



M.D.R.A. Report

Volume 7, Number 1



Cover: Scott McCluskey Iris on a BMW 7600ns White load. Photo by John Ritz.

Editor's Corner :

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Editor Bob Utley

2004 is going to be a busy year for MDRA. We are currently having elections for 2 seats on the Board of Directors, Kathy Gilliland and Dave Bathras are running so it should be an easy vote. The ballots are in the mail to each member as you read this.

Liberty Project is expected to fly this spring. That's what Neil keeps telling everyone and if you tell them enough it's bound to be true, I was once told a broke watch is correct twice a day, lets hope Neil is right once this year. We are starting to put dates on paper in pen, so watch that email.

LDRS is coming up and MDRA expects to have most, if not all members show up and help, fly and have fun. I still have a couple of rooms at the Days Inn. If you are planning on going and want a room let me know soon. The dates for LDRS are July 1-6 2004 in New York. www.ldrs23.org

We're getting better each launch with help. There are more folks that show up to help set up and take down and they seem to be learning the system. Thank you all. Also the RSO and Pad Manager duty list is filling out well before each launch, again, a Big Thank You. Some of you might wonder what does an RSO and Pad Manager do, well on the short list, RSO is Level 2, checks out the rockets, look on the back of our Flight cards there is a list we use. Pad Manager helps other flier's find a pad, get the rocket loaded and set up. Helps keep the flow going at the field so we don't have electronics burning for last second rockets. Cleaning the pads and connectors, make sure the clips go to the right pad, that's a big problem. I walk the line each morning looking to make sure we have wire for pad 1 going to pad 1 and not pad 8 as has been found in the past.

Lastly, lets not forget about the Club meetings, last meeting Mr. Glenn Davis and our President Mr. Weber invited Mr. Tom Jones, four time Shuttle Astronaut, to speak to the club and what a great guest speaker he was. Past meeting guest speaker were, Mr. Newport who found the Liberty Bell 7, Mr. Roberts who worked on the Hubble Telescope, Mr. Lussier who works for NASA building Power Supplies for all those experiments the Shuttle does up in orbit. So

if you get a chance come to our meetings, we do it for the members to learn and enjoy.

So on to the newsletter and seeing your name in print....

ESL #69

Higgs Farm

1/10 & 1/11 2004

Another year, another rocket, another group of rocketeers with smiles frozen on their faces, literally. The 2004 MDRA launch season started off on the cold Tundra of Higgs Farm. You would think we were launching in the Yukon. (This is beginning to sound like a truck ad). To say it was cold would be an understatement. But you really get to see who is committed to this obsession, or who should be committed because of this obsession. Take your pick, most of us are interchangeable. With the temperatures hovering in the teens and the wind out of the Northwest between 5 and 12 MPH, you truly appreciate those hot sweaty days on the Sod Farm.

Even with the challenges that walk hand in hand with these conditions we did what we came to do and that is to fly rockets. Bill Brown got three birds in the air. His appropriately named Sub Zero, (Bill used to live in Alaska so I am sure he laughs at the Maryland version of "COLD"), on a H-180. Bill also flew his Red Dragon on a H-165 and his Eclipse on an I-366 for a couple of high flights and solid recoveries. Bill's partner in crime, Glenn Davis also flew three times. Glenn flew and recovered his Tank Tagger on a F-24, Super Sized DBNP (With this cold I don't think anything was super sized on a rocket called Drunk Bob No Pants) on a H-210 and his Gald-He-Ator (pronounced glad he ate her). Nelson Dewitt was warming up for is Level One attempt with a test flight on his LOC Forte. Unfortunately things didn't go as planned. Nelson flew the Forte on a G-64 that never fired the ejection charge. Nelson, (maybe it's the name) was the first to sample the concrete like ground without a chute deployed. Speculation on the failure centered on the possibility that a touch of grease may have prevented the heat to hit the black powder. This is something to watch for. The slightest bit of grease blocking the small vent hole in the forward closer can cause a failure in the ignition of

the black powder ejection charge. Make sure that part of your assembly is clean. You still need grease around the delay grain and the liner but keep the top clean.

Tom Hier was to attempt his Level Three flight on this sunny, but frigid day. Tom had an Up-Scale Minnie Magg powered by an AMW M-2500. The barking of the big dogs is still ringing in my ears. The rocket was called Plum Crazy and given the number of times Tom tried to get this rocket in the air at previous launches I am sure Tom was getting close to Plum Crazy himself. Tom also had the honor of being the Maiden Flight, christening the new MDRA hydraulic 20' tower / trailer that was recently purchased from our friends at Frontier Rocketry in Massachusetts. Thanks to Arnold Roquerre of Frontier for making this happen. It will be a valued asset to the MDRA inventory of up graded launch equipment. Tom did run into some issues initially getting the rocket on the tower and once those issues were resolved it was "button pushing time". After the usual fanfare prior to a Level Three attempt the button was pushed, (like you know that wouldn't happen). Plum Crazy roared off the Pad and reached for the sky. At apogee the rocket arched over as expected, like it had a choice, and we waited for the nose cone to separate. The Rocket was to be recovered via ARRD. The nose cone got a good look at the ground as it kept getting closer and closer. Plum Crazy was the second rocket of the day to taste the concrete like ground at Higgs Farm. Tom did a quick autopsy on the rocket then after he salvaged what he could, and it wasn't much the rocket was unceremoniously thrown onto the fire that Tommy Higgs was tending to keep us warm. Plum Crazy served a couple of purposes. It put a smile on our face; it put a frown on our face but most importantly, it kept us warm.

Neil McGilvray launched an M-1300 in the Standard ARM inspired Bone Daddy. The motor was an attempt at slowing down and smoking up a blue propellant formulation. While slow and blue don't usually appear in the same sentence when it comes to rocket motors, I was out to change that. The rocket cranked off the pad to an altitude in excess of 6,000 feet. While it didn't have the smoke of the BMW white loads it worked as expected and the rocket was recovered in tact about 1.5 miles away

in good shape. John Ritz got off a couple of highflying rip roaring attempts. John flew his Not My Falcon on a J-300 and his Falcon on a J-500. Both flights had necks cracked backward to track these highflying birds.

