

the **KOSMONAUT**



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**MARCH / APRIL 2014 VOL. 33 NO. 2**



## **KOSMO LAUNCH SEASON FALLS VICTIM TO KANSAS WEATHER**

BY DUANE LANTERMAN

You can't say we didn't give it our best effort. After our initial Springfest date was scrubbed by weather, we activated our back up Saturday date and threw in Sunday as a possibility. After those dates failed to provide decent launch weather, KOSMO President Keith Ravenstein contacted the City of Ellinwood who approved the use of their airport for a weekend. We now had a Saturday, Sunday or Saturday and Sunday possibility. Long story short that weekend also failed to provide a usable launch window and at that point our high power Springfest became a frustrating memory. This of course isn't the first time Spring has thrown us a curve and so undaunted we move into the next launch on our schedule which will be at the Hutchinson State Fair Parking Lot. The launch is planned from 10am to 5pm on Saturday May 3. Come out for part or all of the day. Bring a sack lunch or plan a quick trip to one of the many fast food facilities within minutes of the site. Last minute updates on the event available by calling 620-663-9369.



## **NARAM-56 NOTES**

Just a reminder to those planning to attend NARAM 56 in Pueblo, Co. the last part of July. We as a club decided to build some 18mm powered rockets to take to the event to be a part of the FLYIT/TAKEIT event. While we are grounded due to this crazy Spring weather might be the perfect time to hit your shop and put together a few models to take along on the trip. Speaking of the trip, most of us plan on taking in the sport flying weekend before the competition starts on Monday. John Palmer has reserved 2 rooms at the official event motel. If you are interested in sharing a room please email John at [tlckp@cox.net](mailto:tlckp@cox.net) Most of us plan to leave Friday and return Monday. Some have also expressed interest in camping and facilities are available near the launch site. Check out the official website at [naram.org](http://naram.org) for details on this exciting event.

# NARCON 2014

Steve Saner

Early last fall it was announced that the 2014 National Association of Rocketry's annual convention (NARCON) would be held on the Florida Space Coast in Cocoa Beach and that it would include a tour of Cape Canaveral. As soon as I read that I thought to myself how cool it would be. But I dismissed it at first as being too far away and too expensive. Then I remembered that my wife, Peri, and I have been talking about going to Florida for some time to visit Peri's Dad's best friend. That evening I asked Peri what she would think about going to visit this friend around the first of March the next year. Without missing a beat, she looked at me and asked, "so what rocket thing is going on there?" She knows me too well! After thinking about it for a while we decided to make the trip and do both things.

So, as the next winter storm warnings were being issued in Kansas, we were landing in Florida to sunny skies and highs in the 70s and 80s. The convention was held at the International Palms Resort and Convention Center. We arrived Friday evening. The bulk of the convention was held on Saturday. They had four technical sessions running simultaneously.

Each was scheduled for 45 min. with a 15 min. break between. There were three sessions before lunch and another three after lunch. They had some typical NARCON type sessions, such as construction techniques, discussions of electronics, and "howto" demonstrations. There were also sessions that focused on the history of the manned space flight programs. Given where we were, the organizers managed to find people willing and able to talk about such things. In addition, there were talks about real rocket science work being done today, from university students and engineers in the field. Thus the tag line given to NARCON 2014 of "Rocketry: Yesterday, Today, and Tomorrow" was fulfilled.

I attended a session presented by the RocQ team (affiliated with LOC

Precision) about an online database project being developed to maintain an account of one's rocket fleet and log flight statistics. The intention is for that data to be useful as record keeping for the individual rocketeer, but to also be useful to the community as a whole. They are expecting an initial roll-out later this year. Next, was a presentation by John Beans of Jolly Logic



NARCON Registration Area



Vendor's Room

regarding new developments in rocket electronics. He talked about the Altimeter 3, still in development, and its new features. What got the most attention, however, was a product in development that will let you add dual deployment to virtually any rocket, with no need for a dedicated e-bay and no black powder charges. The last session I went to before lunch was a high power rocket construction discussion with local Floridian and L3CC member Rick Boyette. He talked about several construction techniques, but what interested me the most were some ideas on “built-up” fins, as opposed to solid fins.



Local Space Legends Lunch Panel

We had a two hour lunch break that included a panel of local space legends that was moderated by retired NASA engineer Bob Koenn (also a model rocketeer and member of the organizing team). Other members of the panel, included John Tripe, Lee Solid, and Roy Tharpe, all of whom have worked on rockets at the Cape ranging from the Atlas to the Space Shuttle. It was a fascinating and, at times, humorous, exchange of

stories. The men told stories of their experiences with the occasionally friendly ribbing of each other on the panel. Most poignant, was their recollection of the Apollo I tragedy. We could have easily listened to them for a couple more hours, but we had to continue on with the technical sessions.

