

Jackson Model Rocketry Club

JMRC NEWS

Volume 2, Issue 2

May 2008

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2008 Launch Dates

- April 12 (Gumbert's)
- May 3 (MIS)
- June 21 (MIS)
- July 26 (MIS)
- August 23 (MIS)
- September 6th (MIS)
- October 11 (TBD)
- November 8 (Gumbert's)
- December 6 (Gumbert's)
- December 7 (Christmas party—Annual meeting)

NOTE: Launch dates are subject to change without notice. Be sure to call the "launch hotline" at 517.262.0510 for the latest weather and field information.

APRIL LAUNCH REPORT



Saturday, April 12, 2008 was NOT the finest weather we've ever had for a launch (it was horrible!). There was a mild breeze (heavy winds!), a few sprinkles (it rained all day!), and it was a bit chilly (freezing!). The flyers (fools!) that did show up showed a real never-say-die (unwillingness to accept reality!) attitude that kept them going (kidding themselves!).



Dale Hodgson kicked off the flying with his F powered Weasel. It was a nice flight, and a long recovery walk! Kathy Miller put up two models, a 2 motor clustered Deuce's Wild that had a nice flight, and an E powered Screaming Mimi that probably needed a bit more nose weight. The Mimi lifted off, spun around, and went into

BE SURE TO SIGN-IN

Beginning with our March launch, there are metal clipboards for all members and guests to sign-in when they arrive at our launch. The club needs to keep an accurate record of who is at our launches, in the event our NAR or Tripoli insurance is ever needed.

The member clipboard has all our members listed, as well as launch fees and membership information. Please be sure to sign in **EVEN IF YOU ARE NOT FLYING THAT DAY!**

You can also pre-pay your launch fees, and the amount remaining on your account will be displayed on the list.

The non-member clipboard gathers information from guests, and gives us a chance to follow-up and invite them to join the club.

Let's all try to remind each other over the coming months to sign-in. That way, everyone is sure to keep their flight fees and dues current, and the Club has the revenue it needs to continue and grow!

Also, remember that if you see someone looking around, welcome them to the launch, and ask if you can help them get the lay of the land.

APRIL LAUNCH REPORT (CONT.)



In the afternoon, there were two Hybrid flights. Due to the cold, some time was spent warming the nitrous bottle to keep its pressure up (Have you hugged your nitrous bottle today?!) Dale brought his Mad Dog to fly on a Skyripper I motor. It seemed that Dale hadn't spent enough time hugging the nitrous bottle, as the flight only made it up to 700 feet. However, Dale's "aggressive" ejection charge deployed his chute with TRUE authority, and probably startled a few nearby horses! The rocket landed safely, and Dale only had a few steps to walk to recover it! Just like you planned it, right Dale?

Tony Haga had a nice Skyripper flight with his hybrid powered Scout. The rocket lifted nicely on a G69, and the mini timer popped the chute right at apogee. Who says hybrids need to be huge?!

cruise missile mode out over the recovery field. Although it was too low to fully eject the chute before hitting, the partial ejection and some very soft ground prevented any damage!

To close the day's flying, Dale brought out his XPRS project, his Halo Dart, to test its CO2 based ejection system. The rocket

was built for a 98 MM motor, and adapting the 38 MM CTI I566 Vmaxx motor required some "creativity". Unfortunately, the hard-hitting engine pulled partially out of its adapter during its 0.6 second burn time, and that kept the rocket from going higher than a few hundred feet. Dale's CO2 system worked perfectly though, and the drogue kicked out at apogee, and the rocket suffered no damage on landing.

James Howells brought out his recently completed BSD Horizon to attempt his L1 certification. The 4 pound rocket was fitted with a MAWD altimeter to record the flight, and flew on a CTI H153 with motor ejection after an 8 second delay. After waiting for the wind to slacken a bit, the button was pushed, and the horizon lifted nicely. The rocket landed safely, and although there was some minor zippering, the rocket was absolutely re-flyable, and James joined the high power ranks!



Congratulations James! Welcome to high power, now (everyone say it with me) get out your checkbook!!

After Dale's flight, the few hardy (foolhardy!) souls packed up the launch equipment and bid a reluctant goodbye to the field (sprinted to the shelter of their cars!). Although it was not the busiest flight day we've had, I'm sure



the members who attended will attest that it was great getting out and burning some engines! As always, thanks go to Scott and Jo-Anne Miller, who brought out our launch equipment, and provided motor vending and doughnuts (Great combo!), and Roger Sadowsky, who made sure we had a porta-jon to get out of the wind in!