Jeff Taylor did a static test of an Aero-Spike L-1000. This motor has what looks like an adjustable "nose cone shape" sticking out of the nozzle. Adjustment of the "cone" or "spike" allows for control of the thrust produced as well all the other dynamics that are associated with producing thrust. (That's the rocket science stuff I like to stay away from. It tends to cloud my simplistic thinking abilities.) The motor was lit and things started off with a bang, literally. The spike was shattered and continued on pressurizing, depressurizing and then re-pressurizing. Jeff will have to explain what it was suppose to do and what actually happened. All I can say is that the motor qualified as a "really cool" static fire. If Tom Hier was the first to christen the tower, Tom Thompson was the first to dirty it up. Tom had a vintage M-1150 Kosdon sparky "Spitfire" motor to power his ATEIOB, All The Eggs In One Basket. With the trade mark Kosdon thundering roar the rocket leapt off the pad on a long trail of black smoke, yellow flame and white-hot titanium. The rocket flew perfectly and was recovered in tact despite the frozen land area.

MDRA President, Dave Weber got in two flights. Dave flew his Minnie Magg on a H-220 that increased the pucker factor for Dave as there was a little too much hang time before the ejection charge fire the main. Dave also flew his Norad on a F-50. Darren Wright did something that we haven't seen in some time, fly a rocket. While Darren has been very busy in the motor making world he hasn't had the time to do what all these motors he make are for. Making rockets go up in the air. Darren picked the coldest day of the year, or was it the millennium, to fly his rocket called Psycho. At least the name reflected what we were, to be out in this weather. Darren flew the rocket on a M-1200 with Star Grain geometry. This requires more rocket science, but in a nutshell it is monolithic pour, (no grains) with a star shape in the core instead of the normal circle shape we are so use to seeing. This gives the rocket motor more punch due to the increased surface area. And that it did as it sent the big black rocket vaulting into

the cloudless sky. And just to show that he still has it, Darren even recovered the rocket under chute. Nice to see him back flying again.

The cold of Saturday gave us an appreciation for the warmth that we were provided on Sunday. The temperature had risen into the balmy 20's and the wind was lighter. Bill Brown launched his red Dragon again on a H-180. Carl Bryant was looking for incoming with his ¼ scale Patriot on a H-148. Jim Cox got in two flights with his Skeeter on an E-15 and the G-170 powered V-2. Jeff Davenport cranked off his Eclipse on a J-400. Glenn Davis got in two flights. One flight was on his Harpoon with F-24 power and his Crack PAC-III on BMW-720 power. It took Glenn a couple of tries to light the BMW motor and he almost launched it without energized altimeters, which would have been a really cool flight. Another lesson learned. Don't put them on the pad unless you are ready to go. If the rocket is on the pad with an igniter in the motor there is a better than average chance that someone with an itchy trigger finger will be pushing the button.

Mike deBay flew what was called his Stretch Explorer on a MMW J-300. The up part was spectacular and the recovery looked good also. But that pesky frozen ground and Quantum Tubing didn't mix. Needless to say the ground won and the Stretch Explorer is now the Smashed Explorer. The airframe snapped right in half at above the fin can. Brad Dunagan had everyone's neck cracking and eyes straining as launched his Talon powered by a K-570 to over 9,000 feet. Rumor has it that the flight was really cool. The only problem was no one saw it after the delay grain burnt out. The rocket was recovered and will tear up the skies again. Kathy Gilliland flew her Sun Seeker on a BMW J-450 White Load. The BMW and Sunseeker combination worked well together, but the Sunseeker and rock hard tundra, (Tommy calls his Farm), didn't work out so well. It was like landing in the local K-Mart parking lot. Greg Gruntler powered his Eclipse with a J-370 for a nice flight and recovery.

Keith Holt had his Kaotic Bliss playing by the rules when he flew it on a J-400 Sparky motor. There is nothing like the thunderous roar and shower of white-hot titanium sparks these motors dump out of

the business end. Kevin Kelly was reaching for the stars with his M&M on BMW Blue power, (They make these? I thought they only come in smokey white or glacial pace red?). The motor was a L-1100 Blue load created in the BMW Laboratories and it did crank out some Newton Seconds for an almost out of sight flight and nice recovery. Neil McGilvray flew another one of his snowflake motors, (one of a kind) In a pathetic attempt to make a purple flame, (it looked more pink), the M-1500 boosted carbonated to over 8,500 feet. I can see now why Carbon Fiber is so popular in stealth aircraft. Once the motor burned out the rocket was not seen again until the mains opened ¾ of a mile down range. Even Ted "Eagle Eyes" Proceus lost it.

Speaking of losing and finding, Curt Newport got in two flights of his Proteus II rocket. The first flight was on a J-285 and the second flight was on a J-330. I think Curt is determined to loose this rocket just so he can try to find it. He is going to look pretty silly and be pretty tired dragging a side scanning sonar around Tommy's field. Joseph Nicholas got in two multi motor flights. First with his un-named rocket powered by two C-11's and then with his Good Luck on 2 D-12's and a B-6. Dave Olson had G-80 power doing the work for his Mirage for a laser straight shot up and a good recovery.

Jerry O'Sullivan had the most complex project of the day. Jerry was going to fly his Nike-Ntropy on a combination BMW N-3000 for the Nike Booster and a BMW M-1800 for the sustainer Ntropy. The complexity of a project like with a little freezing weather makes launching a rocket a real joy, well that is if it is someone else's rocket. The rocket had altimeters and ARRD in the booster, timers, altimeters, and video cameras in the sustainer. The entire assembled rocket stood 17 feet tall and Jerry was still running out of room. After a few minor set backs and a few more holes to drill during the initial final prep at the tower, Jerry was ready to fly. And fly it did on a thick column of BMW white smoke cast against the dark blue sky, Nike-Ntropy was off to the races. The separation and ignition of the sustainer looked like it was right on the money. Looks can be deceiving. As the sustainer screamed to its final altitude of over 13,000 feet the booster began it's

decent under what was left of a blown out drogue. When the ARRD fired on cue there was not enough pull on the main to deploy it from the booster airframe. The booster landed motor end first and did some significant damage due to the solid, frozen ground. Not to be out done by the lowly booster, the sustainer decided that it might be fun to deploy the main at 13,000 feet. Oh joy! Luckily the search was short and successful, by Eastern Shore standards. It goes to show that with all the preparation in the world the unexpected is still lurking out there and can still bite you. Success walks hand in hand with failure when we are flying our rockets. Either is just one push of the button away. But that is the challenge of doing what we do. If it were easy anyone would do it and succeed repeatedly. We all know this is not the case and in the end we all become better at flying and recovering our cherished rockets.

