email. I believe we intend to notify everyone that is in the club of this, either by email or post. There was a discussion of the different aspects of the new proposed bylaws by Mike Clayton, and Glenn Swanson. Many issues were addressed, and we intend to vote on some of them at the next meeting.

There was a discussion of our club having a BOD (Board of Directors) and if it was needed. Mike Clayton felt our club was not large enough to constitute this. This is a part of the new bylaws Glenn proposed, article 6.

Chad Ellis then did a great class on fibreglassing your rocket. He used a stock PML 7.5 inch phenolic tube donated by me, and he used 6 ounce glass along with West Systems epoxy and a West Systems roller

to demonstrate the ease of glassing. Tom Lanier demonstrated how to peel the glassine off of a standard kraft tube. Dave Laney had quite a few projects on display as well. Frank Mooney brought his incredible display of various BullPup's to show off.

NHRC supports the Katy ISD Gifted and Talented Program

From Jon Ruehle 2-2-02

I taught two basic rocketry classes for the Katy ISD Gifted and Talented Program today.

Bill Fraizer and John Crispino were the only members that helped on this project out of the "who knows how many" NHRC members there are.

Bill was a saint before, during and after all of the classes. He really was a big help in the class and at the launch site. He set up and tore down the launch rack, and assisted the kids with problems on the field. And he drove all the way up here Katy from Alvin, TX. So next time you see him, thank him for his help! Bill is a really good guy. Bill also brought his L2 ship in for display. Kids love big rockets!

John Crispino offered his AT launch controller as a backup, and dropped it off early this morning, before he went to work.

The G&T kids are a really great bunch of smart kids. They asked a lot of intelligent question about the model and HPR rockets and motors we brought to the class.

One young man in the 8th grade took off with my historical presentation on rocketry, and was quite impressive with his knowledge of model rocketry. He even gave up his motor so that someone else could use it (theirs was a dud.) He said that he flies regularly, so it didn't matter to him to give up a motor. Now that's a rocketeer!!

We had mostly routine flights, a few ended up on the roof of the school, two in a backyard, and one CATO with a small fire contained to the BT. Blistered the paint on the outside severely.

We had a lot of potential BAR dads that were present. I think I may get at least two of them to the March launch in Hearne. The classes were full, and

I'm sure I will go back again next year. Hopefully you will be able to make it next year!

I presented the information by asking questions along the way to test their knowledge and keep their attention.

I gave a brief history of rockets starting with the Chinese about 2000 years ago, working through present day.

I moved into the physics of rocketry, CP, CG, and propulsion, and propulsion systems (liquid vs solid) on a very simplistic level. I made use of a rocket for the CG example, and used a rocket as a weather vane to describe CP. I then talked about the relationship between the two and what happens when they are out of whack. We also talked about the Shuttle and the liquid motors and the solid motors, and how they come on line during the launch.

Then we got into a little safety, went over the common sense stuff like don't chase a rocket into the street. If it's in a power-line, pretend it's disappeared, etc. Only use motors for what they are intended for, nothing else.

Then we went outside and stuffed the Quest "Ventures" that I pre-built in record time. I got 24 of them in the mail on Monday. By Friday they were completed with epoxy fillets (I had to add a little nose weight) and a relatively OK paint job, all white.

The kids all asked very good questions throughout the class.



NTHP Windom Launch

Reports: -From Chuck Cummins

As many of you know Windom, Texas is probably one of the best places in the state for a launch if the weather cooperates. Sure enough on February 16 and 17 the weather did cooperate and the North Texas High Power (NTHP) launch (sponsored by the Dallas Area Rocket Society) was given some near perfect flying conditions. This and the thousands of acres of recovery field made for an outstanding weekend of flying.

It was a great turnout with roughly 20-30 carloads of folks each day and several vendors including Ellis Mountain, Giant Leap Rocketry and Trailing Edge Technology. The class of rocket power ran the gamut from A to M motors. The model rockets made a strong showing along with the high impulse powerhouses. The kids all did a great job in showing off their latest rockets and in showing the crowds that they are obtaining a firm grasp of rocketry.

