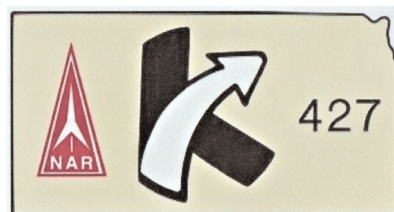


# *the* **KOSMONAUT**

OFFICIAL JOURNAL OF THE KANSAS ORGANIZATION FOR SPACEMODELING

March/April 2023



Volume 42 No. 2



## SPRINGFEST FEATURES GUEST FROM THE EAST

After two weather scrubs, SPRINGFEST nailed a very nice Spring-like day. Our President Steve Saner had received some request from JayHawk High Power Rocketry located in Lawrence Ks and an inquiry from two NAR members from the University of Louisville about utilizing our field and club members to certify students, most Level 1, several Level 2. KOSMO members got the pads set up shortly after 10am, and several members put up some flights including Zac Twigg whose "Da Bomb," composed of many 3D printed parts, flew successfully on an J290 motor. Other members launching during the day included Duane Lanterman, Jeremy Lepel, Austin Streit, DJ Wyant and Tom Freeman (rejoining the club after an extended absence) Also on hand were Duane's grand-kids, Cody and Parker Lanterman. The rest of the flights belonged to our guest which kept club members quite busy administering test, safety checking models, helping with motor selection, and confirming successful certs as the models were returned. The Jayhawk club did very well with all Level 1 flights being successful as well as both Level 2 flights. The two students who made the long haul from Kentucky made two attempts for a Level 1 Cert. Both flights had nice straight boost, however they were using several electronic recovery systems and both times these failed to deploy the chute. We are sure they will try again, perhaps keeping their initial cert flight a bit simpler. A total of 33 flights were made during the day, a good start to the 2023 launch season.

