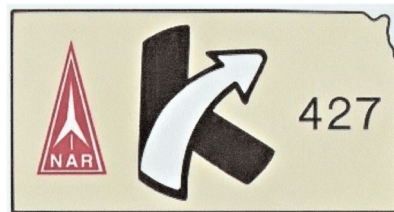


the KOSMONAUT

OFFICIAL JOURNAL OF THE KANSAS ORGANIZATION FOR SPACEMODELING

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MAY SPORT LAUNCH

Back in Hutch again and another nice day for flying. As we were flying in central Kansas, the Air Capital STEM Club was flying in DC at The American Rocket Challenge, lead by KOSMONaut Bill Lindsay. 32 flights were made in Hutchinson and we all had a good time flying. Some photos below of the rockets making it in to the Kansas sky. A report on the DC finals is elsewhere in this issue.



Jeremy Lepel's RTF and Duane Lanterman's builder kit of the New Shepard.



Saner, Lanterman, and Lepel rack up quite a variety.



KRAMO 43

EVENT INCLUDES NAR COMPETITION, SPORT FLYING AND THE HOMETOWN HELPERS COMMUNITY CLUB

KRAMO is KOSMO's longest running event, beginning in 1980 the same year the club was established. It has traditionally been a 2 day NAR competition event with sport flying. It began at Mark and Bonnie Johnson's home in rural Wichita, moved to Lake Afton in Goddard, and then moved to our present low/mid-power field in Hutchinson. Only one year was it canceled, one year it moved date from June and took place in KC, and several times the event has reduced to one day due to weather. This year's edition was reduced to Saturday only as the forecast for Sunday looked to be windy and perhaps wet. This year was unique in that we were joined by the Hometown Helpers Community Club in Sylvan Grove. This group (a former 4H group) built about 30 identical Apogee Apprentice kits the day before and 20 of the kids and helpers made the 120 mile trip to Hutch to launch their rockets. It was a beautiful calm day and the contest had 11 contestants making 54 contest flights. 6 additional sport fliers joined in for a total of 73 flights on the KOSMO side. I don't think there was an official count of the Hometown Helpers flights but I would guess there were probably 40 flights most all with the Estes C6-5 engines which meant they were reaching about 1200' in altitude.

There were four standard competition events, "A" Helicopter Duration, "A" Streamer Duration, "A" Boost Glide, "1/4A" Parachute Duration, a unique EggLoft duration where everyone used a standard Estes Green Egg Rocket and a C11 motor, and Open Spot with a twist in that each contestant got two tries at the target.

Here are the results for the 6 events with just first through third place listed.

"A" Streamer FIRST- Dustin Wyant 38 seconds
SECOND – Bill Lindsay 33 seconds
THIRD – Duane Lanterman 32 seconds

"A" Boost Glide Duration FIRST – Keith Ravenstein 70 seconds
SECOND – Duane Lanterman 10 seconds
THIRD – Steve Hamous 8 seconds

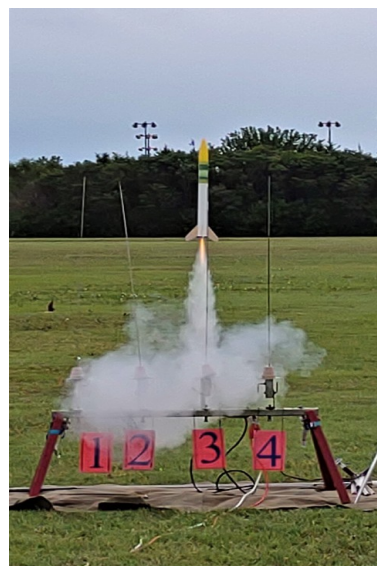
"A" Heli Duration – FIRST – Dustin Wyant – 39 seconds
SECOND – Duane Lanterman 22 seconds

"1/4 A" Parachute FIRST – Duane Lanterman – 25seconds
SECOND – Dustin Wyant – 23 seconds
THIRD – Bill Lindsay – 13 seconds

Green Egg Loft FIRST – Duane Lanterman - 26 seconds
SECOND – TIE – Steve Saner – 23 seconds
Austin Streit – 23 seconds
THIRD – Jayla Wyant – 22 seconds

Open Spot – FIRST – Jayla Wyant – 7.67
SECOND – Steve Hamous – 8.31
THIRD – Steve Saner 9.17

OVERALL POINTS FIRST – Duane Lanterman
SECOND – Dustin Wyant
THIRD – Bill Lindsay



One of the 11 different Green Egg rockets that competed in Egglofting. No broken eggs!