There were many successes and many failures. It's always exciting to see someone gain their Level I, II or III certification. And of course there were the inevitable failures. There was an impressive CATO as a 38mm "I-195" motor blew itself apart just 30 feet above the pad with the report of a cannon. The 100 foot safety rule proved adequate as all the debris staid well away from the crowd. Of course there were the occasional lawn darts, fouled parachutes and other design failures to keep the crowd entertained at other rocketeers expense.

NTHP was well managed with little waiting for a launch pad. Safety was of course #1 and DARS did a fantastic job in keeping the standards high. The highlight of course was Jim Parkers successful Level III certification on an M2000.

Picture perfect. Another M flight (M-1939) to 20,000 feet was we believe never found... some lucky farmer will find it this spring we're sure.

In closing, NTHP was a huge success. For the next Windom launch pack up the car and head north. It's an adventure for everyone. There's nothing like being on the wide-open Texas fields with lots of sun and fresh air to really make for an outstanding weekend.

-From Mike Martin

Mon, 18 Feb 2002

A few notes on the weekend -

Jim Parker certified L3 with an M2000 - full M Redline motor - quite spectacular.

The motor that cato'd and destroyed the rocket was actually a 38mm I195. The motor casing split from the aft end half way up. I've never seen such before. It sounded like a stick of dynamite going off! The fireball incident was a J90 that blew through the forward closure. Yep, a J90 - 7 seconds of fire squirting from both ends of the motor. Not much left of that rocket. The forward closure is no doubt NFG as well. Gotta be careful with those concentric O-rings...

Mark Simms flew a minimum diameter M1939 rocket Saturday afternoon. The last I heard, it was still MIA. He came back Sunday afternoon with a K250 minimum diameter ship that cracked 20K, but not by quite enough to set a record. And, yes, the Tetrahedon of Extremely Painful Death did fly again.

This weekend also saw the resurrection of the XRV MkVII project. Only one flight this time, the motor was an L1120. It was a beautiful flight! Welcome back to the sport you know you love, Mr. Baughman dude!

Brian Wheeler had a great K1100 experience - only 339 days till certification, Brian!

Jim Long flew his BUR with an M1315. ALTACC claims it only went some 3800 feet - we all thought it flew higher than that. A tangled chute resulted in an owiee on one fin. Rita didn't bring cookies this time, but she's working on a fine looking salad bowl rocket...

ObiWan flew his Nike Smoke with a J350 - what's up ObiWan? Using commercial motors again? Also flew the Bad Attitude on a K700.

Alan Davis had a beautiful J415 flight, only to find that the motor kicked out. Blew the AeroPac clean off the rocket. He lost a 54/1280 motor AND the AeroPac retainer! Use JBWeld next time, Alan!

Tom Montemayor had a few great flights. The highlight (for me) was the K458 flight. Juan Valdez would have been proud!

The Water Rocket guy was there, too - can't remember his name. Cheap fuel, and BATF doesn't regulate it (yet).

Someone also had a very nice rocket boosted RC SR71 on Sunday.

Yours truly went only as a spectator this time, didn't even take a rocket with me.

There were many other great flights, as well. Many more were successful than failed, and the weather could not have been better. Next launch is scheduled for MacGregor the weekend of March 16-17. I hope to have the big V2 ready by then, and to fly it with an L1500...

March 16 club launch and meeting

-Warren Benson

The morning started out with dense fog, lifting somewhat after 9:30, but the crowd remained small until late in the morning. Several of those large gliders were flown; they seem to be getting quite popular around here. I was especially impressed with one of our newer youngsters, David Agerton, who had simmed his rocket out very well, flew twice on different G motors, and got ejection right at apogee - and right below the 1000' cloud deck!

There was a big turnout at the meeting with more than 30 members present. All of the officers were present except Tripoli Prefect Michael Martin, who was representing the club at the high power launch in McGregor.

The big news is that the new Constitution was approved in a voice vote well over the 2/3 vote needed, after a few amendments were discussed and voted on. The final document will be posted as soon as those amendments are incorporated into the article.