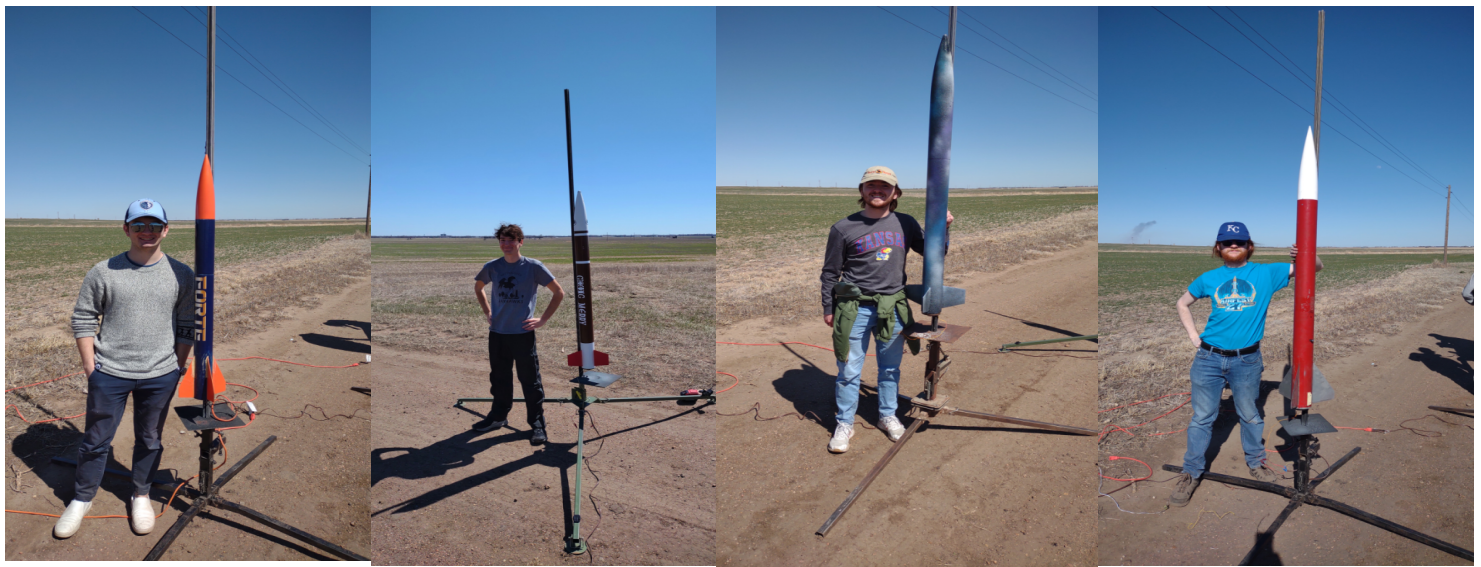


**River City Rocket  
Team from the U. of  
Louisville**



**Jayhawk High Power Rocketry from KU**





## Jayhawk High Power Rocketry – Rocketeers / Cert Rockets



More KU cert rockets next page.





## MORE KU CERT ROCKETEERS AND ROCKETS

Pictured below are some KOSMONauts and their rockets at Springfest



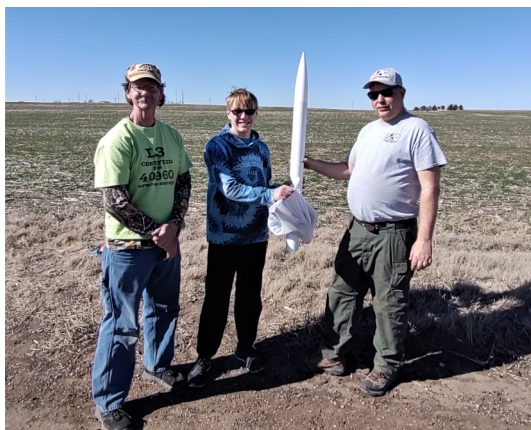
**Tom Freeman is back with the club! His Patriot flew 3 times on F or G power.**



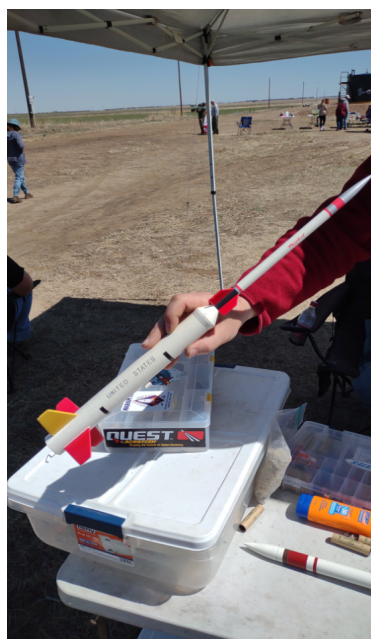
**Zac Twigg mostly 3D printed "Da Bomb" flew on a J290.**



**Duane Lanterman had several flights including the Star Orbiter on an E26**



**KOSMO President Steve Saner presents DJ Wyant with a complimentary NAR membership and a Generation 2 Club rocket designed by Keith Ravenstein (left) for his Jr. Level One attempt**



**Jeremy Lepel's Nike flew great on a C motor.**



**Duane's grandkids Parker and Cody had fun launching their rockets and watching the various cert flights!**



## KOSMO PROUD !

Congratulations to the Wichita Area TARC Team, the Air Capital STEM Club, on qualifying for the Nationals in Washington DC! The group will be leaving for our nation's capital on May 13th. In the photo below are L-R, Natalya Shain, Joseph Scrafford, Gabe Shankar, Jack Thompson, Larissa Shain, and Braeden Shipley. Not pictured is Jacob Norris.

