



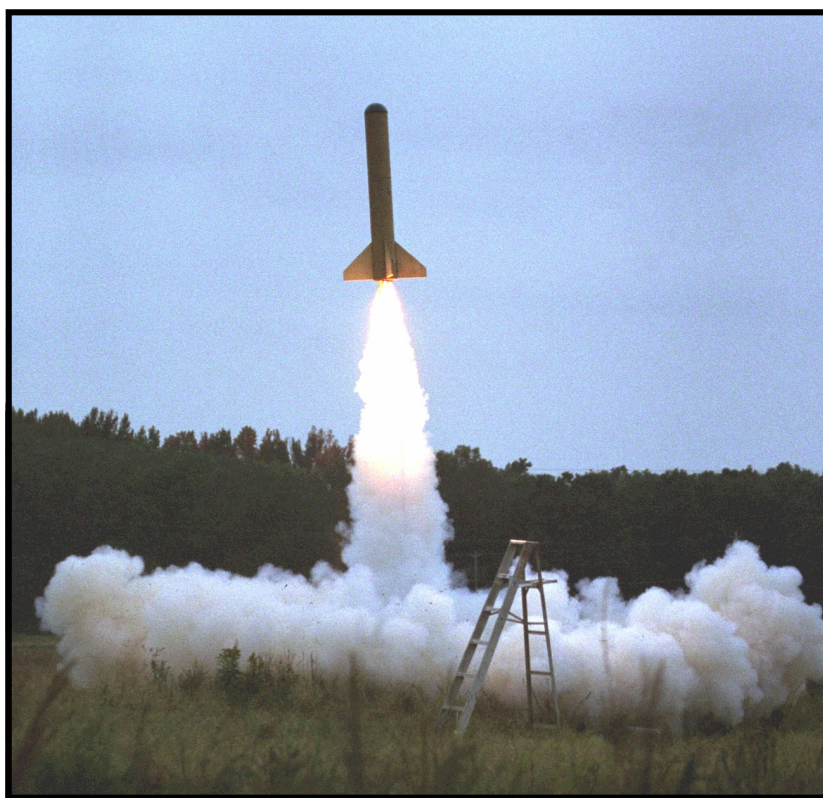
MAX-Q



VOLUME 17, NO. 1

SPRING 2003

Rocket City Blastoff 2002



Saturday, day 1 of the fifth annual RCBO was a day like no other. Unlike the previous RCBO's, Saturday was a wet one, to say the least. The day was gray, soggy and kept most of the fliers from launching anything early on. It did not necessarily rain but after five drizzle storms, the day began to show promise around 11 a.m. Saturday was a day of new motors making their debut on the HARA field.

There were many Animal Motorworks motors flown as well as a debut of a R.A.T.T. hybrid. Another motor which debuted earlier this year that made many flights was Cessaroni's PRO38.

One of many fliers who got serious on Sat. was Greg Kitchens as he started his RCBO off with a successful Level I cert. flight on his scratch built "Sarah's K" flying on an Aero-

tech I366 Redline. To add a little bit of color to our gray skies, Greg Kitchens certified Level II using the same rocket riding on the Animal Motorworks K670 Green Gorilla. The cloud deck was low and we only saw the green flame for a split second but what a flame it was! Congratulations, Greg!

Another one to pierce the low cloud deck was Max Gray flying his "Go, Dogs, Go" on an Aerotech K550. Projected altitude was around 6,000 ft. Lynn Hemrick has found a motor that his beautifully built Estes V2 likes to fly on as he hammered it on the new Aerotech 24mm F21. Not to be outdone, Mallory Hemrick flew her Honest John on yet another Aerotech F21. Jay and Lee Berry were our long distance travelers from Ohio and put up some memorable flights all weekend long. One was the scratch built Little Joe on an Aerotech G35 and another was an Estes Classic Mars Lander on an Estes A10-3.