SOME OF THE KOSMO COMPETITORS



THE HOMETOWN HELPERS COMMUNITY CLUB



Ed Myers, leader of the Hometown Helpers, prepares his Apogee Apprentice, the first of many that the club flew.



KOSMO president Steve Saner hands over an NAR grant check to Keith Ravenstein to help pay for the recently acquired trailer for club events.



No question who the owner of the rocket is in this photo. Carol Bailey watches her first "D" powered rocket blast off!

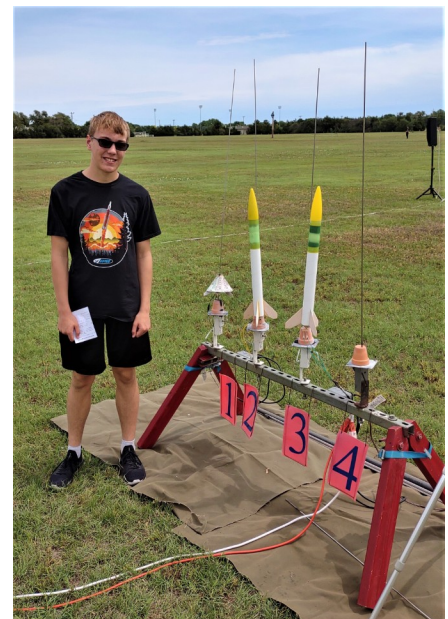
MORE KRAMO 43 PHOTOS



This happy young man poses with a starter set donated by an interested party. He tells us he wants to work for NASA someday.



A beautiful flame from one of the sport flights by a KOSMONaut.



DJ Wyant poses with his Green Egg contest model, while another Green Egg awaits its flight. Pad one contains a Spot Landing model.



Wichita Area TARC / Air Capital STEM Club 2022/2023

Written by Bill Lindsay

The 2022/2023 TARC season started in Wichita the first of September. We started the year off with 9 kids and finished the year with 6 kids on the team. This year's challenge involved launching one raw egg to 850', with the rocket recovering in two separate pieces under two separate parachutes with a duration of 42-45 seconds to qualify. Round one at nationals was 875' with a duration of 43-46 seconds and the second round was 825' with a duration of 41-44 seconds.

The team members: Warren Schellenger, Luke Thompson, Gabe Shankar, Braeden Shipley, Wyatt Shain, Larissa Shain, Natalya Shain, Jacob Norris, Joseph Scrafford.

Board Members: Bill Lindsay President, Brad Smith VP, Mark Logan Treasure, Jeremy Lepel Secretary, Luke Thompson, Jeff Schellenger, Jonathan Scrafford Board Members, Steve Saner, Steve Hamous, John Palmer, Mentors/Advisors, Tina Lindsay, TARC Mom. Kristin Karasko, Fundraisers, Ruth Shain, Snacks. As you can see it takes a lot of folks to put this program on. It also takes about \$15,000 + a year to do the program and that includes the trip to Washington DC

The team had designed 6 different styles of rockets and after several weeks of working on getting the dialed in on Rock Sim, we made arrangements with Steve Saner to visit Make ICT to get some fins and tubes cut. Jack Thompson had decided to 3D print a fin can and nosecone for his version of a Bull Pup. After several attempts to reach our qualifying altitude of 850' it was decided that the Bull Pup design wasn't such a good egg lofter. The design for the second year in a row was a tube fin design. A few of the other designs got us close, but we had run out of time to get more data flights in due to weather, school conflicts, etc. before the qualifying cutoff date.

The team qualified for nationals to represent the Wichita area for the 18th time out of 21 years of the program. I have to "THANKS" Steve Hamous and Cal Ammons (aka Mr. TARC) for their mentorship and the guidance to keep the program going in the Wichita area.

This year's trip to nationals gave us several challenges with the conflict of school and parents schedules. After we had figured out the logistics on who, how and when everyone would be arriving in Virginia the preparing of equipment and securing a trailer was done. The team meet at my house (TARC Headquarters) on Friday May 12 to load the trailer and back of my Explorer.