Photos by Evan 'Buzz' Nau



MAY LAUNCH REPORT

JMRC's most recent launch was held Saturday, May 3rd, at Michigan International Speedway, south of Jackson. The weather was fair but windy, with early clouds that cleared up as the day went on, and a wind that went from strong to stronger! The 33 rockets that were flown by 16 fliers burned 16 BP, 17 AP, and 2 Hybrid motors.

Carl Wagner was on of the first flyers of the day as he made his L1 certification attempt. His scratch built rocket, named "carl's L1 bird" took off on Cesaroni power, with the H153 engine set for an 8 second delay.



The parachute deployed nicely, and the blue and yellow rocket landed with hardly a scratch. Welcome to High power, Carl!

Carl also flew a few of his

signature "recycled" series of rockets, with two coffee creamer based rockets, as well as a Welch's grape that flew nicely on an E9-4.

Daniel Hesselins brought his PML Ultimate Endeavor out to fly on A CTI J400 Smoky Sam motor.



The rocket lifted nicely, but failed to deploy, and fell to earth in a flat spin.

Daniel Griswold had better luck with his Endeavor, which had a nice flight on a F27 motor.

Bob Dickinson had a mixed day on Saturday, with his rebuilt V-2 having a very nice flight after taking some damage back in March. The rocket lifted on a G80, and deployed after a 4



second delay. However, Bob's Big Daddy, which has flown at every launch over the past year, finally met its demise when it failed to deploy and came in ballistic in the parking area. Unlike the mostly fiberglass V-2, Big Daddy was not repairable.



Buzz Nau had a first on Saturday, with his first Hybrid flight. His rocket, Tempest, flew on a Skyripper G69 motor. Tempest lifted nicely on the SRS motor, and went drougeless at apogee. The main deployed right on time at 400 feet, and the rocket landed cleanly.



RUMPTY DUMPTY SAT ON A WALL

By Jo-Anne Miller

Team RUMP made up of Jim Russell, Art Upton, Scott Miller and Mark Palmer made their way out to XPRS in the Black Rock desert of Nevada with aspirations of two altitude attempts. They had planned to re-fly a rocket they flew last year called the Blackjack which was a 3-inch, 2-stage



composite rocket on an M1882 to an M1000 motor hoping to reach an altitude over 50,000 feet as well as what was to be the piece de la resistance this year, a 4-inch, 2-stage composite rocket named Rumpy Dumpty on an N2500 to an N1100 motor which was intended to reach approximately 95,000 feet. Unfortunately, their endeavor was only met with one minor set back after another.

It all began on Tuesday, September 11, 2007 as Scott, Jim, Scott's wife Jo-Anne, and their friend Tony all began the 3 day, 30 hour drive to Nevada in order to transport the two trailers packed with everyone's supplies. It wasn't even 8 hours into the drive when Jim and Jo-Anne in the lead vehicle received a call over their radio that Scott's trailer had blown its right tire and sent its respective fender reeling into the highway. After Jim and Jo-Anne turned around and successfully

retrieved the runaway fender and Tony and Scott had put the spare tire on the trailer, the four travelers decided to call it a night and pulled into a hotel in Stuart, Iowa with the intentions of finding a replacement fender.

The next morning, after searching the internet and local phone books to no avail, and after closer inspection of the fender, the foursome decided to simply beat the misshapen fender back into submission and reattach it to the trailer. So, after and hour or so of early field repairs the pit crew was back on their way.

They weren't very far into their second day's travels when the gang received a call from fellow RUMPSman, Mark Palmer and kids Zach and Emily, with the news of the next twist of events. It turned out that the Palmer's connection flight to Reno,

JMRC AT 3 OAKS—A PHOTO REPORT



All photos by Marc Klinger at www.bigkidproductions.com, where you can find thousands of pictures from past Three Oaks launches dating back to 2002!

MAY LAUNCH REPORT (CONT)

There was a lull in the flying shortly after noon, when Roger's mother-in-law, Pinky, along with his daughters, Emma and Alexis, fired up the JMRC café, and everyone had some hamburgers and hotdogs for lunch, along with some chili that Bob Dickinson had brought.



