

NARAM-56 Launch Report

The crew from LOC/Precision, being Barry Lynch, Mark Lose, Chris Pearson, Mark Johnson and his son, made the trek to Pueblo, Colorado over the weekend of July 24-28 to take in the Sport Flying weekend before the start of competition flying at NARAM-56. Joining us was Blake Nicolic and his father, Petar from Australian Rocketry, that is, the land “down under.”

Blake and Petar attended LDRS the weekend before the start of NARAM. Only a few people from Ohio were there, and no one from LOC/Precision was in attendance. Perhaps the low 10K waiver and the advance warning of the poor flying field kept many people away. The majority of flyers were local NAR members, who outnumbered TRA members. One person in attendance told me that he had never seen so many small (meaning model rockets) flown at a LDRS. The field was suitable for model rockets but not much else. I was told not to think about flying anything over a J motor and be sure to use dual deploy. Water traps and waist high grass over much of the field hampered recovery and many people who had brought large projects opted not to fly them.

Fast forward one week to Pueblo, Colorado, and what was probably one of the best flying fields in the US being used for low-power competition rocketry. Their field would be perfect for a LDRS but they don't have anyone local capable of pulling it off.



Before the start of rocket flying, the crew visited the Garden of the Gods near Colorado Springs, shown above.



We also visited the HQ of Apogee, generally making pests of ourselves. Here is a group shot with Tim Van Milligan and his dog, Pluto. We didn't see Miranda, the office cat though.

The host motel was a Courtyard by Marriott, in the middle of downtown Pueblo, and was one of the nicest motels I've ever stayed in for a launch, and only about 25 minutes from the flying field.

The sport launch was well attended, with many manufacturers, such as Aerotech, Estes, and Quest, along with dealers and vendors like eRockets and Balsa Machining Co, who we were camped right next to. David Lucas was there with a lot of old FSI rockets and the promise that he was going to reboot the company complete with the old black powder "Loadlifter" motors. Good luck with that! The launch organizers went out of their way with food vendors, and had the best variety of food and beverages available that I've ever seen at a launch.



A local Star Wars reenactment group was present on Saturday to pose with people for photo ops. The black Stormtrooper (second from right) was actually a woman. It was pretty hot that day and I had sympathy for them in those heavy costumes.



Blake and Petar brought two hastily constructed LOC/Precision EZI-65 kits, which have just been reintroduced along with the new Aerotech DMS I65 motor, in order to do their NAR L1 and L2 certification flights (left). Petar flew a DMS I140 while Blake opted for the I65. They flew them in drag race fashion, with the I140 of Petar winning the race as can be seen in the photo on the right.





Unfortunately, the new I65 motor which was supposed to have a 10 second delay deployed its parachute shortly after burnout, zippering the body tube the entire length down to the stuffer tube and then completely ripping it off. The rocket was recovered and shortly thereafter, the upper shredded section was brought back to us. The rocket was repaired and flown with the second I65 we had, with the same results. We returned the motor cases to Bill Stine of Aerotech, but doubt we'll get a refund!

Since most of the rockets flown at the NARAM sport launch were low and mid-power, there really weren't a lot of exciting flights, but we'll document what we flew and some more notable big flights at the launch.



Above is one of the few L3 flight done at the launch being taken out to the pad. Right is the rocket at the start of its successful flight.



A large group of students was at the launch being part of the United Launch Alliance. They brought three large rockets to fly, but being straddled with a waiver of only 10K feet, they were heavy and not expected to break the waiver.



The first rocket that was flown, shown at left, was called the “Stars ‘N’ Stripes Rocket” and painted in red, white and blue. It was 20 feet tall and powered by an O motor (manufacturer unknown) but must have been really heavy since its predicted altitude was only 5000 feet! It was carrying several active payloads, which it deployed upon descent.

You can see the three rockets they flew along with payloads at:
http://www.ulalaunch.com/uploads/docs/Intern_Rocket/2014/2014_Student_Rocket-Payload_Lineup.PDF

The second rocket, called the “Future Rocket” was a two-stage with 2-N motors in the first stage and a single N motor in the second stage. Shown at right is lift-off. The rocket was 25 feet tall but once again must have been very heavy as the expected altitude (with 3-N motors!) was only expected to be 9000 feet. It carried 13 payloads, some being deployed at apogee or while under parachute, including an autonomous glider!