Blake Prince got two birds in the frozen air. Blake flew his Vulcanite on a G-80 and his Big Nuke on an I-284. Ted Proceus was also a two-fer with his flights of his Javelin on a H-100 and his Nike Smoke on a K-450 Tiger Tail formulation. John Ritz got some space between the ground and his rockets with two high flights. John flew his Fluttering Heights on a BMW L-700 red motor. The second flight was in his KC-1 boosted by a M-1700 Blue 42 formulation. The KC-1 should be renamed the K-Soya! As it ran up the flagpole to about 9,000 feet. Fred Schumacher was strutting his stuff and clowning around with the BMW M-2200 Blue Load in Money Shot. As the rocket tore off the pad I am sure Fred was thinking, "Whose your daddy?, whose your daddy?" Money reached an altitude of over 7,500 feet on a long rope of hot BMW Blue flame. Jack Stopak got in a collection of flights, four in an all with combinations of B and D motors and even went for a single G-80 motor to round out the day.

Bob Utley had originally planned to drag race Fred Schumacher with a twin BMW M-2200, but there was a shortage of towers to support the race so Bob went solo. Bob flew Bada Bing Bada Boom and it did boom off the pad for a neck cracking flight to over 7,499.9 feet. The BMW Blues rock like the rest of the flamboyant colors created in the secret BMW labs. The flight was perfect as was the recovery. MDRA President Dave

Weber upped the ante on Tuber once again with flight 163. The old girl keeps putting out and you have got to love that. Then there is the issue of Dave's rocket..... Tuber was launched on a H-50 and will be back for flight 164. Dave also reached into his bag of tricks for a vintage Vulcan motor with motor ejection. He likes to live dangerously. The Vulcan 160 kicked off the dust and went to work on Dave's V-2 for a perfect flight and apogee deployment.

This was the first in a long line of launches scheduled for the 2004-flying year. This doesn't happen by accident. The MDRA Board of Directors work very hard on your behalf to secure the fields, upgrade launch equipment and make sure everyone is safe and has a good time while flying at MDRA launches. Remember this is your club too and all you guys and gals have ownership in it. Participation in the operational side is a necessary part making MDRA the Rocket Club the rest of the country aspires to be. Try to take some time during the course of the launch to lend a hand making the machine run smoothly and give the guys and gals you always see up front a chance to burn some AP. Historically the participation in Rocket Clubs is dismal, at best. We have shown that MDRA can exist independent of the Big Two; we have shown that we can be self-insured; we have shown that we can safely launch Commercial and Experimental Motors at the same launch. The next step is to show that we have major group participation and we all have taken on the responsibility required to make things happen. This will be a cultural change that could take some time, it does up to each individual and you all know who you are. Lets show the rest of the country how it can really be done and set a new standard for Rocketry. In the end we will all benefit. Until next time fly high and recover low.

Neil McGilvray

ESL #70
Higgs Farm
2/7 & 2/8

The reoccurring thought that kept entering my mind during this weekend was the phrase "the muck and the mire". I know what muck is and I have to assume that mire is like muck only different. After a prolonged cold snap in Maryland the sun finally re-appeared and warmed the ground just enough to turn the top 4 inches or so of Higgs Farm to a muddy mess. Yes there was some mire in the mud or was it mud in the mire? The good news was that it was warmer than normal but the bad news was that the wind had picked up to maintain a steady 20 MPH breeze with much higher gusts. As much as this disappointed the participants on hand it did give some of us an appreciation of working in the cold and the wind at Higgs Farm.

The weekend before a small group of dedicated rocketeers gathered to build and install a 53-foot long bridge across the "Big Drainage Ditch". This has been a project in the planning for months and the time had finally come to put our money where our mouths were and get to work. The following MDRA members in no particular order showed up and worked as three different teams to bring the project together and complete by 2:00 in the afternoon. John Ritz, Richard Hickok, Scott McCluskey, Fred Schumacher, Bob Utey, Glenn Davis, Bill Brown, Mike deBay, Dave Weber, Fred Wallace, Curt Newport, Neil McGilvray, Tommy Higgs and Adam Higgs. It was nice to see the whole group work in coordination to pull this activity off. I could only think that is the type of teamwork we will need down the road to get the Liberty Project on the pad, in the air and safely put away. My congratulations and thanks to all that participated. I know the time could have been better and the weather warmer, but we all could have been born rich and good looking. The Free Flyers Airplane Club that also uses Tommy's Farm put the deck on the next day. This structure should provide many years of hassle free access to "other side" of the ditch to recover those rockets that refused to land back at the pad.

Saturday only saw a couple of test flights venture into the air above Higgs Farm. Bill Brown put up the biggest of the test flights and paid the price. His Red Dragon under H power decided that ejecting the main under power might be a good idea. The rocket achieved an altitude of about

1,200 feet and drifted about a mile away in the strong winds. The rocket also broke in half and will be spending some quality time in the shop being repaired.

Sunday started out cold and frozen again. But as the day progressed the winds diminished and the return of the muck and the mire indicated that we were at least above freezing. Doug Cameron flew his Nike Smoke on a K-445. The rocket flew straight and true for a perfect ARRD recovery. (It is not often you get to see or read about that). Writers Editorial Comment: Black Sky the manufacturer of the ARRD has determined that there may be a problem with the device due to the aluminum construction of some of the components. For a mere fee of \$40.00, Black Sky will replace the defective parts and upgrade the system to do what you originally thought you bought. The upgrade is supposed to prevent the ARRD from releasing at apogee under the load of the pilot chute. Is there something wrong with this picture or is it me?

Jim Cox got in two flights. Jim flew his Big Daddy on a F-24 and his G-Force on a G-170. Glenn Davis got everyone's attention with his BMW powered PAC III. The motor slammed the rocket off the pad and ran so hot the casing was bulged and blistered to a point that it needed to be removed through the front of the booster. The good news is that the rocket is still intact and a quick replacement of the casing will have Glenn back in business. That is what makes rocketry such intriguing hobby; you never know what lies over the next hill or at the next push of the button. One thing for sure though, you are going to find out. Mike deBay teamed up with his young son Zack to launch their rocket of the same name on a C-6. Kathy Gilliland was playing it safe with two lower powered launches. Kathy launched her V-2 on a D-12 and her Impulse on a two motor cluster of D-12's.