Tom Kurecka is one on the club's best scale artists, and even his sport rockets look scale! Tom flew 4 rockets on Saturday. His Orion

and Pulsar flew on F power, and his very nice Thor Agena-B, took a flight on E power. Scorpion II went aloft on an I800, deploying drogueless at apogee, with the main following at 700 Feet. One of Tom's rockets became the victim of a grove of

rocket-eating trees to the east of the launch field. More rockets would fall victim to those trees before the day ended.

Kathy Miller, Eldred Pickett, and Rob Dickinson all brought out their Minni Maggs to hold a 3 way drag race. Both Kathy and Rob had Vmaxx H400 motors in their rockets, and Eldred powered his blue Minni Magg on an H160. When the button was pushed, Kathy's Pink and yellow rocket leap off the pad, followed a second later by Eldred's. Both rockets got caught in some pretty fierce winds that blew them into the trees, while Rob's flag rocket just sat on the pad. It took about 15 minutes and 4 tries to get Rob's rocket off the pad, but when it did, it recovered in the field, while Eldred's and Kathy's rockets were still hanging in the trees. Hard to say exactly who won that one!

By mid afternoon, the wind had kicked up so high that tent row had to be taken



down to prevent any more tents being bent apart in the wind, and the flying came to an early end. As always, it's the hard work of the volunteers that make these launches a success. Thanks to everyone who came early to help setup, or stayed late to help tear down, or both! Thanks to our Prefect, Scott Miller, and his wife Jo-Anne for their motor vending, and Pinky, Emma, Alexis and Bob for their contributions to the nice lunch everyone had. Lastly, thanks to Roger Sadowsky for bringing out the launch trailer, and acting as LCO for most of the day.

We'll see everyone in June!

Photos by Eldred Pickett



RUMPTY DUMPTY (CONT)

Nevada from Los Angeles, California had been grounded due to mechanical complications. After not being refunded for the grounded flight, the Palmer's then had to make arrangements with a different airline and were only able to fly as far as San Francisco, and therefore forced to rent a car and drive the remaining 6 hours to Fernley, Nevada in order to meet the other members of RUMP and the JMRC (Jackson Model Rocketry Club).

Shortly after the disheartening call from the Palmers, Jim and Jo-Anne received the call from Scott and Tony that their trailer's left tire and fender had now met the same demise as the right. This time after again retrieving a thrown fender from the busy highway the gang realized that all it would be good for was an oversized paperweight

and would have to be replaced. Being that the radial spare tire (designed to flex) from Scott's trailer was already attached, the only viable solution was to use the bias ply spare tire (designed not to flex) from Jim's trailer, which in turn made the trailer ride a little squirrely down the highway.

Though, as luck would have it, while the group was plugging away down the Nebraska highways looking for any sign of hope, a God sent store in Ogallala, Nebraska called The Mercantile appeared just off the horizon. The store supplied them with two new radial tires, a new fender, other various goodies and superior customer service. They were so ecstatic; it was as if they were kids in a candy store.

With new tires and a restored confidence,

the crew arrived safely at the Super 8 Motel in Fernley late the 3rd evening meeting up with other members of the JMRC, the Palmers included, excited for the following 4 days of XPRS in the desert. Little did they know that the rocket Gods were not yet done messing with their adventure.



The eager members of JMRC (Dan Griswold, Tony Haga, Dale Hodgson, Jo-Anne Miller, and Emily and Zach Palmer), and team RUMP (excluding Art Upton who

ALTIMETER COMPARISONS

By Dale Hodgson

With our membership and flying experience growing I'm seeing or hearing about more and more folks wanting to try their hands at using altimeters and flying "Dual-Deploy". There are many, many types of electronics packages out there ranging from the very simplest to the extreme. Costs vary considerably depending upon what a person wants to "do" with the electronics whether it's simply recording highest altitude or downloading data to have a complete graph of a complex flight.

