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StellarXplorers VIII Competition!

Team just completed Qualification Round 3, and the top 30% of teams are headed on to the Semifinals.

Below you will see the winners for each region! Congratulations to you all!

Northeast Region			
CT, DC, DE, IL, IM, KY, MA, MD, MI, MN, MO, NH, NJ, NY, OH, PA, VA, WV, Germany			
Place	Organization	City	State
1st	West Aurora High School AFJROTC #6	Aurora	IL
2nd	Heartland Composite Squadron CAP	Elizabethtown	KY
3rd	Golden Triangle Composite Sq CAP	Glenshaw	PA
Southeast Region			
AL, AR, FL, GA, LA, SC, TN, MS, NC			
Place	Organization	City	State
1st	Springville Cadet Sq CAP	Springville	AL
2nd	McMichael High School AFJROTC #3	Mayodan	NC
3rd	Clover High School AFJROTC #1	Clover	SC
Central Region			
AZ, CO, KS, NM, OK, TX			
Place	Organization	City	State
1st	Rangeview High School #1	Aurora	CO
2nd	Flour Bluff High School NJROTC	Corpus Christi	TX
3rd	Wings over the Rockies #2	Denver	CO
West Region			
CA, HI, ID, NV, OR, UT, WA, Guam			
Place	Organization	City	State
1st	Scripps Ranch High School AFJROTC #1	San Diego	CA
2nd	South High School #2	Torrance	CA
3rd	South High School #3	Torrance	CA

Our Semifinals round will commence on February 24, where the remaining teams will compete to be one of the top 10 teams who will earn an all expense paid trip to Houston for our National Finals, taking place from April 21-23. Stay tuned for updates!



StellarCamp Update

StellarCamp Registration is Open!

StellarCamp is a fun space system design camp for rising 8th through rising 12th graders. Participants get to learn about aspects of space system design with no prior experience required.

After a successful pilot 2021 Summer season, StellarXplorers will be supporting 2022 StellarCamps this coming summer nationwide in areas where there are already StellarXplorers teams and new areas, too!



Approved organizations register via our StellarXplorers [portal](#) for their week/s of StellarCamp consisting of instruction modules and information to conduct the competition on the fifth day, accompanying instructor guide, student workbooks, and demonstration software that the students will use to follow along with the instructions.

StellarCamps will be conducted by instructors from your local school or organization. As host organizations register with us to conduct a StellarCamp this summer, we'll list the dates and locations of these camps. Students will register via their local organization for StellarCamp, not through our StellarXplorers portal. A list of available camp locations and dates will be posted as they scheduled.

For more information, visit our [website!](#)

Aerospace News

[Meet the four Polaris Dawn astronauts SpaceX will launch into orbit this year](#)

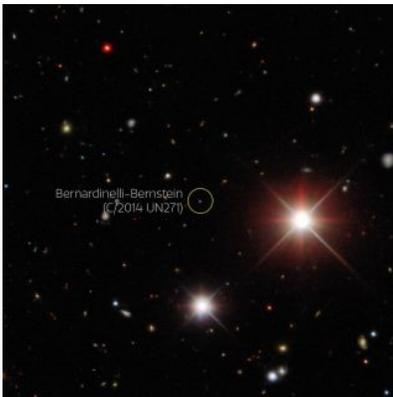
Shift4 CEO Jared Isaacman and SpaceX jointly announced Monday, Feb. 14 the creation of Polaris Dawn, a mission set to fly a Crew Dragon to high Earth orbit in late 2022. The mission will be the opening shot for the Polaris Program, which aims both to conduct human spaceflights and to fund causes on Earth.

"The [Polaris] program will consist of up to three human spaceflight missions that will demonstrate new technologies, conduct extensive research, and ultimately culminate in the first flight of SpaceX's Starship with humans on board," the program said in a statement.

The crewmembers, left to right, are Anna Menon, Scott Pottet, Jared Isaacman, and Sarah Gillis



[Largest comet ever observed bumps Hale-Bopp from pedestal](#)



The Bernardinelli-Bernstein comet, identified in 2021, is officially the biggest comet ever observed.