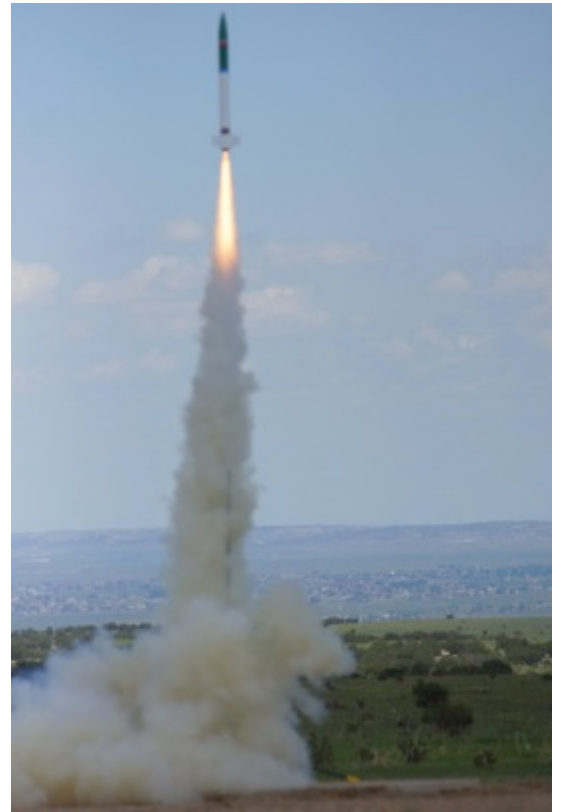




The picture to the left was taken after successful staging of the Future Rocket.

The third rocket was called an "Atlas IV." It had only a single M motor, stood 10 feet tall, and carried a single payload. Unfortunately for everyone, it launched unexpectedly while the launch crew was still doing pre-flight preparations at the pad. Fortunately, no one was injured at the pad by the premature ignition, but on the down side, no one got a picture of it taking off! It was also not recovered! There were still people out looking for it on Sunday when we left the launch site. We were told that the rocket and payload was worth \$100K, which I found hard to believe.

All during the weekend, we kept flying the surviving EZI-65 with larger and larger motors, first another Aerotech I140 for a certification flight (the I65 flights didn't count), then a DMS I280, then a J270 and a J425 for L2 certs. When we didn't shred the rocket with the bigger J motor, we convinced Barry to let us fly it on the new 54mm DMS K535. On the flight card, the rocket was named "Kiss it Goodbye." The picture at right is the flight of the stock EZI-65 with 1/8" plywood fins, no additional nose weight, reinforcement or fiberglass, under power of the K535. The rocket took off so fast that the picture, taken at 1/2000th of a second is blurred! The rocket flew straight up with no spin or cone to what was probably a waiver busting altitude (Sorry about that! We never expected it to survive the flight!) and deployed its parachute successfully at apogee. I told a member of the range crew that anyone who recovered it could keep it. Although a person went looking for it on a quad-runner, they came back empty handed.



Below are some undocumented pics of some of the more interesting rockets flown.

