

# THE KOSMONAUT

KANSAS ORGANIZATION FOR SPACEMODELING NAR # 427 JULY/AUG 2011 VOL.30 NO. 4

## KOSMO/ COSMOSPHERE XTREME CAMP JR HP LAUNCH

Reported by Steve Saner

The Kansas Organization for Spacemodeling has been privileged to work with the Kansas Cosmosphere in Hutchinson in the past, most notably the Apollo 13 commemoration launch in April 2010. So, when Glen Duran of the Cosmosphere contacted us last August to see if we could help him with a junior high power certification launch as part of a summer camp for teens, we accepted the opportunity gladly.

The Kansas Cosmosphere hosts a number of Space Camps each summer. The top-level "Xtreme" camp is for kids that are entering 9th grade and above and who have already completed some of the beginner and intermediate camps. While model rocketry has been a part of some of these lower-level camp experiences, this year, Glen wanted to offer the Xtreme camp participants the opportunity to build a high power rocket and to try for their NAR Junior High Power certification. To make that happen, however, Glen needed to get Level 1 certification himself so that he could be the adult sponsor for the kids. He would also need some launch support and people to make up the certification teams. For these things he tapped KOSMO and we were ready and willing to help. Glen did his Level 1 certification at our SpringFest launch in March. He became a KOSMO member at that time as well.

A challenge that arose early in the planning was exactly where to conduct a high power launch in the Hutchinson area. The State Fair Ground parking lot, where we usually launch, is just not big enough for high power rockets. Several possibilities were explored, but in the end, Glen secured permission to use the old Naval Air Station (NAS) facility south of Hutchinson, near Yoder. This is a huge World War II era facility that was established in 1942. It has been used for a number of military and civilian purposes since that time, but is now home to a sailplane glider club, the Kansas Law Enforcement Training Center, some Hutchinson Community College facilities, and a few salamander-like creatures. An interesting note about this facility is that the father of KOSMO member, and Hutchinson native, Ron Shipley was stationed at this base for a while.

Launch day was set for Sunday, July 17. As many as 14 launches were expected, which were to include 12 campers and 2 adult sponsors who were going to attempt adult Level 1 certification. We aimed to start between 9:00 and 10:00 in the morning to escape the heat of the afternoon. Around 8:00am KOSMO members Keith and Monica, John, Duane, Mark, Steve, Ron, Kirk and Luke arrived at the NAS. The temperature was in the low 80's at this point and we did some exploring around the base and scouting to see where we might be able to set up launch operations. Of particular interest was the old control tower that still stands, but only barely.

The Cosmosphere campers and sponsors were having their own set of challenges. Much of the camp was held at Beaver Lake, Arkansas and they had experienced some van difficulties along the way. They had arrived back in Hutchinson at 2:00am. So they didn't make it out to the launch site until closer to 10:00. At that point we made quick work of deciding where to set things up. We had four high power pads, one with a rail and three with 3/16in rods. Each had a relay system connected to the controller some 100ft away. We had two canopies that we set up with tables to make a preparation and checkout area. The next difficulty became apparent soon after we started to check over rockets. For some reason, that was never really determined, the epoxy that the kids had used to glue the fins to the rockets was not holding.



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In many cases the fins were very flexible and in some cases, with not much effort you could pull a fin right off. So a makeshift gluing area was designated with 5 minute epoxy. This was only marginally successful. The kids were having trouble getting this new epoxy to harden as well. The rising air temperatures may have had something to do with that.

The rockets were all LOC Precision kits, including the ISIS (PK-25), Nuke Pro Maxx (PK-5) and Hi-Tech (PK-56). The motors were all Aerotech 29mm reloads of either H128W, H165R, or H238T depending on which rocket it was going in. The total weight and propellant weight of these combinations made all of the rockets Class 1 and so we did not have to worry about any FAA waivers. Glen had all of the reloads prepared and loaded the motors and installed the ignitors.

Eventually we had two rockets ready to go. They were placed on the pads and Mark Johnson took up the position of RCO at the control table. The first rocket took off, flew to altitude, deployed its chute and landed successfully. On the second launch however, we discovered our next problem. The motor ignited and shot right through the airframe, blew the nose cone off and proceeded to propel itself a couple hundred feet in the air and then fall back to the tarmac. Thankfully no fires were started and no one was hurt. An investigation soon found that the thrust ring on the 38mm to 29mm adapters had not been glued down, which allowed the motor to launch without the rocket. This was corrected on later rockets.