Keith Holt had the crowd shielding the sun from their eyes with his J-570 launch of his Kaotic Bliss. Keith exemplified what High Power is all about. Big motor, small rocket, high flight and great recovery. Like they say any recovery that allows you to get the rocket back is a good one. Any recovery that allows you to use the rocket again is a great one. Scott McCluskey was clowning around with BMW power for a cranking flight on his Iris. Scott had BMW M-1800 White

Load in his rocket screaming flight and perfect recovery. All of Scott's recent flights have been in preparation for his up coming two stage Standard ARM flight. If it goes half as good as Scott's previous flights there will be smiles all around. Speaking of things working out exactly as planned, some days chicken and some days feathers. Neil McGilvray's flight of the 90-pound N-3300 powered Cracked Actor was looking like chicken all the way to the final 1000 feet. The rocket tore off the away cell tower on it's way to 7,880 feet. The recovery was perfect, except for the defective Sky Angle deployment bag. Writer's Editorial Comment: Maybe it's me, again. But when a system is used as it is designed and the design fails does that mean that the design might be defective? As fate would have it the tether for the XXL deployment bag pulled right out of the bag as the nose cone was pulling it free from the airframe. Haven't we seen this before? Oh right Dave Bathras trashing his big beautiful 7.5" Strong Arm. This left the chute securely folded in the bag, eliminating any hope of a successful recovery. The rocket will fly again but the lesson learned is to question everything, including "manufactured" equipment. If you have Sky Angle Bags, check them. This is the third major failure of this type that has left significant damage in its wake. So do your self a favor and double-check your equipment.

While on the theme of things that shouldn't happen, but do anyhow. Elaine Miller can surely attest to this. Elaine launched her Cloud Kiss on a M-2200, as she has done successfully before. But today would be different. Even with 3 altimeters controlling the recovery of the rocket, Murphy jumped on board like it was the last Chopper out of Nam. The rocket went every bit of 8,000 or more when it turned around and was hurtling in ballistic. At about 1,000 feet the main charge fired and deployed the main that was stripped away from rocket as soon as it came out. The rocket has been in better shape and probably will not fly again. Looks like more feathers to me. But the reality is that we build them to fly them. Anyone can tell fish stories about what their rockets will do. At MDRA we are all from Missouri, "Show Us". Great attempt Elaine, I can feel your pain.

Curt Newport has taken from finding things at the bottom of the ocean to finding things in the middle of fields. He must be doing something right because Curt had two out of sight flights with his Proteus II. One flight on a BMW J-372 red load and another higher flight on a BMW J-470 red load. Dragging a side scanning sonar into the middle of a half mud half ice field has got to wear your ass out. Jerry O'Sullivan had the always-reliable Ntropy racing to the heavens on a BMW L-1500. The accent was arrow straight however the timer was set a tad too early and the deceleration at a newly defined lower apogee cased the main to come out when the rocket was just a small dot in the sky. Oh, joy! Fortunately the rocket didn't drift too far and all was recovered intact. Wes Prince launched two rockets, his Honest John on E-9 and F-24 power. After both flights I think the F-24 will be the motor of choice for this rocket. While Wes was flying Dad, Blake Prince was prepping for his NAR Level II attempt. Flight Certification day is always stressful and the conditions of the day didn't help. Blake muddled through all the necessary preparation and got the bird to the pad. Blake was flying a Warlock powered by a J-350. When the button was pushed the motor came to life and lifted the rocket to a perfect apogee deployment of the main chute and successful Level II. Congratulations Blake, way to go.

Ted Proceus had his Nike Smoke rocking and rolling on K-700 Tiger Tail propellant. This is a well-characterized formula that never fails to turn heads, usually straight up. This flight was no exception. John Ritz got in two flights. John flew his Falcon on a J-400 and his Fluttering Heights on a L-1200 BMW Red. Both flights rocked off the pad and John even got them back in one piece. What a good feeling, or so I am told. Rob Roberts sweetened things up with his Vulcanite on a H-157 sugar motor. It is usually all or nothing with those types of motors and Rob got "all". Rob also attempted a two-stage flight on a H-170 and H-69. This time rob got half of all or was it half of nothing....regardless only the booster lit and the second stage will have another shot at performing before the MDRA crowd.

Fred Schumacher, our newly anointed Tripoli TAP Member, flew his rocket called Money Shot on a BMW M-

2000 White Load. (How appropriate!) Fred didn't stain the sheets with this launch. The rocket blazed off the pad on a long rope of that familiar BMW hot, white smoke. Not a drop of the powerful thrust was wasted as Fred's rocket soared almost out of sight of our watery, tearing eyes. The flight was climaxed by a spectacular deployment of the mains, timed with "Woodsman" like precision right on cue. Tom Thompson blasted his rocket Go Fast and Don't Break on a K-950. I say or at least wish that with all my rockets, usually to no avail. Anyhow, Tom's rocket followed the naming and did both. It went fast and didn't break.

Dave Weber teamed up with Medieval Motor works and flew a J-400 Sparky motor in his LOC Warlock call Ugly For Now. (Note to Dave...Not a good choice of names) But being the friend I am I'll suggest that Dave rename the rocket Ugly For Ever. It seems that Dave was on the same rack as someone else, whom shall remain nameless, that previously announced and launched his own rocket with rather disastrous results. "What could go wrong, it's a rocket?" Dave pressed the button on his rocket at the end of the 5 count and probably wishes he didn't. The up part was spectacular and the down part was really cool. Unfortunately there were no chutes and the short rocket is in a permanent compressed state now. Gerry Willis had his scratch built W2 in action powered by an I-205 for a nice flight.

All good things must come to an end, as did this launch. For those that hung in there the weather finally cooperated and there was some great flying to be done. This is why MDRA will never cancel a launch. You never really know what the Eastern Shore weather will do. Just hang around and it will usually change before your eyes. The only problem is that it can go from bad to good, but also go from good to bad. Many thanks go out to Tommy Higgs, without him none of this is possible. Thank him when you are buying a hamburger at the Road Kill Café. You kill it, Tommy will grill it.

There is always a need for volunteers to help run the launch. The culture is slowly changing. That is what MDRA is all about. We are going to do the things other clubs talk about. We have taken many positive steps and blazed a trail for the rest of the country to follow. Lets show them

how smoothly things go when we have lots of hands pitching in. Most clubs have a small core group that does all the work. Ours started that way but is expanding at each launch and it will only get better. The more people that help out the less work you have to do. What a concept. Talk to your neighbor at the field. Get a buddy to help. You have over 150 friends at MDRA, get to know them and let's all continue to make this the greatest hobby that ever left the ground. Fly high and recover low!

Neil McGilvray

Interview: Jerry O'Sullivan

What got you into rocketry?