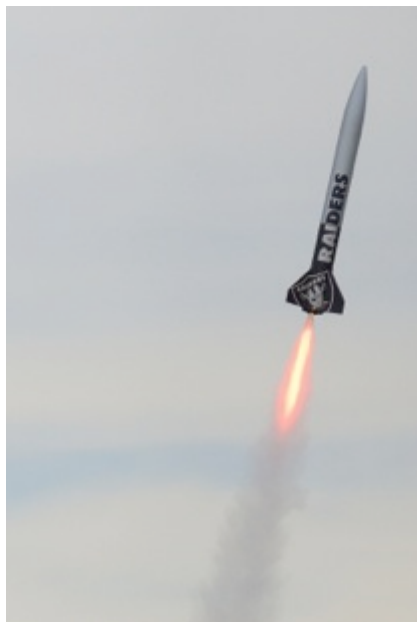
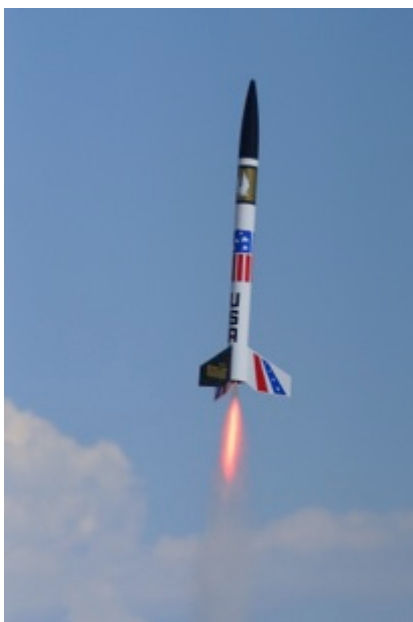
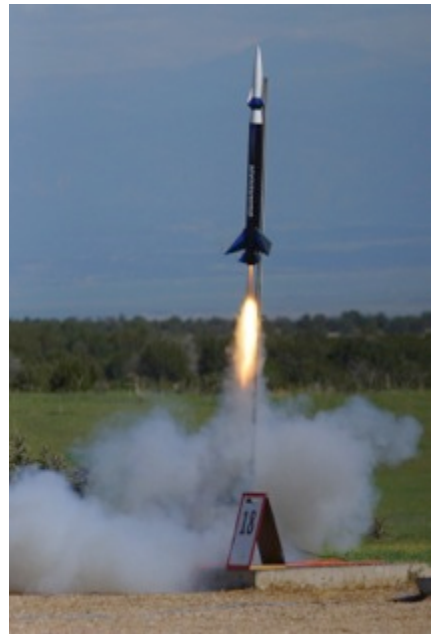
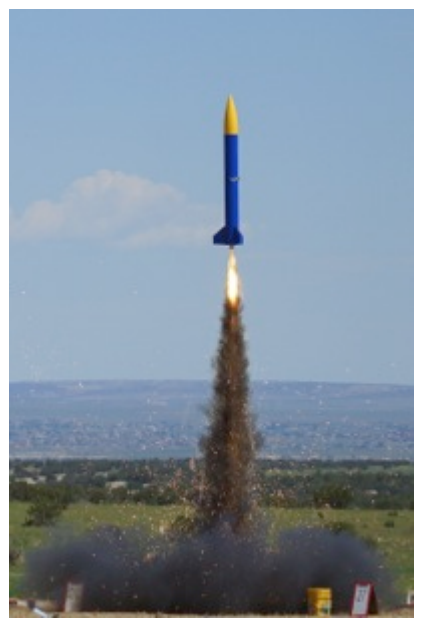


Photo credits:
Mark Lose/Fox Photos
Chris Pearson

The weather in the Colorado Springs area was quite wet this summer compared to the summer of 2013 when much of Colorado was on fire! The range shut down early on Saturday because of the threat of rain, people were fleeing the launch site on Sunday as heavy clouds approached late in the day and it rained a great deal on Saturday and Sunday night. Rain was forecast for every day the following week, and it actually cancelled competition flying on Wednesday. All of the manufacturers, most of the dealers and half of the food vendors left after the range shut down on Sunday. My guess is that the competition crowd the following week wouldn't be big enough for any of them to profitably stay. Rocket competition, for non-competitors, is pretty boring. Many of the competitors, including Bob Ferrante from MTMA, didn't even show up until Monday, forsaking the sport launch altogether.

The LOC crowd left Monday morning, making the trek up Pike's Peak on the way back to Denver and the airport. Pictured at right is most of the group at the summit. At the peak it was 29°F and had snowed the night before! The coolest part of the trip to the peak was a thunderstorm that was actually below our altitude! Seeing lightning and hearing thunder come from clouds 1000 feet below you is an experience!



We got the Aussie's to the airport just in time for it to be shut down because a tornado was spotted nearby. Tornado alarms sounded at both the airport and in nearby populated areas and they herded everyone into the airport restrooms! All flights in and out were suspended for an hour but everyone got out on their flight on time.

The NARAM Sport Launch went well overall. The supporting groups had borrowed the launch system from Northern Colorado Rocketry, eliminating the problems they had with their own totally inadequate launching system the last time they had NARAM there. They have a permanent launch site with the high power launchers sunk into concrete pads, a storage shed with AC power and air conditioning and a good PA system.

Footnote: *Several days after our return from NARAM, Aerotech sent a message to their dealers warning them of the problem with the (lack of) delays in both the H45 and I65 DMS motors. They were told to advise their customers to use the motors in a plugged fashion and to use electronics for recovery until a fix could be worked out.*