After lunch I went to a session about the Research and Development competition at NARAM. It was led by Mark Wise who has been a judge of that event for some time. He described the things that he looks for and gave some tips about how to approach an R&D project. Several long-time R&D contestants were also in attendance to share their experiences. Next I went to a presentation on “Full Pre-Flight Analysis” by Sean Stapf of SECorp. He described how they do analysis on real rocket designs with various computer simulation and modeling technology. While



Banquet Dinner

interesting, it was not really of practical value to the typical hobbyist as the technology involved tends to be a bit out of our reach. The last session I went to was about the Civil Air Patrol's rocketry program. I chose to attend that session mostly due to the contact that we have made with Mark Weiss of the Flint Hills CAP Squadron. I feel that I gained a greater understanding of the program. An emphasis was made on trying to interest CAP

squadrons in further rocketry participation through TARC.

Saturday evening, Peri and I both attended the banquet dinner. The “surf and turf” food was great and the service provided by the hotel was excellent. After dinner we were treated to a panel discussion of three Space Shuttle astronauts. The current Kennedy Space Center director, and four-time Shuttle astronaut, Bob Cabana, led the discussion. He was joined by two-time Shuttle astronaut and space walker, Winston Scott, and space scientist Sam Durrance, also a two-time Shuttle astronaut. They shared their experiences from the moment of liftoff, to operations in the weightless environment, to memories of the view from space, to coming back to earth. The stories were amazing. The men were engaging. And the whole room was just riveted.



After Dinner Panel - Space Shuttle Astronauts

Sunday morning the convention part wrapped up with the traditional State of the NAR discussion led by our president Ted Cochran. His presentation can be found on the NAR web site. For the most part, the NAR continues to thrive.

After a break where everyone had the opportunity to eat a late breakfast on their own, we embarked on what may have been the primary reason many of us had come. This was the tour of the Cape Canaveral Air Force Station. Volunteers for the Air Force Space & Missile Museum led the tour. We filled two large buses, each with its own guide. Both groups saw the same things, but we took different routes so as to manage the group better. The first stop for our group was Hanger “R” where the Museum is currently storing some nicely restored rockets in their collection. We saw, up close and personal, anything from a Redstone missile, to a SNARK (one of the several winged missiles), to a Polaris missile.



Hanger R

We then continued on, passing by nearly all of the launch pads on the base. This included launch complex 40, where the SpaceX Falcon is launched. We saw launch complex 37 where the United Launch Alliance launches the Delta IV. Sadly, no rockets were on any of these pads at this time. We also saw the historical pads, including where Redstone, Atlas, Titan and others were launched. Very little in the way of infrastructure is left at most of these pads. At these locations we stayed in the bus and the guide related interesting tidbits about each site.

By far the most impressive stop was launch complex 34 where all of the early Saturn I and IB rockets were launched. We were allowed to get out of the bus and explore. The concrete pedestal still sits upon the flame-retardant bricks of the circular launch pad and the portal blast deflectors still stand nearby waiting to be moved into place. From the blockhouse is a row of structures on which cables would be supported before they enter the tunnels under the pad. An unmanned camera building still rises above all. The grass around the complex is kept neatly trimmed and looking to the east you can see, and even hear, the ocean. This pad is maintained as a memorial to Virgil I. “Gus” Grissom, Edward H. White II and Roger B. Chaffee – the three astronauts who lost their lives in the Apollo I fire. Three marble memorial benches have been placed south of the pad in remembrance. To walk around this pad and see the scorch marks on the concrete from the blast and the rusted tracks upon which the mobile service tower was moved, and to just try to imagine the sights and sounds of a real launch, was both surreal and humbling.



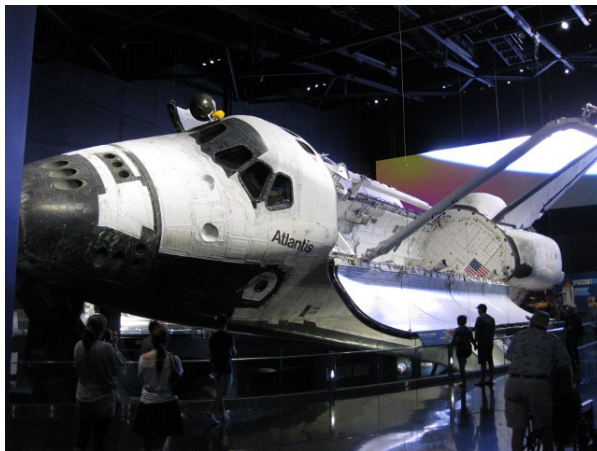
Launch Complex 34 - Saturn I/IB Launch Pad



Apollo I Memorial at Launch Complex 34

The tour ended at the Space & Missile Museum, which encompasses launch complex 26 and 5/6. Launch complex 26 is the site of the first successful American launch of a satellite into orbit, Explorer I. Launch complex 5/6 was the site of the early Mercury project launches. One of the old block houses at this site is still in tact and has been turned into part of the museum. You can go inside and see artifacts, including firing room equipment. Outdoors there are a number of rockets and launch related equipment. Many of these are showing a lot of wear from the weather.