As a kid I wanted to be an astronaut. I'd guess any BAR around my age would agree, the Apollo program was both an inspiration and the impetus behind a million model space programs. You could build and fly very cool Estes kits of the Saturn V, Saturn 1B, and the Mercury Redstone, although as I recall I never got the guts to launch my 3 "C" cluster Saturn V. Worried about off-axis thrust and crashing at age12....

You have a very diverse background and ongoing interests, what takes priority?

I try to balance family, business, music, audio/video, and aero-hobbies. But my wife would say I spend WAY too much time on the latter.

What project are you working on now?

I'm re-finishing a 12" dia Nike Smoke and am near the finishing stage on a 7.5" dia Sandhawk. They have big motor mounts and either can carry an on-board mini DV cam. The Sandhawk is set up as a sustainer for flight atop the 12" Nike booster, but I'm not planning that one any time soon.

What does the future hold?

In the near future we have LDRS in Buffalo.

As a club I think we'll make a splash. Between now and then I plan to put the big Smoke up on one of those now famous BMW white motors in the upper O range. Some nice relaxing summer flying at the sod farm, then maybe we'll all pull together and get the Liberty Project airborne this fall.

Where does it end for you?

I've been asking myself that question for years. In truth, rocketry HAS no upper limit. You can get into motor making – a science in itself, rocket videography and photography, staging, clustering, contest flying, advanced payloads with ATV, telemetry, GPS, remote sensing, etc. The possibilities are almost endless.

What do you do for a job now?

I own and operate O'Sullivan Insurance Agency which is an Independent Insurance Agency. We represent about a dozen Carriers with products ranging from home and auto insurance to commercial liability, life and health insurance. I've been at it for 14 years.

How are you able to juggle you work and rocket related activities?

Fortunately, self employment can be forgiving, schedule-wise. As long as the office is covered, I'm lucky to be able to get out pretty much at will.

What kind of time on average do you invest in rocketry?

This past fall I was working on a rocket just about every day – trying to get a lot of things flight-ready. Obviously, the prepping, flying and de-prepping take quite a bit of time too. It was intense at times. But on average I try to get at least a little something done each day.

Why do you do it?

Even now, with as many flights as I've done myself or helped others with, I still get a tiny bit nervous when it's MY rocket on the rail. When it all works right it's one of the best feelings ever.

Since your involvement in HPR, in your eyes how have things changed over the years?

It's interesting to step back and look at the divergent paths happening. On the one hand MDRA really comes into its own. Gets organized, upgrades the launch system, acquires another great summer field, proves that EX and Commercial motors can be safely flown together, same range, same day. Provides an environment free of politics, while encouraging new flyers and push-the-envelope projects alike. You just can't say enough good about it. On the other hand, TRA leadership makes mis-steps, alienates many and loses members all while the regulatory environment gets tough and Aerotech's production stops due to the fire. It's like 2 parallel universes. For me personally though, it's only gotten better as we as a group hone our motor making and flying skills.

Where do you see things going? Where would you like them to go?

For MDRA, I think we're in good shape. As long as we have generous landowners we'll continue to grow and prosper. Nationally, I think NAR does a great job promoting model rocketry with the Team America Competition and its numerous community involvements. We should do everything we can to involve kids - they're the future of this hobby. TRA should be mindful of this and keep lines of communication open and regular with the NAR. What's needed is a cohesive policy by the national organizations to promote rocketry as a whole and strong leadership to make it happen.

What has been a "High Light" in your rocketry experience?

My favorite was my first M-M 2 stage flight. The Terrier-Sandhawk had an Aerotech full M-2500 blue thunder in the booster staging to a Kosdon M1130 with on-board ATV and telemetry. Bill Schworer (who built the ATV and telemetry payloads) called out the altitude to apogee over the PA. It was beyond cool and the flight was just about perfect.

What has been a "Low Light" in your rocketry experience?

That would have been my most recent N-M 2 stage flight. Although boost and staging were awesome, recovery issues caused a crash of the booster and apogee deployment of the sustainer. To add insult to injury I didn't get on-board video. I was disgusted by the fact that despite meticulous preparation, several things went awry. After a while you **expect** things to work. But rocketry is singular in it's ability to humble.

Any words of wisdom?

Take your time. Take your time building, finishing and prepping. If it doesn't come together for the March launch do it in April or May. Take your time at the field. Don't succumb to "go fever". We do this for recreation - if you're stressed it can really drain the fun and potentially doom the project. Sometimes the smart thing to do is to abort the launch and live to fly another day ..

Bob's questions.....

Since you're an Insurance agent, do you have another agent insure you so they loose money?

I used to (really) but now I qualify to insure myself. My wife's perfect driving record really helped.

Now that your moving into RC are you going to combine them for RC Booster glider?

Absolutely - the only problem will be buiding something strong enough to take an M without ripping the wings off but light enough to fly. I'll have to check with Neil McGilvray and Rob Edmonds on that....

Everyone knows you as Jerry and his fine flying furniture, when can we expect to find that dinning room set or bedroom set flying?

Well Bob, you flew the "outhouse" - come to think of it that looks a lot like my wife's old armoire.....hummmmm.....

Now that you are NAR Level 3 Certification Committee, how many women have given you their phone number?

Only Kathy Gilliland..... :))

Is it true that at NAR launches you wear a crown?

Unable to print answer.

Thanks Jerry for answering the questions, well most of them.

Kevlar Loops:

I have found a simple way to secure quick-links to the ends of Doug Pratt's 5/8" tubular Kevlar without having to sew loops or tie large bulky knots. Robert Dehate has come up with an ingenious solution to this problem. Just so you know, Robert gave me permission to republish his process in our newsletter.

I have used this technique to make Kevlar harnesses and shock cords for my larger projects. The technique is very easy to follow:

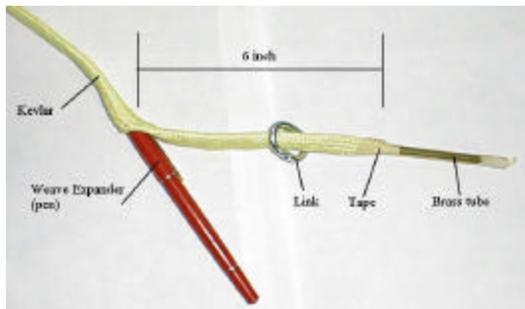
1. Take a quick-link and pull about 6 inches of Kevlar through it.
2. Take a piece of 1/4 " brass tube about 4" long and roll the end of the Kevlar and stuff it into the end of the brass tube and secure it with blue painter's tape. I have found that using blue painter's tape works well!
3. Using a fat pen or a screwdriver as a "Weave Expander" open the weave on the Kevlar about 7" or 8" inches from the end connected to the brass tube.
4. Feed the brass tube into the expanded weave and pull the tube and the 7" or 8" connected to the tube inside the tubular Kevlar. I found this to be the hardest part of the process. You have to work to get the first part of the Kevlar inside the weave.
5. Feed the cord back into itself until the Kevlar is tight against the quick-link.
6. Take your "Weave Extender" and open a hole near the front end of the brass tubing. Bring the tube out from the inside of the Kevlar and pull the brass tube loose. This is

where I found the blue tape really helps. You need to twist the tube to break the tape loose and blue tape has just enough adhesion to get the Kevlar inside the weave and will release when twisted with a pair of pliers.