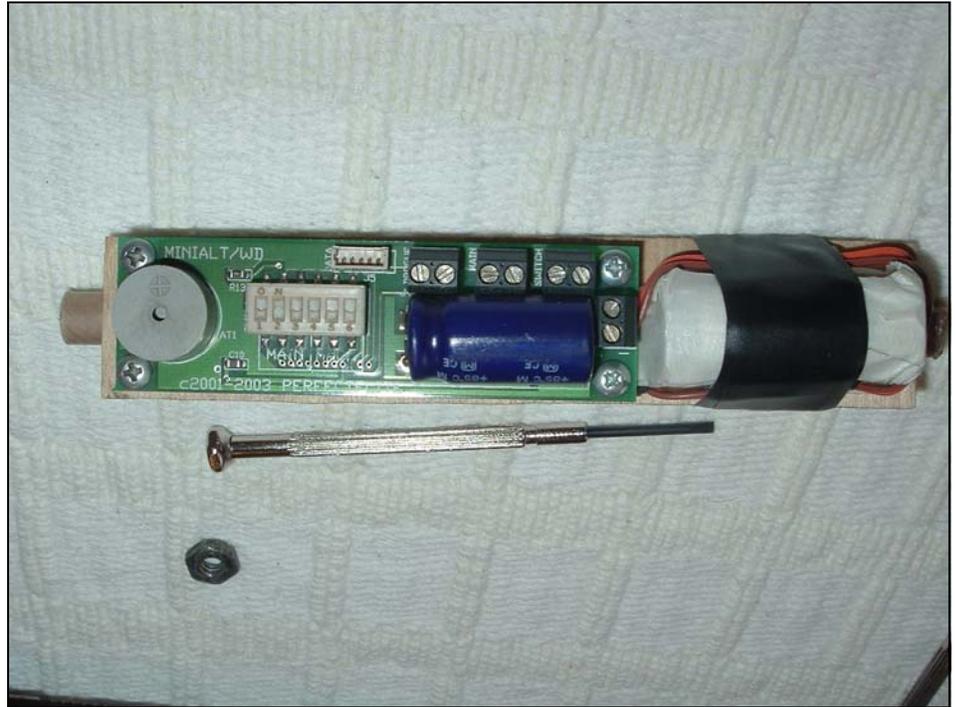
While I'm definitely not an expert at the electronics game I have flown several different altimeters. What I'll try and do is give a brief description of each and my experiences with them:

G-Wiz LC 800:

This is the first altimeter I bought to use in my L2 flight back in May 2004. The cost then was around \$160 or so. The altimeter is fully dual-deploy capable and handle such things as air starts, apogee and main events. I believe the operating max altitude is around 25K. It has an accelerometer so there is no need to set any type of Mach delay. The altimeter requires two 9v batteries to operate and fire e-matches so accommodations must be made in constructing the altimeter bay. Mine fit easily into a 4" bay; I suspect that with a little ingenuity it could fit in something smaller. This altimeter has proven itself to



G-Wiz LC800



PerfectFlite MAWD

be very reliable; I have probably close to 20 flights and all were successful. There are two differences that set this altimeter apart from the others I've flown. One is that there is no audible signal to confirm continuity or maximum altitude. There are LED lights that flash instead. In order to see these LEDs a window has to be cut into the bay. Instructions for doing so are found in a past newsletter article written by yours truly. Later versions of the altimeter (the MC board for example) have audible as well as LED indicators. The other difference is that the main deployment altitude can not be varied; it is factory set at 800 feet.

PerfectFlite MAWD:

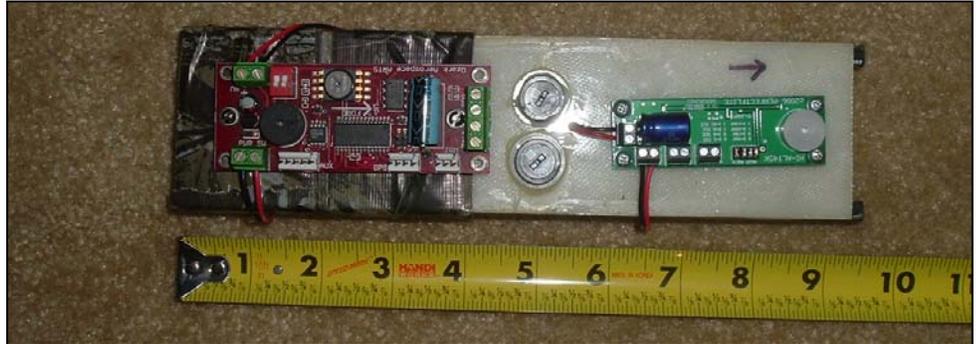
The PerfectFlite MAWD's have a reputation for being extremely reliable; it's been my experience that this reputation is well deserved. I have two of them and have never had an issue. The cost is around \$100. These altimeters are also fully dual-deploy capable and have several additional capabilities that are very useful. They are powered by either one 9v battery or others available from PerfectFlite. There is a six button-battery (silver oxide) configuration that works extremely well and allows the altimeter to be placed in small spaces; I use this configuration in my Raptor which is a 29mm minimum diameter design. Continuity, max altitude and main event are detectable via various audible tones. There is software and hardware available to download flight data if desired. Also, certain diagnostics and settings can be utilized using the available software. This altimeter operates using a barometric sensor so if the flight will approach or exceed Mach a delay must be used. The delay can be set using a pattern of three switches that is outlined in the instruction manual. The apogee event can be set to either fire at apogee or set to delay for two seconds after apogee. This can be useful when flying complex projects that utilize two altimeters; one primary and one used