Thus ended NARCON 2014 in grand fashion. The tour did not include any part of the Kennedy Space Center, but we received discount coupons to go there on our own. Peri and I took Monday to do just that. We went to the visitor’s center, which has a “rocket garden” containing a number of the manned space program rockets of old, such as the Mercury and Gemini programs, as well as a Saturn IB. The center contains many other exhibits and activities that you can do. The crown jewel, however, is the brand new Space Shuttle Atlantis exhibit. When you go into the building you first go into a theater where a short video describes the history of the Space Shuttle. You then walk into a sort of 3D theater where you experience some of the sites and sounds from a Shuttle launch to



Space Shuttle Atlantis at Kennedy Space Center

landing. The screen then lifts and there in front of you is Space Shuttle Atlantis in all her glory. The display and presentation are second to none. Many other shuttle related artifacts and displays are also in this building.

Included in the price of admission is a short bus trip that takes you to the Apollo and Saturn V center. The bus goes right by the Vertical Assembly Building that was used for both the Apollo and Space Shuttle programs. You can see pads 39A and B off in the distance. One of those does still have much of the Space Shuttle rigging still in place. The Saturn V building contains the pieces of an actual Saturn V rocket laying on its side. It is set up very much like the one in Huntsville Alabama that I wrote about in a previous article last summer.



Rocket Garden at Kennedy Space Center

NASA, and the administration, has taken some criticism over the last number of years, especially since the closure of the Space Shuttle program, regarding the apparent lack of direction regarding the manned space program. We noted that nearly every NASA representative that we encountered made a deliberate point of explaining that the manned space program is not dead. It is rather in transition. While less visible at this time, the work continues. New structures are being built. New programs are being developed and tested. The work that was started during the Space Shuttle era is being handed over to private entities and NASA is now focusing on deep space travel with a manned mission to Mars as the goal. We were assured that things are alive and well.

So that was my NARCON 2014 experience. Of interest to me was comparing it to the one that we had a hand in producing two years ago. In many ways it was similar. Throughout the entire process I was definitely impressed with the organization and attention to detail that the team displayed. Clearly they have access to some local attractions that almost no one can equal, and as a result, they had a much larger crowd than we did. Those things aside, it was organized much like what we did in Hutchinson and had a similar degree of success and impact, each in their own way. I can be both impressed with what was done here and pleased with the job that we did.

The hotel and convention center that was used was nice and very suitable for a NARCON, but it was not particularly fancy. It does, however, have the distinction of sitting right next to the ocean. You can walk directly to a nice beach without leaving the resort grounds. This, of course, is a novelty to Kansas folk. We enjoyed a nice stroll along the beach and ate dinner the first night on an outdoor patio of a grill and bar that is also part of the resort.

After our “Space Coast” experience we traveled South to visit Peri’s family friends. With a couple days left in our vacation, we drove down to see the Florida Keys before making our way back to Orlando and flying home again. We made it back to Kansas almost in time for the start of Spring.

# **KRAMO 34 IS ON IT'S WAY !**

**KOSMO'S LONG  
RUNNING NAR SANTIONED  
CONTEST IS COMING MAY 31  
AND JUNE 1 TO HUTCHINSON  
, KS.**

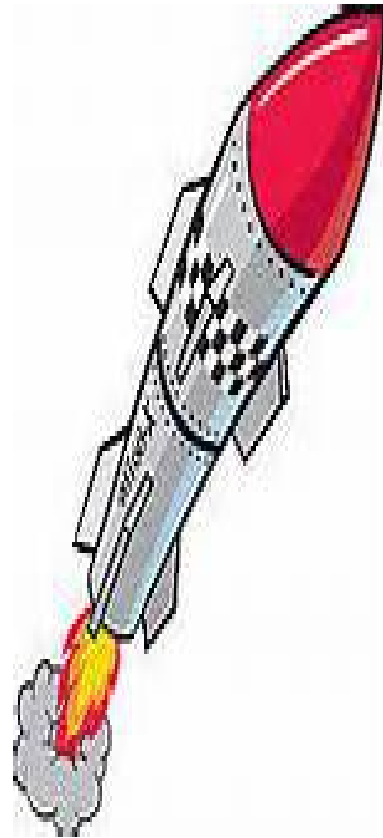
**HERE ARE THE EVENTS SO  
YOU CAN BEGIN TO PREPARE**

**-  
OPEN SPOT LANDING  
RANDOM DURATION  
"B" EGGLOFT DURATION  
"A" ALTITUDE  
"1/2A" HELICOPOTER  
DURATION  
"A" ROCKET GLIDER  
DURATION**