Air Capital STEM Club  
President – Bill Lindsay  
V. President – Brad Smith  
Treasurer – Mark Logan  
Secretary - Jeremy Lepel

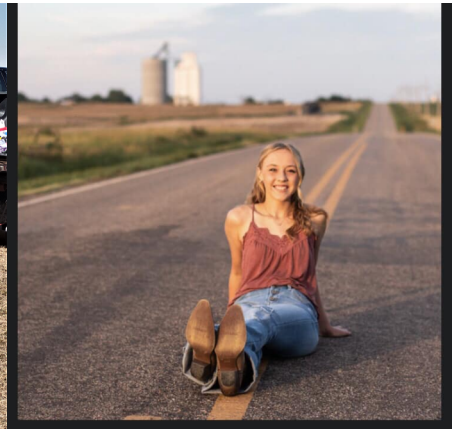
Board of Directors  
Dr. Jonathan Scrafford  
Jeff Shellenger  
Luke Thompson

Advisors/Mentors  
Steve Hamous  
Steve Saner  
John Palmer

The majority of the support team and officers are KOSMO members. Great job ladies and gentlemen.



KOSMOnaut Jayla Wyant is going to Missouri State University this Fall. She was one of 25 students accepted into their accelerated program and also granted early acceptance into the KC University medical school. She is currently looking at becoming an OBGYN. Oh, and by the way, this summer she will spend a month in Japan with a host family through 4H.



KOSMOnaut DJ Wyant will be a part of the Hoisington Middle School's robotics team at the World Championships towards the end of April. DJ was also nominated for robotics student of the year in Hoisington.





## April Ends with Launch in Hutch

Our launch season began on the first Saturday of April at our high power field and ended the last Saturday in

April at our low/mid power field. The forecast was a bit uncertain with winds not looking particularly favorable. We decided to give it a go and planned on most flights with streamers, low power and most likely ending early. We had a nice crew show up and were especially glad to have new members Doug and Carol Bailey join us for the first time. It was great to get acquainted with them and look forward to many more launches together. As we packed up, some of us headed to the local Fire House Sub restaurant and continued

our conversations over some good food and drink.



**The CREW** - Duane Lanterman, Fred Smith, Steve Saner, Keith Ravenstein, Carol Bailey, Zac Twigg, Richard (frequent observer) and Doug Bailey.



**Doug Bailey's Estes ESAH.**



**Zac Twigg's "Flash Jr."** lays down some heavy smoke from it's F36.



**Duane Lanterman's mini "Der Red Max"** based on plans and graphics from his pen pal Joe Peklicz. It tried to hide on its second flight but was found at the end of the day.



**New members Carol and Doug Bailey visit with KOSMO president Steve Saner.**





Come compete with us at the **Kansas Rocket AeroModelers Open ! KRAMO**

This is our 43<sup>rd</sup> edition of our local contest and you'll find the competition friendly and low key. There will be prizes and ribbons along with sport flying the two days.

KRAMO will be a NAR sanctioned, National Rocketry Competition (NRC) event. Any of this year's NRC events may be flown and the results of those flights will be submitted to the **National Scoreboard**. The KRAMO contest will consist of four NRC events and two non-sanctioned events. Awards will be presented for each KRAMO event as well as an overall meet champion award. Anyone wishing to fly NRC sanctioned events that are not part of the KRAMO events listed above must bring any items necessary for those events. This includes altimeters and payloads.

**OPEN SPOT LANDING** – Any recovery or motor may be used. There will be a target (spot) placed by the contest director and your score is the distance your nose cone (or motor nozzle if there is no cone) is from the spot. *This year KOSMO is allowing two flights in this event with the closest attempt being your score.*

**“GREEN EGG” EGGLOFT** – A unique KOSMO event each modeler must use a stock Estes “Green Egg” kit powered by an Estes C11-3 motor. (modifications allowed are a shock cord and *internal* mount of your choice and a streamlined launch lug) Egg will be provided by the club. You must safely return the egg and you have two possible flights with your best time being your score.

**“A” BOOST GLIDE DURATION** – Any “A” powered rocket one portion which returns to the ground in a stable gliding flight after separating from the booster which contains some sort of recovery device. The glider is timed and your score is the total of two flights, One glider must be returned.

**“1/4A” PARACHUTE DURATION** – A lightweight model powered by a 1/4A engine recovered by a parachute. Your score is the total of two flights. One flight must be returned.