Saturday May 13th Braeden and myself departed Wichita for Overland Park, Ks.. meeting fellow KOSMO member Blake Goddard to pick up the Kansas City teams rockets and equipment. After visiting for about 30 minutes, it was time to head east. Braeden was googling places to eat and where we could get gas. He found a couple of fast-food places around Concordia, Mo. We made it a fast stop as Braeden had seen they were forecasting severe weather around the St. Louis area about the same time we would be going through. Braeden and myself arrived in the Dayton, Ohio area around 9:30 PM EST. After having a scare with our hotel reservation, we finally got situated for the night. Sunday morning, we were back on the road for Virginia around 8:30 AM. This put us at our Airbnb around 5:00 PM EST. We unloaded everything, visited with the neighbors, and then off to eat and hit the *National Mall* that evening.

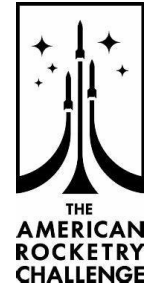
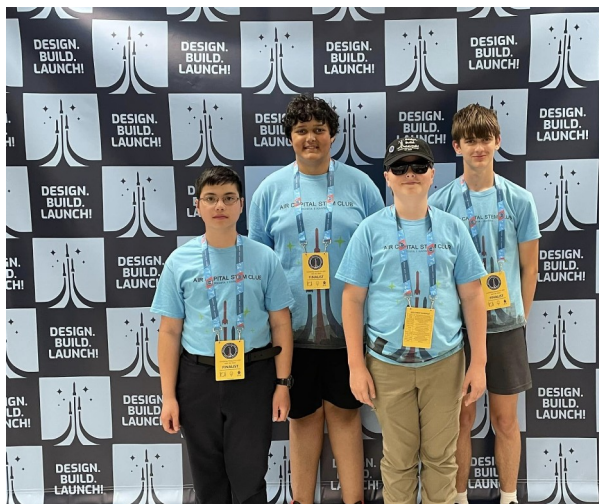
Monday -Wednesday Braeden and I did a lot of sightseeing and visiting museums. Congressman Ron Estes and his wife gave Braeden the royal treatment with the tour of the *US Capital*. Braeden saw things in the Capital that the public doesn't usually get to see. Braeden also did a fine job

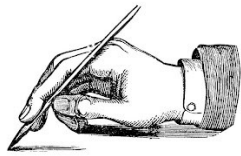
representing the team with our visits with Senators Moran and Marshall. Braeden even managed to squeeze in visits to *Arlington National Cemetery*, *Ford Theater*, *Smithsonian Air and Space*, *WWII*, *Korea*, and *Vietnam memorials*. The big day was Wednesday visiting the *Smithsonian Udvar-Hazy facility*.

Thursday morning several members of the team arrived around 2:30 AM. Thursday morning we left for Washington DC on the METRO to visit *The White House*. After our White House visit it was time to go and get some data flights done in The Plains, VA. Friday Joseph, his dad, and younger brother arrived. The kids did school work in the morning and we then held a team meeting at the Airbnb before heading to Uno's Pizza in Manassas where we joined the team from KC. We then headed to the Manassas Middle School for team check in at the mandatory team safety briefing.

Saturday we were at the Great Meadow for the 21st annual TARC nationals. The weather was not the best for flying with high humidity and ceilings just above 1000' with no wind. It started to improve around 9:30. We flew our semifinal flight around 11:45 with great flight conditions. The rocket we flew did great for our qualifying flight in Argonia, Ks. The closer we got to nationals we started having problems getting the rocket to reach altitude. On our semifinal flight our target altitude was 875' 43-46 seconds. Our launch had a good straight boost but as luck would have it we overshot our target altitude. Our flight was 901' and a duration of 56 seconds as our parachute canopied in the middle of a thermal. We finished the year placing 59th out of just over 800 teams competing to represent the US in the international competition in Paris, France.

Sunday Braeden and myself started the long drive back to Wichita while Luke, Hadrian, Jack, Gabe, Jonathan, Joseph visited the *National Mall* before heading home. Braeden and myself made it to Dayton, Ohio late Sunday afternoon. Monday, we visited *The US Air Force Museum* and *Randy at E-Rockets*. Luke, Jack, Gabe, Hadrian arrived back in Wichita Tuesday early afternoon. Braeden and myself had originally planned to spend the evening with KOSMO members Mark & Bonnie Johnson in Columbia, MO. Braeden and I weren't feeling well so we decided to drive from Dayton (departing @ 7:30 AM) to Wichita arriving back at my place around 10:30 Tuesday night, that was a long drive! Another TARC year in the books.