Chuck Webb displayed his new digital launch controller, and the club voted to go ahead and purchase Al Jackson's Vaughn Bros. controller, accessories, and pad. Even with Chuck's system in hand, the membership felt it was just too good a deal

NHRC Launch Windows

- April 27, 28 April Madness Regional Contest
- Dallas (DARS)
- May 4 Club Launch - JSC 9 AM - 2 PM
May 11 wacky Wockets - JSC 9 AM - 5PM
May 18 Club Launch - JSC 9 AM - 12 noon
Club Meeting and BBQ Party at Clear Lake Park
12:30 - 5:00
- May 25, 26 Rockamole Regional Contest (AARG)
McGregor TX
- Jun. 1 Club Launch - JSC 9 AM - 2 PM
Jun. 15 Club Launch - JSC 9 AM - 12 noon
Club Meeting at Clear Lake Park 12:30 - 3:00
- Jul. 6 Club Launch - JSC 9 AM - 2 PM
**Jul. 11-14 LDRS - Tripoli's annual High Power
Launch Amarillo TX**
- Jul. 20 Club Launch - JSC 9 AM - 12 noon
Club Meeting at Clear Lake Park 12:30 - 3:00
- Aug. 2 Club Launch - JSC 9 AM - 2 PM
**Aug 4-9 NARAM the NAR annual
competition meet- McGregor TX**
- Aug. 16 Club Launch - JSC 9 AM - 12 noon
Club Meeting at Clear Lake Park 12:30 - 3:00
- Au.g 23-25 Balunar Festival - JSC

to pass up.

We also voted to extend an honorary lifetime membership to Al in appreciation for allowing us to use the equipment over the past few years, and making us such a good deal to purchase it.

While on the lifetime membership kick, we voted to extend the same honor to our official JSC liaison John Connolly, who has been a great 'behind the scenes' help to the club. There are others that need to be considered for this tribute at future meetings.

The NAR Annual convention will be held on the first weekend of April in Austin, and many of our members will be attending. Tom Lanier volunteered to RSO the April 6 JSC launch.

We spoke about Wacky Wockets and someone remembered that we set an extra date aside for JSC in May. Indeed, we did schedule May 11 from 9AM - 5PM for an extra launch, so set aside the 11th for Wacky Wockets.

Jon Rhuele spoke about the new high power club forming for the north Houston folks - Northwest Houston Rocketry Association (NHRA – Tripoli Prefect #64). We discussed having the two clubs work closely together in the future. Jon announced that there would be a high power launch on April 20. Since this is a regular JSC launch date, it will be a NHRA launch.

We do not expect the NHRC to be getting out of the high power business, in fact the membership voted to have NHRC sponsor a High Power launch in the future. With all that's going on around the state this spring, and knowing how important to have some major vendors present, no date has been set yet. The final weekend in June is a possibility, though.

Outreach – The Texas Aerospace Scholars Program has asked us to be involved with them again next summer. This is a great opportunity to work with top students from around the state to build and fly rockets (as well as to help shore up our good relationship with the Johnson Space Center). Last year several of our members also contributed by flying larger demonstration rockets for the students.

Finally, a big thanks to Gary Dahlke for giving a fascinating presentation on the Space Shuttle SRB's.

If you missed it at the meeting, be sure to catch him at NARCON on Sunday April 7th.

Thanks to everybody that helped make this a memorable day of rocketry,



Teddy returns the Endeavour after a great flight despite a close call with a rabbit. Below – Andy Eng's Oversized Deltie (photos curtesy Teddy Agerton)



Membership Renewal -

Your Membership to the NASA/Houston Rocket Club is important to you and it is very important to the club. Membership provides access to one of the best launch sites in America, launch equipment, an informative newsletter, and the opportunity to meet and fly with other rocketeers at major sport, contest, and high power launches in the Houston area. Yearly dues are \$15 for individual and \$20 for family memberships and due March 1.

Check the renewal date on your mailing label below and select the prorated amount you owe for the rest of the fiscal year (through March 1) from the chart on the right. If your membership is due now or in the next few months, there will be a renewal form included.

Month Joined	Individual Dues	Family Dues
April	\$13.75	\$18.33
May	\$12.50	\$16.67
June	\$11.25	\$15.00
July	\$10.00	\$13.33
August	\$8.75	\$11.67
September	\$7.50	\$10.00
October	\$6.25	\$8.33
November	\$5.00	\$6.67
December	\$3.75	\$5.00
January	\$2.50	\$3.33
February	\$0.00	\$0.00

NASA/HOUSTON ROCKET CLUB
NAR # 365 TRA # 002



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