By feeding the Kevlar inside itself you make a type of Chinese finger trap. The more the Kevlar is pulled, the tighter the hold gets on the piece inside the weave. Robert has done some stress studies and the chain links he uses have broken before the Kevlar lets loose. The results of the testing are posted at <http://www.rocketmaterials.com>

Stop by my prep area at the next launch if you have any questions or would like to see a harness up close. See you at the field!

Scott A. McCluskey



<http://www.geocities.com/rdh82000/Tips/kevlar.htm>

PERFORMANCE HOBBY

<http://www.performancehobbies.com>

Don't forget that I stock "plenty" of Firefly, as well as Daveyfire igniters.

See you at a launch soon!
Phone (202) 723-8257, fax (202) 723-0010.
Please send this along to the club.

Where'd they go?

I am sure you have heard about the cancellation of the last mission to Hubble by now. I had the info a little earlier. December 4, I got laid off from the Space Telescope Science Institute. However, I had already begun to interview so I was not caught completely off guard. To make a long story short, I am now working for a contractor

called Analex at Kennedy Space Center in Florida. I am working as a mechanical integration engineer in the Expendable Launch Vehicles (ELV) group. Talk about landing on your feet!!!! Sheesh!

It is surreal driving past the guard shack into Cape Canaveral. I pass the VLA building on my commute and can easily see the pads from the causeways. The next launch here is a Delta IV heavy scheduled for July 3rd. I am going out to tour the pad and rocket later on this month. Wee hee!

I will miss flying with you folks up there. So far, the high power action around here seems a little weak. There is a club, but I haven't been able to track them down as of yet. Needless to say, I will have to do my Level 3 down here. The bird is almost finished, but I will have to wait until I close on my house before I can get serious about flying it.

Stay warm (it is 65 here today).
Calm winds and clear skies.

Eric

(Eric as in Eric Roberts, use to work on Hubble Telescope, oh, the pain of it all)

NEXT ISSUES:

- More words from Neil.
- Launch report of Mar & April.
- Events for May & June.
- Interview with other Famous Fliers.

Keep The Pointy End
up and the Fierly
End down.

D. Bullis

<http://www.mdrocketry.org/>

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Log January 10-11, 2003 ESL #69

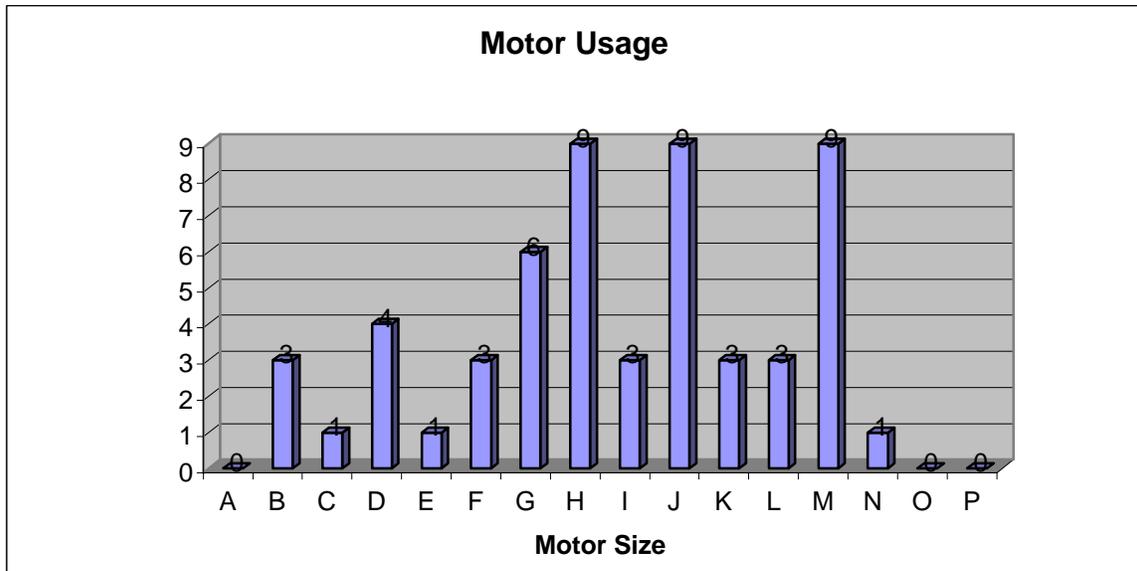
Flyer		Manufacturer	Model	Motors	Result
Brown	Bill	Scratch	Red Dragon	H165	
Brown	Bill	Scratch	Eclipse	I366	
Brown	Bill	Scratch	Sub-Zero	H180	
Davis	Glenn	Scratch	Super Size DBNP	H210	
Davis	Glenn	Scratch	Tank Tagger	F24	
Davis	Glenn	Public Enemy	Glad-He-Ator	H210	
DeWitt	Nelson	LOC	Forte	G64	
Hier	Tom	Scratch	Plum Crazy	M2500	*Cert 3* sorry
McGilvray	Neil	Scratch	Bone Daddy	M1300	
Ritz	John	Thoy	Falcon	J500	
Ritz	John	Thoy	Not My Falcon	J300	
Taylor	Jeff	Scratch	static test	L1000	
Thompson	Tom	Scratch	ATEIOB	M1150	
Weber	David	LOC	Minnie Magg	H220	
Weber	David	LOC	Norad	F50	
Wright	Darren	Smokin Rockets	Psycho	M1200	Star grain
11-Jan					
Brown	Bill	Scratch	Red Dragon	H180	
Bryant	Carl	Public Missile	1/4 Patriot	H148	
Cox	Jim	Scratch	Skeeter	E15	
Cox	Jim	MSH	V-2	G170	
Davenport	Jeff	PML	Eclipse	J400	
Davis	Glenn	Launch Pad	Harpoon	F24	
Davis	Glenn	Scratch	Crack Pac -3	K720	BMW Blue
deBey	Mike	Scratch	Stratch Explorer	J300	Sparky MMW
Dunagan	Brad	Hawk Mountain	Talon	K570	
Gilliand	Kathy	Scratch	Sun Seeker	J450	BMW WL
Gruntler	Greg	PML	Eclipse	J370	
Holt	Keith	Scratch	Kaotic Bliss	J400	sparky
Kelly	Kevin	Scratch	M&M	L1100	BMW Blue
McGilvray	Neil	Scratch	Carbonated	M1500	
Newport	Curt	Scratch	Proteus 2	J330	
Newport	Curt	Scratch	Proteus II	J285	
Nicholas	Joseph	Scratch	No Name	"C11,C11"	
Nicholas	Joseph	Scratch	Good Luck	"B6,D12,D12"	
Olson	Dave	Aerotech	Mirage	G80	
O'Sullivan	Jerry	Scratch	Nike-Ntropy	"N3000,M1800"	BMW WL
Prince	Blake	LOC	Vulcanite	G80	
Prince	Blake	LOC	Big Nuke	I284	
Prince	Wes	Missile Works	Lance	G25	
Proseus	Ted	Scratch	Javelin	H100	
Proseus	Ted	Scratch	Nike Smoke	K450	Tiger Tail
Ritz	John	Scratch	KC-1	M1700	blue 42
Ritz	John	Scratch	Fluttering Heights	L700	BMW Red
Schumacher	Fred	Yo-Yo	Money Shot	M2200	BMW Blue
Stopak	Jack	Scratch	No Name	"D12,D12"	
Stopak	Jack	Scratch	No Name	"D12,D12,B6,B6"	
Stopak	Jack	Scratch	No Name	"B6,D12,D12"	
Stopak	Jack	Scratch	No Name	G80	
Utley	Bob	Scratch	"Bada Bing, Bada Boom"	M2200	BMW Blue
Weber	David	LOC	V2	I160	Vulcan
Weber	David	Weber Eng.	Tuber	H50	flight #163