**“A” STREAMER DURATION** – A rocket powered by an “A” engine recovered by a streamer at least 5 times as long as its width and connected at its narrow end by a single line. Your score is the total of two flights. One flight must be returned.

**“A” HELICOPTER DURATION** – A rocket powered by an “A” engine with auto rotation blades deployed after being launched vertically. It can not separate into any pieces during flight and must make at least one full rotation. Your score is the total of two flights. One flight must be returned.

**KRAMO JUNE 10-11 2023 - HUTCHINSON STATE FAIR PARKING LOT – SATURDAY 10-5 SUNDAY 9-3  
ENTRY FEE \$7 SPORT FLYING BOTH DAYS AT NO CHARGE**

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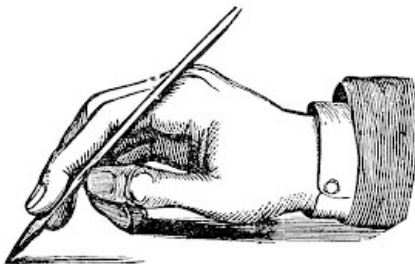
## **KOSMONauts HEADED TO NSL**

At least 5 KOSMONauts will be headed to Alamosa, Colorado memorial day weekend to be a part of the National Sport Launch. They will also be taking the extended tour of the Estes factory in Penrose. Good luck and fly high Keith Ravenstein, Steve Saner, Dustin Wyant, DJ Wyant and Zac Twigg. Here is the same crew pictured in Alamosa in 2021.





## *From the Presidents Pen*



First of all, I want to say a big thank you to everyone that helped with the process of doing the high power certifications for the KU and Kentucky students during the SpringFest launch. It is great that we can provide that kind of service to various groups. It is rather remarkable how many of these groups we have worked with over the years. For the most part it was a successful day. I feel that I learned some things about doing certifications and hopefully you did too. Maybe I'll have more to say about that later. Thanks again!

This month I wanted to say a word about the OpenRocket simulator. I know that some of you have used and do use OpenRocket, as opposed to RockSim from Apogee Components. There was a long period of time, from March 2015, that there were no new releases. It was stuck on version 15.03 and it kind of fell behind. Just over a year ago, they finally started putting out some beta releases (5 total) until finally this last February, version 22.02 was released.

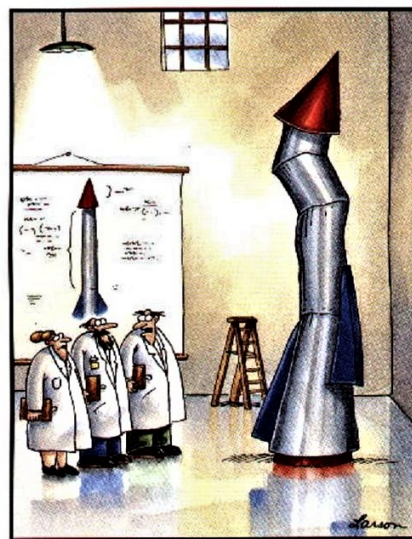
The story, as I understand it, is that back in 2015 they really wanted to release some additional features, most notably the ability to include pods and “strap-on” boosters in the designs and simulations. However, they ran into some serious software architecture issues that made further development very difficult. The project had originally been a part of a masters thesis back in 2009 and wasn't exactly up to the challenge of extensive expansion. With the recent addition of a couple of very prolific volunteer developers a major rewrite of core elements of the program was undertaken to get the software into a much more manageable state.

Some new features of the 22.02 version includes pods, strap-on boosters and tail cones. It includes the ability to make free form fins that conform to nose cones and transitions. Rail buttons are now supported. There are significant updates to component libraries. There are also many improvements to the simulation engine as well as the user interface. For a full listing of the improvements, you can read the release notes here: [https://openrocket.info/release\\_notes.html](https://openrocket.info/release_notes.html).