Oh, what a day Sunday turned out to be with a 180 degree turnaround of the weather compared to Saturday's dreary conditions. Todd Juhrs made a number of Pro38 flights, one of his PML Ptero Jr. flying on a Pro38 I205. He tried a cluster flight of a Pro38 and four Aerotech F21s in his modified Blackhawk R&D SAAB. The flight was successful even though the F21s

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Volume 17, No. 1

Spring 2003

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 letter of the Huntsville Area
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HARA LAUNCHES

No further launches
 scheduled at this time
 due to lack of flying
 facilities.

HARA MEETINGS

Directions: Take Hwy.53 N, L on Dan Tibbs Rd. L on Indian Creek Rd., R on Navaho Trail. 116 Navaho Trail. Thanks to Todd and Pam Lumpkin for the use of their home for a meeting place.



PRESIDENT'S MESSAGE

Friends, Americans, and Rocketeers, lend me your ears. Happy 2003, everyone! I'm excited that the weather is finally warming up and that the flying season is finally here! As I'm sure everyone knows, HARA has a new launch site this year. The map can be found on the HARA website and in this newsletter. The new field is a bit smaller than our last field and has a rocket-eating tree or two around, but no power lines and no briar thicket. The field dimensions are roughly ½ mile by 4/10 mile; so, this will impact J and above flights. Using the 'max altitude can be twice as high as the smallest dimension of the field' rule, level 2 flights will be limited to 8/10 mile, or 4225' AGL. This year may also prove to be trying, as we are having to deal with the shortage of Aero-tech motors and the Homeland Security Act, which will take full effect in May. Stay tuned, I will try my best to keep everyone updated on the status of model/HPR rocketry in the U.S.

We have a new set of HARA officers this year; unfortunately, they're the same ones as last year. Please give your officers help and support when they ask for it. The officers are only 5 people out of a group of thirty or more. We've got a talented bunch of rocketeers in HARA. Please let us put your talents to use in our programs/endeavors, which promote rocketry education within our community. Oh, there was one change this year. Will Hillis has taken over as webmaster for our website. Will has

done a great job getting the website moved over to a new server (www.hararocketry.org is still our web address though) and making the necessary updates for 2003. The webmaster task is a rather time consuming job. Thanks, Will, for taking this on!

As always, while I'm on my soap box, I'd like to say a few words about safety. A friend of mine in Utah recently had a severe allergic reaction to epoxy vapors and could have died if he hadn't taken immediate action to get some medicine. I'm sure that everyone has heard that epoxy vapors are not good for you. This is most definitely true. Epoxy resins can be absorbed through your skin, and the vapors can be inhaled; over time, your body may become sensitized to the resins. When your body has finally become overloaded by the toxins, a severe allergic reaction may be triggered. When this happens, your body may release a massive dose of histamines in response to the toxins, and the histamines will start shutting down your air passages. This is a precursor to anaphylactic shock. When a person goes into anaphylactic shock, they often have only tens of minutes to live unless they can be given medicine (often adrenalin) immediately.

Most of us in this hobby are men, and our machismo may lead us to deny the seriousness of a reaction to epoxy. If after (or during) messing with epoxy, you get short of breath or have hives break out, please seek medical attention ASAP. If you've waited too long to seek help and it's becoming increasingly more difficult to breathe, call 911 and tell them what's happened; the paramedics (in the ambulance or fire truck, whichever is closer) will be able to quickly diagnose the anaphylaxis and can quickly administer life-saving medicine. Luckily though, this drastic action can usually be avoided by taking some simple pre-

cautions when working with epoxy. Foremost, ALWAYS wear nitrile gloves (not latex). Epoxy will seep through latex gloves and will get on your hands; so, don't wear latex gloves, wear nitrile gloves! Did I say that emphatically enough? Harbor Freight, here in Huntsville, sells nitrile gloves for ~\$10 per box of 100. They're cheap. Secondly, wear breathing protection. A respirator (~\$30) will keep the epoxy vapors out of your lungs. So, all of this just to point out that a pinch of prevention can save your life. Be safe, be smart!