A	0	0
B	3	15
C	1	10
D	4	80
E	1	40
F	3	240
G	6	960
H	9	2880
I	3	1920
J	9	11520
K	3	7680
L	3	15360
M	9	92160
N	1	20480
O	0	0
P	0	0

55 TOTAL MOTORS 153345 NEWTON/SECONDS



©Newport 2004
Glenn Davis and Curt Newport, you add the caption...



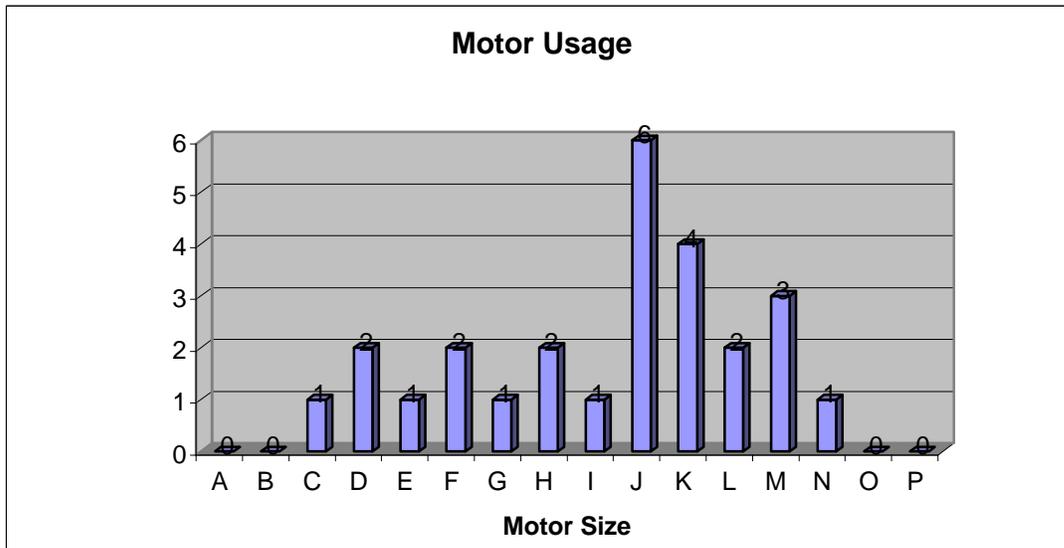
Alien	0	
Atlantic	0	
Aerotech	1	
Apogee	0	
Art Applewhite	0	
Binder	0	
BSD	0	
Centuri	0	
Cluster R	0	
Custom Rockets	0	
Cosmo Drome Rocketry	0	
Dynacom	0	
Edmonds	0	
Estes	0	
Fliskits	0	
Giant Leap	0	
Hawk Mountain	1	
High Flight Tech	0	
Hobby Lab	0	
Impulse Aero	0	
JD Cluster	0	
LOC	6	
Launch Pad	1	
Missile Works	1	
MSH	1	
NCR	0	
Newton 3rd	0	
Neubauer	0	
PML	2	
Performance Rockerty	0	
Pratt Hobbies	0	
Public Enemy	1	
Quest	0	
Rocketman	0	
Rocket R&D	0	
Rocket Teck	0	
Rogue Aero	0	
Rocket Vision	0	
TCB	0	
Thoy	2	
True Modeler	0	
Scratch	31	
Shrox	0	
Smokin Rockets	1	
V.B.	0	
Unknown	0	
US Rockets	0	
Vertical Concepts	0	
Weber Eng.	1	
Yankee	0	
Yo-Yo Dyne	1	
	50	TOTAL ROCKETS