**THIS WILL GIVE US A WEIGHING FACTOR TO BE A REGIONAL  
EVENT. IF WE DO NOT HAVE ENOUGH PARTICIPANTS IT WILL  
RE-ORGANIZED INTO AN OPEN MEET AND "A" ROCKET GLIDE  
WILL BE DROPPED FROM OFFICIAL RESULTS. HOWEVER, WE  
WILL STILL HAVE THE GLIDER EVENT AND RIBBONS AND  
PRIZES WILL BE AWARDED TO WINNER IN THIS EVENT.**

**SAT. MAY 31 FROM 10 am TO 5 pm and SUNDAY JUNE 1 FROM  
10 am To 4 pm  
KANSAS STATE FAIR GROUNDS PARKING LOT - HUTCHINSON,  
KS.**

**ENTRY FEE - SPORT FLYING \$1  
COMPETITON ADULT/TEAM \$7  
COMPETITION YOUTH \$5  
FAMILY COMPETITION PASS \$15**



## **PRIZES, RIBBONS, AND OVERALL TROPHY WILL BE AWARDED**

**SPECIAL NOTES:** The altitude for the "A" Altitude event will be determined by electronic altimeters. You must use an altimeter approved by the NAR. (check their website for list) You are encouraged to bring your own altimeter for this event. KOSMO will have 2 Jolly Logic Altimeters available for checkout on a first come first serve basis (the club altimeters are not certified for national records as they do not download data)

Due to safety concerns and past experiences, a tower style launch pad will be allowed for the Eggloft event only if the body tube of the rocket has a uniform diameter (not tapered) or if a piston launcher is also used.

**SPORT FLYING CLASS 1 ROCKETS RECOVERABLE IN THE FIELD ARE WELCOMED !!**

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### **NEW MEMBER MARK WEISS !**

Mark resides in Manhattan, Ks. and is the aerospace education officer for the Flint Hills Civil Air Patrol Squadron based in Junction City, Ks. He is interesting in working with KOSMO in order to proceed with the Level One Certification program available in the CAP Advanced Rocketry Unit. Welcome Mark !!

## **KOSMO 2014 LAUNCH CALENDAR**

**MAY 3 SAT. KOSMO SPORT LAUNCH HUTCH FAIR GROUNDS PARKING LOT 10 AM TO 5 PM CLASS 1 ROCKETS - CALL 620-663-9369 FOR LAST MINUTE UPDATES**

**MAY 31-JUNE 1 KRAMO 34 SEE SEPERATE PAGE THIS ISSUE FOR DETAILS**

**AUG. 23 SAT. KOSMO SPORT LAUNCH HUTCH FAIR GROUNDS PARKING LOT 8AM TO 12 PM (NOTE THIS IS A MORNING LAUNCH) CLASS 1 ROCKETS**

**SEPT 6 SAT. FINAL FRONTIER FUN FLY ELLINWOOD AIRPORT OR LANTERMAN FARM 10AM-5PM 10,000' WAIVER SPECIAL EVENT "JR. ROCKET DRAGS"**

**SEPT. 20 SAT. ALTERNATE DATE FOR FFFF DUE TO WEATHER**

**OCT. 18 SAT. NIGHTFLIGHT HUTCH FAIR GROUNDS PARKING LOT 3PM TO 8PM LIGHTED ROCKETS LAUNCH FROM 7PM-8PM SPECIAL EVENT "JR ROCKET DRAGS"**

**NOV. 1 SAT. LOW AND SLOW HUTCH FAIR GROUNDS PARKING LOT 2PM-5PM DINNER TO FOLLOW CLASS 1 ROCKETS- NO LAUNCH FEE**



**GENERAL NOTES - LAUNCH FEE AT SPORT LAUNCHES IS \$3 FOR MEMBERS, \$4 FOR NON MEMBERS - AT THE HUTCH FIELD ROCKETS ARE LIMITED TO THOSE THAT CAN BE REASONABLY RECOVERED WITHIN THE FIELD -**

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