

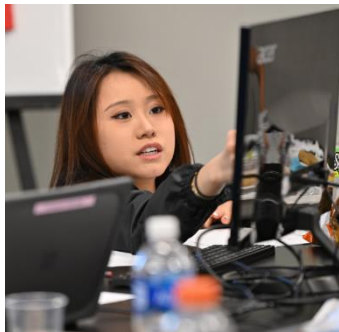


COMPETITION | SPONSOR NEWS | STEM RESOURCES | SPACE NEWS | JUST FOR FUN

NATIONAL SPACE DESIGN COMPETITION

There's still time to register for the 2024-2025 National Space Design Competition

Registration for the 2024-2025 National Space Design Competition is open through **October 14, 2024** (this deadline has been extended from the original date of Oct. 11). All high schools, JROTC units, Civil Air Patrol squadrons, scouting troops, 4-H clubs, and other approved youth organizations are welcome to participate!



Participating teams are guaranteed three online rounds of competition. Each of these qualifying rounds is preceded by a practice round, for a total of six scenarios! Round scenarios are focused on determining optimal orbits, choosing satellite components, and selecting launch vehicles that meet mission requirements (i.e., time, weight, budget). Each qualification round also includes a multiple-choice quiz.



Teams are provided with access to an online training course provided by Nova Space, Inc., along with a license for the Systems Tool Kit (STK) software, provided by Anys Government Initiatives.

To register at team at your organization, visit www.stellarxplorers.org/team-registration. Student competitors do not need to be added to rosters until October 25.

To see a list of teams that have signed up for the upcoming competition season, view the [map of currently registered teams](#).

Give back to your community by becoming a mentor!

StellarXplorers teams are typically led by teachers, but not all teachers feel equipped to prepare their students for the competition. Because of this, **many teams rely on technical mentors** (aka the space professionals) to help them prepare.

If you have a strong understanding of determining orbits, selecting satellite components, and/or choosing the optimal launch vehicle for a mission – you should consider being a mentor. The time commitment is up to the mentor, and the schedule agreed up on with the team director, and mentorship can be conducted virtually or in person.



Registration is required for all new and returning mentors. A background check will be requested of all individuals who register for this role. [Click here for complete details and to register today.](#)

SPONSOR NEWS

Norm Augustine Honored with AFA's Lifetime Achievement Award

In recognition of a lifetime of work advancing aerospace power, Air & Space Forces Association awarded Norm Augustine with a Lifetime Achievement Award at the 2024 Air, Space & Cyber Conference.

A distinguished aerospace leader, Augustine began his career after graduating magna cum laude in Aeronautical Engineering from Princeton University. He served as Assistant Director of Defense Research and Engineering, Assistant Secretary of the Army, Undersecretary and Acting Secretary of the Army. In the private sector, he led Martin Marietta and Lockheed Martin as CEO.

Augustine has been pivotal in shaping U.S. space policy, chairing the "Advisory Committee on the Future of the U.S. Space Program" and serving on key advisory boards, including the Air Force Scientific Advisory Board and the President's Scientific Advisory Board. His leadership extended to the nonprofit sector, where he chaired the American Red Cross, National Academy of Engineering, and Association of the United States Army.

A lifelong advocate for youth and STEM education, Augustine chaired the StellarXplorers Board of Advisors, inspiring students to pursue careers in space, aviation, and other STEM disciplines. A Fellow of the Explorers Club, he has traveled to over 130 countries and embarked on many remarkable adventures, from dogsledding in the Arctic to standing at both poles.

Augustine's honors include the National Medal of Technology, the Joint Chiefs of Staff Distinguished Public Service Award, and the Department of Defense Distinguished Civilian Service Award (five times). He holds 34 honorary degrees and was named one of the Fifty Great Americans by the Library of Congress.



Left to right: AFA Chair of the Board Brig Gen. Bernie Skoch, honoree Norman Augustine, Secretary of the Air Force Frank Kendall, and AFA President and CEO Lt. Gen. Burt Field at the Air, Space & Cyber Conference on September 18, 2024. Photo by Mike Tsukamoto/Air & Space Forces Magazine

L3Harris Foundation continues support of StellarXplorers with \$50K grant



From left to right: Stephen Gourley, AFA Vice Chairman of the Board for Aerospace Education; Christopher E. Kubasik, Chair and CEO, L3Harris; Bernie Skoch, AFA Chairman of the Board; Burt Field, AFA President and CEO

During the Air & Space Forces Association's 2024 Air, Space and Cyber Conference, L3Harris CEO Christopher E. Kubasik presented the StellarXplorers program with a \$50,000 check, marking the seventh consecutive year of support.

"We are honored to have the continued support of L3Harris," said Rebecca Dalton, StellarXplorers Director of Operations. "They've been with the program since its early stages, and they understand the importance of investing in STEM education opportunities for our nation's youth."

[Click here](#) for a video of the check presentation and remarks from Christopher Kubasik and Bernie Skoch.

Lockheed Martin Awarded GeoXO Lightning Mapper Contract to Support Forecasters with Severe Weather Monitoring

NASA has [awarded](#) Lockheed Martin a contract to design and build the next-generation GeoXO Lightning Mapper (LMX) instruments for the National Oceanic and Atmospheric Administration (NOAA). The baseline contract is valued at approximately \$297 million for two instruments with options for two additional instruments.