Log February 7-8, 2004 ESL #70

Flyer		Manufacturer	Model	Motors	Result
Cameron	Douglas	Scratch	Nike Smoke	K445	
Cox	Jim	Estes	Big Daddy	F24	
Cox	Jim	Aerotech	G Force	G170	
Davis	Glenn	Scratch	Pac-3	K720	BMW Blue
deBey	Zack	Estes	Zacks Rocket	C6	
Gilliand	Kathy	Estes	Impulse	"D12,D12"	
Gilliand	Kathy	MSH	V2	D12	
Holt	Keith	Scratch	Kotic Bliss	J570	
McCluskey	Scott	Scratch	1/2 scale Iris	M1800	BMW WL
McGilvray	Neil	Scratch	Cracked Actor	N3300	Blue
Miller	Elaine	Scratch	Cloud Kiss	M2200	
Newport	Curt	Scratch	Proteus II	J372	BMW WL
Newport	Curt	Scratch	Proteus II	J470	BMW Red
O'Sullivan	Jerry	Scratch	Ntropy	L1500	BMW WL
Prince	Blake	LOC	War Lock	J350	*Cert 2*
Prince	Nes	Estes	Honest John	F24	
Prince	Wes	Estes	Honest John	E9	
Proseus	Ted	Scratch	Nike Smoke	K700	Tiger Tail
Ritz	John	Scratch	Falcon	J400	blue
Ritz	John	Scratch	Fluttering Heights	L1200	BMW Red
Roberts	Rob	Scratch	Double Trouble	"H170, H69"	
Roberts	Rob	LOC	Vulcanite	H157	
Schumacher	Fred	Yo-Yo	Money Shot	M2000	BMW WL
Thompson	Tom	Scratch	Go Fast & Don't Break	K950	
Weber	David	LOC	Ugly for Now	J400	MMW Sparky
Willis	Gerry	Scratch	W2	I205	

A	0	0
B	0	0
C	1	10
D	2	40
E	1	40
F	2	160
G	1	160
H	2	640
I	1	640
J	6	7680
K	4	10240
L	2	10240
M	3	30720
N	1	20480
O	0	0
P	0	0

26 TOTAL MOTORS 81050 NEWTON/SECONDS



Alien	0
Atlantic	0
Aerotech	1
Apogee	0
Art Applewhite	0
Binder	0
BSD	0
Centuri	0
Cluster R	0
Custom Rockets	0
Cosmo Drome Rocketry	0
Dynacom	0
Edmonds	0
Estes	5
Fliskits	0
Giant Leap	0
Hawk Mountain	0
High Flight Tech	0
Hobby Lab	0
Impulse Aero	0
JD Cluster	0
LOC	3
Launch Pad	0
Missile Works	0
MSH	1
NCR	0
Newton 3rd	0
Neubauer	0
PML	0
Performance Rockerty	0
Pratt Hobbies	0
Public Enemy	0
Quest	0
Rocketman	0
Rocket R&D	0
Rocket Teck	0
Rogue Aero	0
Rocket Vision	0
TCB	0
Thoy	0
True Modeler	0
Scratch	15
Shrox	0
Smokin Rockets	0
V.B.	0
Unknown	0
US Rockets	0
Vertical Concepts	0
Weber Eng.	0
Yankee	0
Yo-Yo Dyne	1
	26
	TOTAL ROCKETS

March 2004

Rocket Events

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday																																																																																																		
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28 Hobby Show, MDRA will be there. www. hobbyshow. com	29	30	31	<table border="1"> <thead> <tr> <th colspan="7">February</th> <th colspan="7">April</th> </tr> <tr> <th>S</th><th>M</th><th>T</th><th>W</th><th>T</th><th>F</th><th>S</th> <th>S</th><th>M</th><th>T</th><th>W</th><th>T</th><th>F</th><th>S</th> </tr> </thead> <tbody> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td> <td></td><td></td><td></td><td></td><td>1</td><td>2</td><td>3</td> </tr> <tr> <td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td> <td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td> </tr> <tr> <td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td><td>21</td> <td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td> </tr> <tr> <td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td> <td>18</td><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td> </tr> <tr> <td>29</td><td></td><td></td><td></td><td></td><td></td><td></td> <td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td><td></td> </tr> </tbody> </table>			February							April							S	M	T	W	T	F	S	S	M	T	W	T	F	S	1	2	3	4	5	6	7					1	2	3	8	9	10	11	12	13	14	4	5	6	7	8	9	10	15	16	17	18	19	20	21	11	12	13	14	15	16	17	22	23	24	25	26	27	28	18	19	20	21	22	23	24	29							25	26	27	28	29	30	
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April 2004

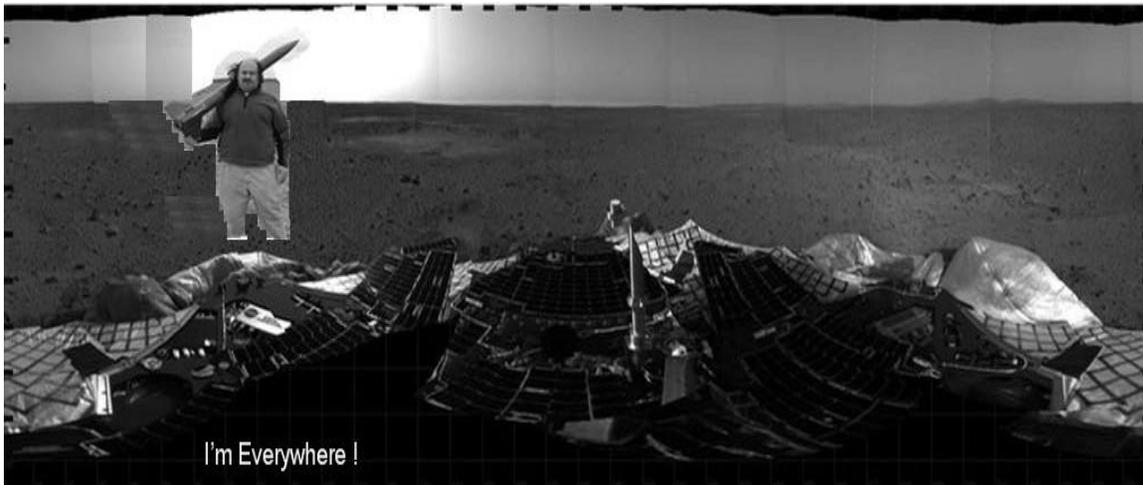
Rocket Events

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Space Facts:

Amy, Sally and Moe, were the first mice in space for U.S.

Last Page Funny



John Ritz, seems to be everywhere. Here on Mars getting that long lost rocket. If you get a chance check out some of the videos, LDRS 17, 18, 19, 20. Redstone project, he's in them too.

No one is exempt from this page, we are starting at the top and working our way to the bottom of the barrel.



Feb. 26, '04
 Dear Neil, Dave, and Company,
 Thanks for the kind note and
 the collection of rocketry patches!
 I, too, had an enjoyable
 evening with your club.
 I was honored to represent
 all of you in space on STS-78
 and my other missions.
 Best wishes on the success of
 the Liberty Project.... fly safe!
 Tom Jones

Mr. Jones Thank you card. Thank you Mr. Jones for taking the time to come to our meeting.