I look forward to flying rockets with you all in the coming months. I'll probably be busy at the launches with administrative stuff, but please don't let that stop you from stopping me and saying hello. The rocketeers are the best part of rocketry. It's important that we not lose sight of that!

Chuck

president@HARA.org

IMPORTANT REMINDER:

Dues were due in January!

**If you have not paid yet,
please send your check to:**

HARA

225 Park Stone Drive
Madison, AL 35758



Toby's bowling ball.

Photo courtesy of Toby Carter.



Russ Bruner's Pro38 Flythrough.

Photo courtesy of Russ Bruner.

RCBO 2002



Toby's Bowling ball.

Photo courtesy of David Logan.



Russ Bruner's guidance rocket.

Photo courtesy of David Logan.



Before and After: Dave Calhoun's AMRAM

Another view:
The landing of the AMRAM.

Photo courtesy of Mrs. Logan.

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did not fare so well. Charles and Luke Fowler tried to outfly each other in a battle of the Estes C motors which helped the Estes C motor to be the motor of choice for this year's RCBO. Katy Logan from Kentucky was this year's RCBO most frequent flyer with 9+ flights.

What would an RCBO or a HARA launch be without a hybrid flight? Or maybe 6? Todd Lumpkin got in a HyperTEK I260 flight in his scratch built "Heaven Bound" rocket. Todd also flew a J260 and a J250 HyperTEK in his scratch built Purple Reign. This author got in on some hybrid action by debuting the new R.A.T.T. Works hybrid, a 29mm designated as the I80. The I80 was flown twice in a scratch built rocket called the "RATT Mobile" to an altitude of 1,600 ft. both flights. I also got in another flight in the RATT Mobile using a HyperTEK 835cc J330, capturing the highest altitude kudos of 6,800 ft.

Enter the Bowling Ball. Toby Carter wowed the crowd with the

largest cluster flight in his bowling ball rocket. Toby clustered two Aerotech J350s with one central Aerotech J570 for an explosively successful flight. Toby Carter and Gary Whitney collaborated on a 13 ft. tall Saturn V which was to fly on four J350s and a central J570 but an electronics failure postponed the flight until the next month. (See photos elsewhere in this newsletter).

What is a launch without a little carnage? Russ Bruner had an air-frame/centering ring failure causing a Pro38 J330 to fly straight up through

his rocket for a heads-up flight. The rocket fell, the motor kept going! Dave Calhoun had a beautiful boost on his 4 in. PML AMRAM on an Aerotech I284 which, in turn, transformed itself into a duel fencepost after a separation. Fortunately, there was very little damage other than a loose fin. I am not positive on any damage, but Chuck Pierce had an Aerotech I300 Cato on takeoff for another low altitude heads-up.

I would like to say a big thank you to those who attended this year's RCBO and helped to make it a memorable one but special thanks go to those who worked in the background: Mark Tygielski for the Porta-John...enough said there, Oscar Valent for running the HyperTEK system and for making sure we all had food to eat and Rich Gramly for cooking the food. Thanks go out to Pam and Todd Lumpkin for securing the banquet Sat. night at Papa Lovetti's. Thanks to all the vendors who provided prizes and Chuck Pierce and Todd Lumpkin for handling the raffle. Thanks to all for a successful 2002 RCBO.

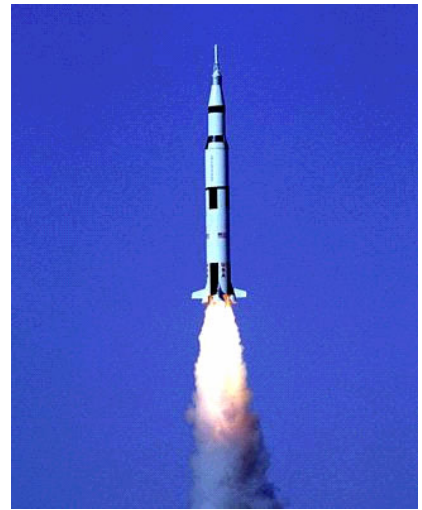


Johnnie Paul's G Force.