Due to some of these setbacks, we never had more than two rockets on the pads at once. There were several successful flights and several of the campers got their Jr. Level 1 certification. We also had a couple separations, a couple shreds, and one rocket that probably would have been otherwise successful, was lost. There were also a couple of rockets that we just couldn't allow to fly because the fins were just not glued on well enough. The two adult sponsors that attempted Level 1 flights were successful as well.

We finished the launching around 1:00pm and the temperature was well in to the triple digits by then. In all there were something like 11 flights. Looking at the event in hindsight now, it would seem that everyone involved learned some things, and for that reason it can certainly be called a success. Not everyone had a successful flight, but that is as much a part of this hobby as anything else. No discussion, that I know of, has taken place about whether to do this again or not. Speaking as one KOSMO member however, I would say that if the desire is there on the part of the Cosmosphere, let's take what we learned and give it a go next year.

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### KANSAS ORGANIZATION FOR SPACEMODELING

The KOSMONAUT is published bi-monthly by the KANSAS ORGANIZATION FOR SPACEMODELING NAR Section #427. Subscriptions are \$8 for 6 issues. KOSMO membership is only \$10 for a year and includes the KOSMONAUT. Newsletter editor is Duane Lanterman and can be emailed at [rocketsandracing@cox.net](mailto:rocketsandracing@cox.net). Memberships/subscriptions should be made out to KOSMO and sent to Bonnie Johnson, 3532 S. 154<sup>th</sup> St. E., Wichita, Ks. 67232. If you would like your newsletter delivered in a digital format please note that with your subscription, include your email.



# EAA/KOSMO CONNECTION

Reported by Duane Lanterman

The Kosmonauts were again invited to display their rockets at two nearby EAA events, the 48<sup>th</sup> Annual Air Capital Fly In at the Newton Airport and the EAA Fly in two weeks later at the Hays Regional Airport. This gives the club a fun way to talk to people about our hobby, hand out flyers, and an opportunity to look at some cool aircraft. Mark Johnson, Keith Ravenstien, and John Palmer represented the club at Newton and John has included a few words about his take on the day in the article below. Keith Ravenstien represented the club in Hays and got to visit with a number of rocketters who reside in Western Kansas. He had a very fruitful day. Later that day about 11 KOSMO members met at KEN'S Pizza in Hutchinson, Ks. We had originally scheduled a sport launch at the Fair Grounds but it was a brutal day with temps well over 100 degrees and a brisk wind. The meeting did give us an opportunity to eat pizza and discuss the Cosmosphere Xtreme Camp Jr. High Power launch the next day south of Yoder, Ks. This proved to be positive planning meeting. This launch is covered in great detail by Steve Saner in our cover story. All in all, a very busy month for our club.

## NEWTON AIR CAPITAL FLY IN

Reported by John Palmer

On July 2<sup>nd</sup> we were invited to participate in our second annual trip to the Newton fly in. This year the weather was very different than last year. No rain but plenty of heat. Mark, Keith and I showed up early to set up; we grabbed a couple of tables and began to set up. Keith brought his level 3 project and a few other rockets. Mark brought a good collection of vintage engines, his RC glider and a few other rockets. Me, well you know what I brought, a nice collection of scale rockets. This year front and center was my Soyuz. As we were setting up we began talking with many visitors. One of the guys I ran into actually worked on the shuttle. He used to work for Rockwell in California and had tickets to the final launch later on that month. He was telling many stories of the shuttle including the final flight of the Columbia He even told us about the test run afterwards to show how fragile the leading edges were. He also worked on other rockets and enjoyed telling me all the details of each rocket.

Through out the morning each of us would take turns going out on the tarmac to look at the planes and talk to many of the pilots. We heard many interesting stories. We all worked closely with Monty from the Kloudbusters watching each others booth and talking to the visitors. We met many new people this year and handed out more flyers than last year so maybe we will get some new members. After a long hot day, we packed up and left looking forward to next year's event.