ALTIMETER COMPARISONS (CONT)

as a backup. Main deployment can also be set at different altitudes via three more switches found on the board; this again is very useful when either using multiple altimeters or when conditions warrant either a high or low main event. As with the Mach Delay, the switch settings are very well outlined in the instruction manual. One interesting (and a little scary) trait of this altimeter is that if the altimeter exceeds its operational altitude of 25K the altimeter will read this as no additional height and will fire the apogee charge. However, the main event will fire as designed. Accordingly, the MAWD apogee event channel shouldn't be used in flights over 25K.

PerfectFlite HiAlt 45K:

This is a fairly new altimeter available from PerfectFlite. Like the MAWD's, these altimeters seem to be very reliable. They are actually a little cheaper, costing in the \$80 range. I have two of these and haven't had any issues despite making several flights with both. They have almost the same capability as the MAWD's with some notable differences. As the name implies, this is a HiAlt (High Altitude) board; its operational limit is about 45K, rather than the 25K of the MAWD. These are what I'll call "function-only" altimeters in that they record no flight data other than max altitude, they simply fire events. These altimeters run on one 9v battery. There may be other battery packs compatible but further testing would be needed. Continuity, max altitude, mach delay and low voltage are indicated by audible alerts similar to the MAWD. Because of their simplicity these altimeters can be used as primary boards or as backup boards. I'm using one in my XPRS project that let's just say it's going to get really, really high really, really fast!



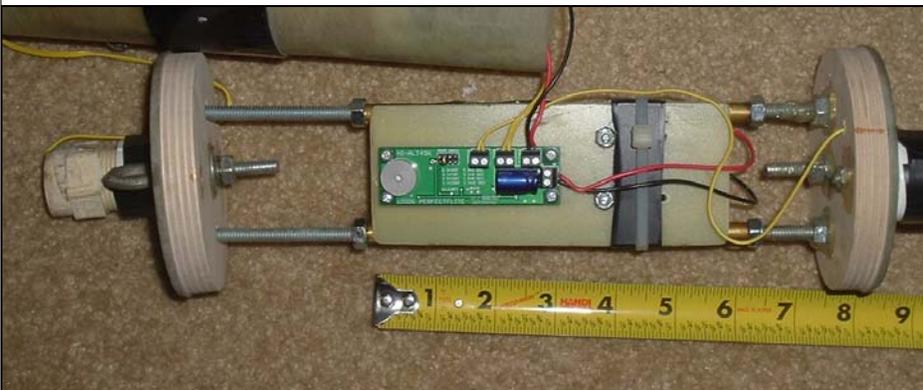
ARTS Board and PerfectFlite Hi-Alt 45K

Loki Research ARTS:

This altimeter is the most complex (and most expensive) I own. Actually, I have two and both function quite nicely. The cost was in the \$180 range. These altimeters are extremely capable of capturing and recording a vast amount of data. Everything is programmable via the software that comes with them. Continuity, low voltage and max altitude are indicated via audible indicators. The altimeter runs on one 9v battery. The unique feature of this altimeter is that two separate flight parameters (apogee, main event, staging, etc.) can be pre-programmed and can be selected by selecting the appropriate channel via switches on the board. Also, two flights can be recorded and held until downloaded at a later time. Because there is an accelerometer present Mach flights will have no effect on the sensors. Complete diagnostics can be run with the software including sensor check and firing events if desired. These altimeters have been designed to accept GPS telemetry that has now become available through Loki. The flight data that can be downloaded is enormous; the altimeter can even be set to collect flight samples at different rates depending upon how much

detail is required and the duration of the flight. MECO (Main Engine Cut-Off), Apogee Event altitude, Main Event altitude and G's sustained are just a portion of the data that is collected. The entire flight can be graphed or printed in a summary table. Motor performance data can also be determined as part of the data capture. I've flown the ARTS boards several times each and have found them to be very reliable with no issues. I used the ARTS and PerfectFlite Boards in my L3 Cert flight; the data we collected from both boards was very impressive. A new version of the altimeter (ARTS 2) is now available with even more capabilities such as the option of adding a second 9v battery to ensure proper event operation.

