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FINAL FRONTIER FUN FLY

Photos by D. Lanterman/ D. Wyant

We were back on our high power field the weekend after Labor Day. As we went to bed Friday night the winds Saturday were expected around 10 mph from the SE. Upon waking up the winds had switched to the NE and with a bit higher wind speeds. We made the change from the far south end of our field to the far north of the field. We hadn't been at the point for quite awhile but it worked out well except there was no road into the very dry field. The regulars showed up and then we had a pleasant surprise as a family from Junction City, a good two hour drive, arrived. The Tuckers, Joseph, Gaby, and Levi were first time fliers and joined the club. Little Levi had brought his red rocket apply named "Rocket". We didn't have a lot of flights but the time passed quickly and we of course enjoyed visiting and trading stories. Carol Bailey launched her cluster rocket to complete her Silver Level in the NARTREK program and hubby Doug gave his Goddard rocket its first flight. Duane Lanterman flew a number of models but the highlight of the day was Steve Saner's K500 flight. This flight is detailed in a separate article in this issue. It was another HOT day in a summer that has seen lots of 100 degree days and very little rain. We all headed home satisfied with the day.

***PHOTOS – (1)GROUP PHOTO L TO R; D. BAILEY, C. BAILEY, K. RAVENSTEIN, D. WYANT, J. LEPEL, S.HAMOUS, S. SANER, D. LANTERMAN (2) NEW MEMBERS-JOSEPH, GABY, LEVI (3) CAROL WITH HER CLUSTER ROCKET (4) DOUG'S GODDARD MODEL**









More photos from Final Frontier -

Top row: Doug helps Joseph and Levi with his first flight – Levi's red rocket blasts off
Middle row: two of Duane's rockets
Bottom row: Steve preps his "Reckoning" – see separate article this issue.











FLIGHT OF "THE RECKONING

Steve Saner, KOSMO president

For those that were at the Final Frontier Fun Fly or even if you are just curious here is some details on the flight of "The Reckoning".

The yellow and blue rocket that I flew on a K400C reached an altitude of a bit over 6600ft. One altimeter said 6646 and the other showed maybe a bit less. This is about 600 ft higher than the OpenRocket simulation suggested. That surprises me a bit. The wind caused a fairly significant tail wobble in the early part of the flight, which you would think would have wasted some energy. It also didn't go quite straight up, again due to the wind.

Maybe the motor had more thrust than expected. It seemed to burn longer than the 3.3 sec that it is rated. This hypothesis is strengthened by the fact that the measured max velocity was 566 mph while the simulated max velocity was 537 mph.

Recovery was mostly nominal, but I do believe the main chute was perhaps a bit bound up and didn't really open up until the last moment. That, however may have been fortuitous as it landed just short of the substation and the high voltage power line. Any more time in the air and it may have caught one or the other.

All in all I was happy with the flight. The electronics and tracking system worked perfectly.

Here is a bit more detail on the electronics as some members have inquired.

The primary flight computer is an Altus Metrum TeleMega. This performs the primary dual deployment, firing an ejection charge at apogee and another at 1000ft for main deployment. Most of the data that I reported comes from this device.

The TeleMega also has a GPS receiver and RF telemetry on the 70cmamateur radio band. This telemetry is received with an Altus MetrumTeleBT connected to a small arrow antenna. The TeleBT sends received data to the AltosDroid app on my phone via Bluetooth.

The secondary flight computer is a Perfect Flight StratoLoggerCF dual-deploy altimeter. It was configured to fire an ejection charge at apogee with a 3 second delay and then another for main deployment at 900ft.

Finally, I was also running an Altus Metrum TeleGPS tracker in the nosecone. This does not perform any deployment functions. It is only an RF tracker. This tracker is configured on a different frequency than the TeleMega and if needed I could switch my ground station to that frequency in case the primary signal was lost.







EAA FLY IN AND KANSAS STATE FAIR – OUR HOBBY ON DISPLAY

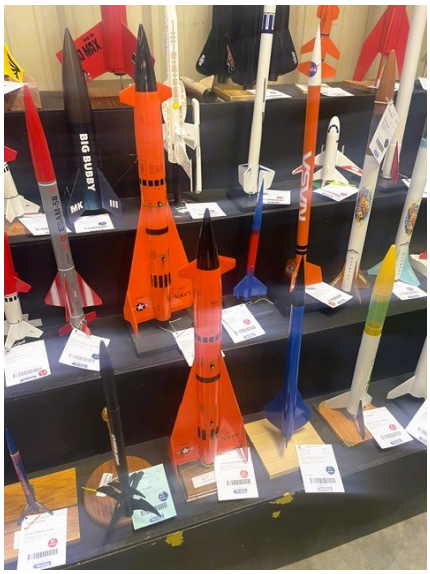
KOSMOnaut and EAA member Steve Hamous holds two rocket camps each summer. At a EAA Fly-in the first part of September Steve promoted his camps to youngsters attending the event at the Jabarra Airport. Thanks Steve for promoting our hobby and paying forward to the next generation.