From the Presidents Pen

“It is what it is”

Duane asked if I would use this space in this month’s newsletter to talk about about the National Sport Launch in Alamosa Colorado, which was attended by myself, Keith Ravenstein, Dustin Wyant, DJ Wyant, and Zac Twig. Early on, the adventure took on an “It is what it is” tone as some things didn’t quite go according to plan. Prior to NSL, all but myself traveled to Colorado on Thursday to attend an extended tour of Estes, led by Bill Stine. All reports of that experience were that it was excellent. Since I wasn’t part of that, you will have to ask the others about it. There was also a visit to Apogee Components in Colorado Springs. Thursday night Keith, Dustin, and DJ stayed in a sketchy part of Pueblo and I believe this is where the “It is what it is” description of things began.

That sentiment was further expressed Friday evening when I met the rest of the group at the hotel in Alamosa for which we had a reservation. Dustin had found this hotel online months before where they advertised a contractor’s suite. This was to be two adjoining rooms with a twin sized bed for each of us. When we arrived, however, a single room was reserved for us that contained two double beds (not even queen size). We were assured by the woman at the counter that the contractor suite was not available and should not have been available for rent since the beginning of the year. After a few phone calls to look for other options around town, we decided that we would make do with what we had. Four of us occupied the beds and Zac volunteered to sleep on the floor. In the end, we managed quite well.

Saturday morning greeted us with lovely rocket flying weather, but by afternoon the winds picked up to the point that they called an end to that day’s activities two hours early. Sunday, however, the weather was very nearly perfect all day. And Monday followed with nearly as good conditions, only a bit more wind in the afternoon. Temperatures were chilly in the morning and warm, but not really hot during the day. Really couldn’t ask for much better with the weather.

We all had been to NSL at this location two years ago and in some ways they had improved upon the organization and operation of the launch from then. In other ways there were a few things that could have been a bit better, but all in all it was a fine launch. It was well attended as NSLs go. Maybe not quite as big of a crowd compared to two years ago, but still quite respectable. There were some big and impressive flights. One of those was an “M” to “M” two stage that flew to around 34,000ft.

As for the five of us, well, we had some issues. Not all was bad. I had a good flight to 6600ft of a new rocket that I finished in time for the event. Dustin had a good flight with his Black Hole and DJ flew his RC glider a couple times with good results. Keith flew his rocket named Prozac on a K motor (with plans to later fly it on an M motor) but something went wrong with apogee deployment and things went bad from there. Unfortunately that rocket was a total loss, including electronics. Zac flew his 54mm minimum diameter rocket and apparently the aluminum fin can came off and he lost that along with the motor casing. I entered the “Spudloft 2023” contest to launch a potato to 2023 ft. Due to a stupid error on my part, deployment was way late, the shock cord ripped and the payload section crashed into the quarry making a sort of sauce of the potato. I mean, “It is what it is”, right?

Despite the issues, I think we all, as a whole, had a good time. I guess I should also say that I did have one additional stroke of good fortune in that I won a \$200 gift certificate from Chris’ Rocket Supplies in the raffle. I wasn’t the only one of our group that won something in the raffle, but I admit, mine was the big prize. As a result there is a 3in all fiberglass rocket in my future.

The San Luis Valley Rocketeers have volunteered to host NSL West for at least the next two years. It sounds like the dates may change a bit, though. So we’ll see what happens, but we might be ready to try it all again next year.

Steve Saner



KOSMONauts on the move in May and June

NSL IN COLORADO



TARC IN DC – WHITE HOUSE



LAUNCHING ROCKETS IN HUTCHINSON



2023 KOSMO LAUNCH CALENDAR

SPORT LAUNCH – JULY 15 – LOW/MID POWER FIELD – HUTCHINSON- STATE FAIRGROUNDS PARKING LOT- 9AM-1PM – Note earlier start time than usual

SPORT LAUNCH – AUGUST 12 – LOW/MID POWER FIELD – HUTCHINSON- STATE FAIRGROUNDS PARKING LOT- 9AM-1PM – Note earlier start time than usual.

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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COOL KOSMO STUFF – Pictured bottom left are two very limited edition KOSMO caps in a *light blue* color. These were given away in a random drawing of contestants at KRAMO 43. The hats were provided by funds from Peggy Warnock (and her late husband Joe) who were founding members of our club. Winners were Keith Ravenstein and Bill Lindsay. On the right are new KOSMO pins that were designed by Dustin Wyant. Dustin will be handing these out at future launches. The look great Dyustin!