[LMX](#) is a single-channel, near-infrared optical instrument developed specifically to detect, locate, and measure the intensity, duration and extent of lightning flashes in near-real-time.

This lightning data will provide persistent severe weather observations of the Western Hemisphere, improving storm analysis and prediction, and aiding the detection of tornado-producing storms. The imagers will improve hurricane intensity calculations, lightning hazard detection, wildfire ignition detection and aviation threat avoidance. Read more at <https://news.lockheedmartin.com/>.

STEM RESOURCES

Join the StellarXplorers Alumni Network

The StellarXplorers Alumni Network is intended to connect program alumni with each other and with program sponsors and supporters from industry and academia. Within this group we will share networking opportunities, available internships, job postings, and more!



This is a private group for past and present StellarXplorers participants. You must be at least 16 years of age to join, per LinkedIn account regulations. All requests to join will be reviewed by StellarXplorers staff to verify participation in the program.

To join, visit: <https://www.linkedin.com/groups/12721859/>

SPACE NEWS



Curious About What's Happening Overhead?

Check out the Space.com [Space Calendar](#) to stay up to date with upcoming planned rocket launches and skywatching-worthy dates. And in case you missed it...

- 22 SEP 2024 | [SpaceX's Crew-9 flight for NASA. Here's how it turned into a rescue mission](#)
- 21 SEP 2024 | [NASA invites public to design Artemis moon mission navigation tech](#)
- 17 SEP 2024 | [Earth will get another moon this month — but not for long!](#)
- 15 SEP 2024 | [SpaceX's private Polaris Dawn astronauts splash down to end historic spacewalk mission](#)
- 07 SEP 2024 | [Boeing Starliner returns to Earth, but without astronauts](#)
- 06 SEP 2024 | [NASA's solar sail spacecraft is visible in the night sky. Here's how to see it](#)
- 3 SEP 2024 | [Artemis 3 astronauts will walk on the moon with 4G-equipped spacesuits](#)
- 1 SEP 2024 | [1 month until the annular solar eclipse 2024: Here's what you need to know](#)

Photos from Space:



Extreme Outer Galaxy in near- and mid-infrared light. Bright blue stars seen within this star-forming region, known as Digel Cloud 2S as seen by the JWST (Image credit: NASA, ESA, CSA, STScI, M. Ressler (JPL))

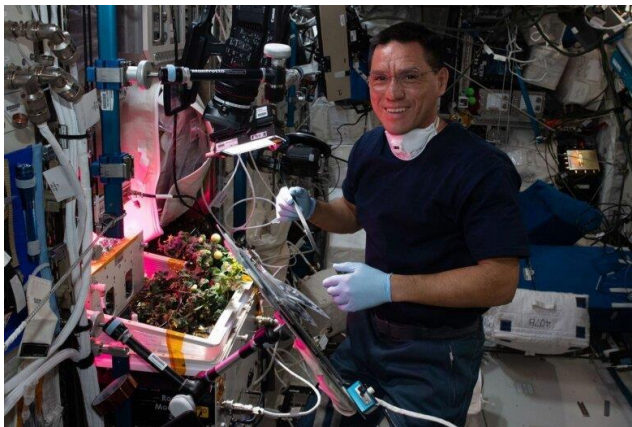
This area is about 58,000 light-years from the [heart of the Milky Way](#), or "Galactic Center." For comparison, the solar system is located just under halfway between the Galactic Center and the very [edge of the Milky Way](#). That distance is just 26,000 light-years, so when we say "extreme edge" for these new observations, that's more than hyperbole! The result of this galactic envelope-pushing

exercise is a stunning image of star clusters in the midst of a "[starburst](#)" and an intense period of rapid star birth.

Read more at <https://www.space.com/james-webb-space-telescope-extreme-outer-galaxy>

JUST FOR FUN

The case of the missing ISS tomato



Last year, astronaut Frank Rubio became the central figure in a lighthearted whodunnit that has taken months to solve..

After Rubio harvesting one of the first tomatoes ever grown in space, he admitted he misplaced it.

"I put it in a little bag, and one of my crewmates was doing a (public) event with some schoolkids, and I thought it'd be kind of cool to show the kids — 'Hey guys this is the first tomato harvested in space. I was pretty confident that I Velcroed it where I was supposed to Velcro it ... and then I came back and it was gone."

In the microgravity environment of space, anything not anchored to a wall is at risk of floating away. Rubio returned to Earth on September 27 with the precious produce still lost aboard the space station. Months later, despite having been blamed by crewmates for eating the tomato, it was revealed that those remaining on the ISS had located it.

The astronauts did not reveal where the tomato was or specify what state the produce was in when found. Rubio surmised in October that it had probably already shriveled into an unrecognizable rot. Due to the humidity at the space station, "it probably desiccated to the point where you couldn't tell what it was," Rubio said.

Case closed.

(Article courtesy of [CNN](#))

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Tweet us, like us, follow us, and share with StellarXplorers on your favorite platform!
We would love to share any stories about your team. Send them our way: info@stellarxplorers.org.

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