In general I have found the altimeters I own and have used to be very reliable. I owe that to the quality of the boards in general as well as being meticulous in setting them up prior to flight. Always check connections, battery voltage and continuity before each and every flight. The boards themselves will indicate a go or no-go situation. Also, when in doubt, check before flying. Sometimes it's fairly easy to forget an important step in that rush to get something in the air.



PerfectFlite Hi-Alt 45K

There are lots of altimeters out there that are available and newer versions are becoming available. I would suggest that before purchasing one do some research and determine what would be the best choice that fits your needs as well as your budget. Hopefully I've presented some good background information on various altimeters I've collected over the last few years. As always, if you have questions ask a fellow flyer. We're never too short of opinions! Fly High, Fly Safe and Dump that Laundry!

Jackson Model Rocketry Club

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We're on the Web!
www.jmrconline.org

Blast off with Rocketry!

The Jackson Model Rocketry Club (JMRC) is a prefecture of the Tripoli Rocketry Association (Prefecture 96), and the National Association of Rocketry (Club 620). JMRC is a 501(c)3 tax-exempt organization, and donations to the club are federally tax-deductible.

Prefect—Scott Miller

Vice Prefect—Roger Sadowsky

Secretary—Rob Dickinson

Treasurer—Paul Tobias

JMRC holds launches monthly (weather permitting) year-round from two primary fields in the Jackson area. The club has launch equipment sufficient to launch any rocket from the smallest Estes model to large high power rockets, including hybrids. Waivers are 5,000 ft. AGL or 9,000 ft. AGL, depending on location. To find our next launch, or for more information on JMRC, see our website, www.jmrconline.org, or call Roger Sadowsky at 517.764.7514.

was meeting the troop on the playa staying in a rented motor home), were up and raring to go the next morning. But, as they encroached upon the desert, they were met with an immense dust storm. They decided to venture forth using only their GPS's and sheer excitement to guide them until, unfortunately, the visibility became like seeing through swirling brown sugar and they were forced to turn back.

Not letting it get them down, the team grabbed a quick breakfast at local eatery Bruno's and set up shop in the parking lot prepping rockets and motors and waiting for the dust to clear. Late that afternoon,



RUMPTY DUMPTY (CONT)

the team was finally able to cautiously make it out onto the playa to drop off the trailers and meet up with 4th RUMPster Art who had been holed up alone all day in his motor home through the desert's storm.

Later that afternoon as the dust began to settle a few rockets finally began to fly while team RUMP began arrangements for the next day's preparation of both the Blackjack and Rumpty Dumpty rockets.

Day 2 of XPRS held beautiful weather and an eye-catching night launch as members of JMRC were finally able to get some of their rockets into the air while team RUMP got plans for their babies under way to fly on day 3.

Sadly, as previously stated, the rocket Gods really were having a good time at team RUMP's expense and met them on the playa on day 3 with yet another dust storm. This time the team was able to make it to the XPRS site, but was stuck in Jim's trailer prepping the rockets and trying to stay out of the storm. As the day progressed, more and more of the rocketeers and visitors to the Black Rock desert began leaving

giving up hope until only the dedicated members of Aero-Pac (the hosting group), the JMRC, team RUMP, and a handful of other rocket enthusiasts were left.

With only 2 hours left to the waiver, the dust cleared, and the wind finally calmed, but alas, team RUMP's dreams of this year's altitude records were shattered as a result of too few people left to help track the rockets and recovery time running way too low. With Monday's experimental launch being scrubbed due to the departure of most of the visitors, the other members of JMRC and Aero-Pac took the time to launch a few last minute rockets which really helped raise the spirits of all involved.

The wonderful Aero-Pac crew offered to help team RUMP fly their works of art on Monday regardless, but as the situation was, Mark, Art and other members of the JMRC had early flights on Monday and the team decided that it would be best to simply chalk up this year's XPRS as a great time to meet new friends and spend quality time with irreplaceable old one's doing what they love and already making plans for next year.