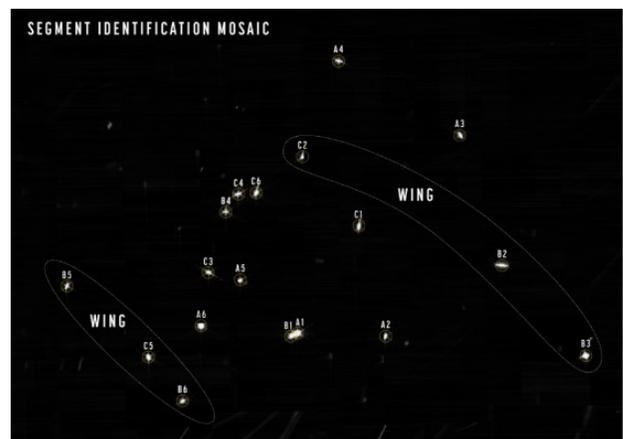
The new record, reported on the preprint website arXiv and now accepted for publication in the journal *Astronomy and Astrophysics Letters*, bumps the Hale-Bopp comet from the top spot. Hale-Bopp was discovered in 1995 and became visible to the naked eye in 1996; it was about 46 miles across. Comet Bernardinelli-Bernstein has now been calculated to be about 85 miles across.

The comet is currently winging its way toward the interior of the solar system. It will get closest to Earth in 2031, though not too close for comfort: The comet will remain just outside Saturn's orbit

[First images from NASA's James Webb Space Telescope](#)

The team behind NASA's James Webb Space Telescope released some of the first images from the much-anticipated observatory on Friday, Feb. 11. The main photo, which doesn't even hint at the power Webb will bring to the universe once it's fully operational, shows a star called HD 84406 and is only a portion of the mosaic taken over 25 hours beginning on Feb. 2, during the ongoing process to align the observatory's segmented mirror.

"The entire Webb team is ecstatic at how well the first steps of taking images and aligning the telescope are proceeding," Marcia Rieke, principal investigator of the instrument that Webb relies on for the alignment procedure and an astronomer at the University of Arizona, said in a NASA statement.



JWST is now 48 days out from its Christmas Day launch and in the midst of a commissioning process expected to last about six months. The telescope spent the first month unfolding from its launch configuration and trekking out nearly 1 million miles (1.5 million kilometers) away from Earth.



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Space Careers

Radio Frequency Engineering

Radio Frequency Engineers develop RF payload and subsystem solutions and the RF / electronic components for Space and Missile platforms.



They work with RF from the MHz range all the way up through Optical systems. Communications subsystems or RF payloads are needed for every platform and serve missions ranging from human space flight, commercial broadband services, national intelligence, protected communications, navigation and more. Their product portfolio includes a wide range of international and domestic programs, addressing the important needs of our commercial, civil and military customers.

"A satellite must be capable of receiving and interpreting data that has been transmitted from Earth in order to command its mission objectives. Just like the modem in your home, a satellite's communications payload bridges the gap between analog signals (radio waves) that can propagate through space and digital signals (bits) which represent the data we care about. However, unlike your modem at home, the radio frequency signals to/from a satellite can be transmitted sometimes hundreds of millions of miles through space, and still be received and interpreted with very few errors!" - Paul Bucci, LM Space

Careers in Radio Frequency Engineering include working on Antenna Systems and Components, Electronically Steerable Arrays, RF Transmitters and Receivers, RF Photonics and Optical Communications, and much more.

Aerospace Opportunities!

Lockheed Martin 2021 Scholarship Program Launch

The [Lockheed Martin STEM Scholarship Program](#) is open to students pursuing bachelor's degrees in engineering, computer science, or physics who show need and come from underrepresented or underserved communities. Up to 200 scholarships of \$10,000 each are offered for full-time study at a U.S. accredited four-year institution. The deadline to apply is April 1, 2022.

The [Lockheed Martin Vocational Scholarship Program](#) is open to students pursuing associate degrees, credit-bearing certificates or industry-recognized credentials in technology and advanced manufacturing disciplines. Up to 150 scholarships of \$5,000 each are offered for study at a U.S. accredited vocational-technical school, trade school, two-year community college or state college. The deadline to apply is March 11, 2022.