I have been a fan of OpenRocket for quite a few years, even despite the stagnation. I am, however, very glad to see that the development log jam was broken and I am hopeful that more updates will be coming soon. For those that might be interested, I wanted to bring these new features and improvements to your attention. You can download OpenRocket and use it for free from <https://openrocket.info/>.

*Happy Rocketeering!!!*

*Steve Saner*



"It's time we face reality, my friends. ...  
We're not exactly rocket scientists."



## 2023 KOSMO LAUNCH CALENDAR

**SPORT LAUNCH – MAY 20- LOW/MID POWER FIELD– HUTCHINSON KS – STATE FAIR GROUNDS PARKING LOT- 10AM – 4PM**

**KRAMO – 43RD ANNUAL CONTEST AND SPORT FLY – JUNE 10 AND 11 – HUTCHINSON KS- STATE FAIR GROUNDS PARKING LOT – SATURDAY 10AM-5PM – SUNDAY 9AM-3PM -CONTEST EVENTS DETAILED IN THIS ISSUE**

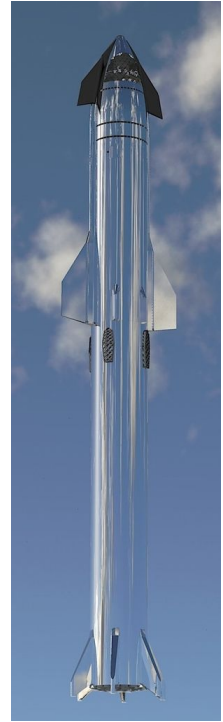
**SPORT LAUNCH – JULY 15 – LOW/MID POWER FIELD – HUTCHINSON- STATE FAIRGROUNDS PARKING LOT- 9AM-1PM**

**SPORT LAUNCH – AUGUST 12 – LOW/MID POWER FIELD – HUTCHINSON- STATE FAIRGROUNDS PARKING LOT- 9AM-1PM**

**FINAL FRONTIER FUN FLY – SEPTEMBER 9 WITH BACKUP DATE OF SEPTEMBER 23 -LANTERMAN FAMILY FARM- ELLINWOOD KS - 10,000' FAA WAIVER PLANNED- 10AM TO 5PM**

**ROCKET'TOBER – OCTOBER 7 WITH BACKUP DATE OF OCTOBER 21- LANTERMAN FAMILY FARM- ELLINWOOD KS - 10,000' FAA WAIVER PLANNED – 10AM TO 5PM**

**NIGHT FLIGHT – NOVEMBER 11- LOW/MID POWER FIELD – HUTCHINSON KS – STATE FAIR GROUNDS PARKING LOT- BEGINS AT 2PM WITH LIGHTED ROCKET LAUNCHES AFTER SUNSET USUALLY CONCLUDING ABOUT 6PM**



The parking lot at the State Fair grounds in Hutchinson is our low/mid power field. We do limit flights to Class 1 rockets (which generally means up to a G impulse motor max) that can reasonably be expected to stay within the bounds of the field. (this is at the discretion of the range safety officer)

At Ellinwood we will file an FAA waiver good to 10,000 ft above ground-level. Generally speaking, this will allow up to a K impulse motor. Note that you must be properly certified, or be getting your certification, to fly high power rockets. If you would like to get Level 1 or Level 2 NAR certification, we have members that can help you with that. Please contact us if you have any questions. While high power rockets are allowed at this launch, most flights tend to be of low and mid power rockets. So do not hesitate to join us even if you are not flying high power. **WITH KANSAS WEATHER THESE DATES ARE CERTAINLY SUBJECT TO CHANGE. UPDATES CAN BE FOUND AS THE DATES APPROACH ON OUR CLUB'S FACEBOOK PAGE, OUR CLUB EMAIL LIST, AND OUR CLUB'S WEBSITE.**

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### KOSMOnauts THAT PARTICIPATED IN SPRINGFEST



Duane Lanterman, Steve Saner, Dustin, DJ, and Jayla Wyant, Keith Ravenstein, Zac Twigg, Austin Striet and Tom Freeman. Not pictured Jeremy Lepel.