Photo courtesy of David Logan



SATURN V REVISITED



November 2002—The last HARA launch of 2002.

Toby and Gary of Chattanooga, Ten. launched their 12' dia. scratch built Saturn V on four J-350's and one central J-570 for a magnificent scale flight.

Photos courtesy of Toby Carter.

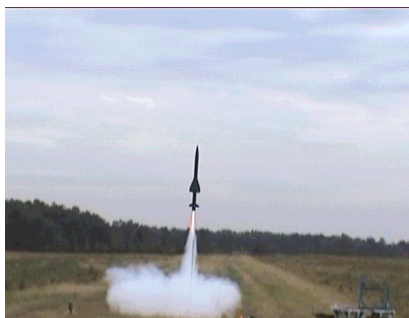


EX-LAUNCH REPORT OCTOBER 19, 2002

The winds were steady that day, so the altitudes of the rockets we flew were kept low. The first rocket to fly was Chuck Pierce's *BSD Horizon* on a "gaseous green" J290 motor. The *Horizon* reached an altitude of 2699 feet. The dual deployment system worked fine, but the nose cone popped out at apogee and was lost.

Next up was Max Gray's rebuilt *Dern Tootin*. It was launched on a K720 "Mr. Clean" and reached 2614 feet. This particular rocket was built to take M motors, but it is light enough to fly on K motors. Dual deployment worked as designed.

The largest rocket of the day was my 95 pound *Widow Maker*. The rocket is 8 inches in diameter and 115 inches (approximately 9-1/2 feet) long. Terry McCreary pushed the launch button and ground started two 75 mm L1250 "Mr. Clean" motors. *Widow Maker* roared off the pad with dual mach diamonds visible from 500 feet away. About 5 seconds later I hit the button on the WRC2 and air-started two J225 "white smokey" motors. At 3,140 feet the rocket separated and out came 2 drogue chutes. I was worried that the 25-pound nosecone would be



Chuck's Rapier taking off on a K650 "white smokey".



Chuck's BSD Horizon on a J290 "gaseous green motor."



Above: Walt's Widowmaker launching on two 75 mm L1250 "Mr. Clean" motors.

Below: Walt launching the Dirt Dauber on a red J190



snatched out at apogee, but the shear pins held and the main parachute came out at 1,000 feet. This rocket now holds the field record for largest motor cluster, air start and total impulse at 8000 Newtons.

Chuck Pierce's *Rapier* was next on the pad. It was launched on a K650 "white smokey" motor, and reached 2968 feet. It was a great flight with a text book dual deployment. Last rocket of the day was my *Dirt Dauber* on a red J190, which flew to 2,253 feet. Once again dual deployment worked fine. This was a great day for rocketry. With only 5 flights, we burned up 12,800 Newtons. All of the rockets flown landed in the field. With the exception of a missing nose cone, we had a flawless launch.

-Walt Stafford



HARA

The **Huntsville Area Rocketry Association**, based in Huntsville, Alabama, home of America's first adventures into space. Founded in 1979 as a section of the National Association of Rocketry (NAR). **HARA** maintains an active launch schedule coupled with an ongoing commitment to rocketry's educational applications.

HARA's website:

[Http://www.hararocketry.org](http://www.hararocketry.org)



For those that do not know, Max Gray achieved Level III status at LDRS in 2002 on an Animal Motorworks M1850 Green Gorilla.

Congratulations, Max!!!!

Formation of AERO

In early December, Walt Stafford gathered a group of Rocketeers together and formed a sister club of HARA which will focus on the experimental side of rocketry. The club is aptly named the Alabama Experimental Rocketry Organization or AERO. (See logo elsewhere in this edition.) We are young and bold and will continue to grow with all the knowledge we gather in making our own rocket propellant. As we organize further and have more activities, we will be updating everyone further but for now, contact Walt Stafford or Chuck Pierce regarding information on AERO.

AERO'S website:

<http://www.aerocentral.com>