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Steve Saner  
discusses  
rockets  
with some  
young  
visitors





**KOSMO**  
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**COSMOSPHERE  
XTREME CAMP  
JR HP LAUNCH**

**JULY 17, 2011  
OLD NAVAL  
AIR STATION**





**REMAINING KOSMO 2011 LAUNCH DATES**

Most club launches have a fee of \$4 non-members, \$3 members

**SATURDAY/SUNDAY AUG 27/28 TRAVEL DATE TO KC**

KCAR (NAR Section #505) has invited KOSMO to join them for a regional contest.  
Events: OPEN SPOT - "A" STREAMER DURATION- PREDICTED DURATION- SPORT  
SCALE- 1/2A ROCKET GLIDE DURATION- "A" HELICOPTER DURATION  
\$7 ENTRY FEE MEET RUNS 10AM SAT TO 5PM SUNDAY  
LOCATION SHAWNEE MISSION PARK OFF OF 435 ON THE KANSAS SIDE. CHECK  
THEIR WEBSITE kcrocket.org or KCAR ON FACEBOOK FOR MORE DETAILED  
DIRECTIONS.

**SUNDAY SEPT. 11 -FINAL FRONTIER FUN FLY 10AM-5PM  
LANTERMAN FAMILY FARM ELLINWOOD, KS.**

GO 2 MILES WEST OF ELLINWOOD ON HWY 56, THEN 2 MILES NORTH ON NE80 AVE.

**10,000'WAIVER**

**BBQ @ NOON -SMALL FEE**

**INCLUDES KANSAS ROCKET DRAGS CLASSES**

**SUPPER AT THE LONE WOLF IN ELLINWOOD AT CONCLUSION**

**CALL DAY OF LAUNCH OR CHECK WEBSITE FOR LAST MINUTE CANCELLATION  
DUE TO WEATHER OR MUDDY FIELD 620-617-6443**

**SUNDAY SEPT. 25 - ALTERNATIVE DATE FOR FFFF  
DUE TO IN INCREMENT WEATHER**

**SATURDAY OCT. 22 NIGHTFLIGHT**

**3AM-8PM**

**STATE FAIR PARKING LOT HUTCHINSON KS**

**CLASS 1 SPORT LAUNCHES FROM 3AM-6PM**

**BBQ FROM 6PM-7PM SMALL FEE**

**LIGHTED CLASS 1 ROCKETS FROM 7PM-8PM**

**SUNDAY NOV. 6 LOW AND SLOW-MICRO ROCKET LAUNCH  
2PM-5PM**

**RON/CAROLINE SHIPLEY RESIDENCE WICHITA KS**

**FLY FREE - SUPPER \$5**



Description of pictures on KOSMO/Cosmosphere page: TOP, KOSMO members and campers pose for a group photo. MIDDLE: Final preparations on the rockets. A photo of NAS during WW II. BOTTOM: A Level 1 launch leaves the pad. A Cosmosphere staff member preps her rocket. The NAS tower as it stands today.



# KANSAS ROCKET DRAGS



This years upcoming FFFF will again include the Kansas Rocket Drag Races. We use KOSMO style rules which differ from the NAR pink book. See rules and 2011 classes below -

- \*Your rocket must meet minimum requirements for the class.
- \*Races are conducted in heats of two rockets at a time. Pairing is decided by drawing names from a hat. In the event of an odd number of participants , single "rns" must still be flown.
- \*Contestants may only fly one model per class.
- \*Three points awarded for each run. One for first off the pad, one for the highest altitude, and one for first safely down. The flyer with the most points wins that heat.

This years classes - **JUNIOR DRAG** SINGLE "A" MOTOR MIN. DIA. OF BODY TUBE .75"

**TOP GAS** - 20 NEWTONS OF POWER MIN. DIA. OF BODY TUBE 1.5"

Trophies will be awarded to TOP ELIMINATOR /RUNNER UP IN EACH CLASS !! BE THERE !



## FIRST CONTACT - A MESSAGE FROM THE WEB GUY, STEVE

This is a reminder for all Kosmonauts that have an email address and use the Internet. KOSMO has an email discussion list to which you can subscribe. You will get all messages that other members send and any messages that you send will go to everyone on the list. This list has been a valuable tool for discussing upcoming events and asking each other questions. Also KOSMO is now on Facebook. If you are a Facebook user, be sure to "Like" our page. For more information on both of these resources, go to our website (<http://www.kosmo427.org>) and click on the "Contact Us" link.

# H A Y S

Keith's Level 3 project dominates the club display at the EAA Event



STAY TUNED FOR AN EXCITING ANNOUNCEMENT FROM THE NAR, KOSMO, AND KCAR