September means the Kansas State Fair in Hutch. This years rocket entries were quite impressive. Thanks KOSMOnaut Dustin Wyant for agreeing to be one of the judges.





One of these challenging Jayhawks belongs to KOSMOnaut DJ Wyant.



Adventures in Florida – October 10-14 2026

by Steve Saner- KOSMO President

Sometime in July of this year I received a message that the company behind a software package that we use at work was going to be putting on a conference. It is software that we use to document our network and I've kind of become the subject matter expert for that system. So I was interested in maybe attending the conference. When I saw that it would be hold it at the Kennedy Space Center, I become more interested.

Long story short, on Saturday October 10th, I flew to Orlando. On Sunday I had booked my own personal time at Kennedy Space Center. I was able to get an adult admission to the visitor center and the Explorer bus tour for a kids price.

I had been to the KSC visitor center in 2014 when I went to Cocoa Beach, FL for NARCON. If you look through the Kosmonaut archives and find the March/April 2014 issue, you can read about my time there. Not all that much has changed at the visitor's center in that time, so I'll not say much about that here. The bus trip, however, did go some places that I didn't that time.

The most notable stops on the bus tour was the Vehicle Assembly Building and Launch Complex 39. These facilities, of course, supported most of the Apollo missions and all of the Space Shuttle missions. They are now being used by SpaceX and the new Orion program. I took some pictures, but nothing better than what you can find online, so I'm not including anything here. It was, however, very cool to see these historic sights. One thing you notice is there is always something under construction at KSC for one new project or another.

What I did not know before leaving and that I learned about on the bus tour is that SpaceX scheduled an ISS resupply mission for that Tuesday morning at 6:33am. That was the day of my conference, but I could get up early to possibly see that. I asked the tour guide where a good place close to Titusville (where I was staying) would be to watch. He directed me to Kennedy Point Park. So, at 5:30am I got up and drove about 10min to the park. There was a viewing area right along the Indian river separating the mainland from KSC. I figure that I was just under 15miles from the launch pad. We couldn't see much at that distance but the blinking beacons on the lightning towers. At exactly 6:33 a bright orange ball of fire started raising up from the ground. Some 15 seconds later we could hear the roar of the engines. It was a great vantage point and perfect weather. Clear sky's and the eastern horizon was just becoming light. We could follow the Falcon 9 all the way to staging. At that point the most amazing thing happened. The second stage went heading down range and the gasses from that and the expiring booster caught the light of the sun, still just over the horizon and made the most amazing site. You may have seen it described as a jellyfish. To my mind it was like a nebula. You can find photos on the Internet. I didn't bother trying to take photos. I just wanted to see it. And while all of that was happening, we could see what looked like moving star passing by. It was the ISS itself. Makes sense when you think about it, the second stage of the rocket was pushing the Cargo Dragon in line with the ISS with the goal of catching up to it. As we were taking all of this in, we could see the re-entry burn of the booster as it was headed back to Landing Zone 40. Finally one last burst of fire for the landing burn and about 15 seconds later, the double sonic booms. In that description I used the word "we" quite a bit. I said it that way because it just so happened that the guy standing next to me turned out to be a SpaceX employee. In fact his team was assigned the job of preparing that vary rocket for launch that day. One of his jobs was to set the explosives that they use to make staging and capsule separations possible. I was able to talk to him about it a little. I noted that he was a bit nervous. Kind of like someone doing their first certification flight. But, it all worked perfectly.

UPCOMING 2026 LAUNCH CALENDAR



NOV 7 – NIGHTFLIGHT – HUTCHINSON FAIR GROUNDS – 2PM- 6PM
Last chance of 2026 to launch with the club. Sports flights start at 2pm and as the sunsets the night rockets will come out. Flight must be lighted from lift off to landing. *We will meet rain, shine, or anything in between!*

Coming in January – Annual Meeting- Location, time, and date to be announced in the next issue. A chance to share a meal, trade stories, bring your winter projects, elect officers, select events for KRAMO 47 and set the 2027 launch calendar.

Details on launch fields can be found at our club's website www.kosmo427.org

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ROCKET'TOBER WINDED OUT – Our HP launch in October experienced wind gust the first scheduled date of 41 mph and the alternate date was windy also so we move on to our low/mid power field the first part of November.

Congratulations go out to KOSMOnaut DJ Wyant on completing his successful private pilot's check ride and earning his certificate. Pictured below is DJ's first lesson at age 12, his first solo at 16 and his private license at 17. DJ is a senior at Hoisington High School. Way to go DJ!







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