

Flight Opportunities

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- Mar. 11-15: Lunar and Planetary Science Conference • The Woodlands, Texas – **Let us know if you're attending!**

Happy New Year!
The Flight Opportunities team

NASA Selects Winners of Third TechRise Student Challenge

On Jan. 23, NASA announced 60 winning teams for its third **TechRise Student Challenge**.

The grades 6-12 student teams, who will work together to turn their proposed experiments into reality ahead, include more than 490 students representing 46 states and territories. Each team will receive \$1,500 to build their experiments, a flight box to house it, technical support from Future Engineers, and an assigned spot for their experiments on a NASA-sponsored suborbital flight test scheduled for this summer. Sitting at lab table, young man holds component and young woman holds soldering iron.



Zephyr Proffitt (left) and Tayah Day of Red Mountain High School in Mesa, Arizona, work on building their experiment during last year's TechRise Student Challenge. Credits: Red Mountain High School

Addressing a wide variety of science and technology challenges, student experiments will fly on either a World View high-altitude balloon or Astrobotic's Xodiac rocket-powered lander.

Approximately 200 volunteer judges with expertise in engineering, space, and Earth science reviewed entries and selected winners. **Many thanks to our readers who served as judges!**

[Read NASA's feature announcing this year's TechRise winners.](#)

Community of Practice

Leveraging Iterative Flight Testing to Advance Dust Sensor to Aid in Lunar Landings

Wednesday, February 7, 2024
10:00-11:00 a.m. PST

Researchers from the University of Central Florida will speak about **Ejecta STORM** (Sheet Tracking, Opacity, and Regolith Maturity) – an instrument designed to measure the size and speed of surface particles kicked up by the exhaust from a rocket-powered lander on the Moon or Mars. During [this webinar](#), they will explore how they embraced the Flight Opportunities program's “fly, fix, fly” ethos to advance their plume-surface interaction technology – from a 2020 flight campaign to a 2023 series of flight tests on Astrobotic's Xodiac rocket-powered lander.



Flight testing of Ejecta STORM in Sept. 2023. [Video available here.](#) Credits: Astrobotic

In discussion with Flight Opportunities, researchers and Astrobotic will share valuable lessons learned on iterative flight testing to mature a technology that could reduce risk for lunar landings.

Microsoft Teams meeting

Join on your computer, mobile app or room device

[Click here to join the meeting](#)

Or call-in (audio only):

+1 256-715-9946 • Phone Conference ID: 396 513 97#

[See all Community of Practice webinars.](#)

Do you have ideas or suggestions for a future Community of Practice topic? We'd love to hear your thoughts. Email us at NASA-FlightOpportunities@mail.nasa.gov to tell us what you'd like to see.

Opportunities

Register by Feb. 1 for TechLeap Universal Payload Interface Challenge

To move technologies into flight testing and between different flight environments as quickly as possible, NASA's [Flight Opportunities](#) program invites innovators to develop a flight-ready [universal payload interface for its third NASA TechLeap Prize](#). A maximum of three winners will receive up to \$650,000 each to build their system plus the opportunity to flight test it at no cost.



NASA
TechLeap
PRIZE

Interested in submitting your idea?

- [You must first register by 2:00 p.m. PST Feb. 1.](#) (Final applications are due Feb. 22, 2024.)
 - [Learn more about the challenge, eligibility criteria, and more here.](#)
 - [Watch recordings of Q&A and webinars about the challenge here.](#) (Note: A Q&A webinar for registrants will be held on Feb. 8; details provided upon registration.)
-

Mar. 4 Deadline for Concept Summaries: Technology Advancement and Applied Research Leveraging the ISS National Lab (NLRA-2024-4)

Concept summaries are due March 4 for researchers interested in submitting proposals for flight investigations to be performed on the International Space Station. Researchers with applied R&D, translational medicine, technology maturation, and technology demonstration projects may [propose to use the unique environment of the space station](#) to develop, test, or mature products and processes that have a demonstrated potential to produce near-term and positive direct or indirect economic impact.

Full proposals are by invitation only.

[Learn more about submitting your concept summary by Mar. 4.](#)



Credits: NASA

NASA SBIR/STTR Phase I Proposals Due Mar. 11

The Phase I solicitations are now open for NASA's Small Business Innovation Research and Small Business Technology Transfer (**SBIR/STTR**) programs. These programs fund R&D and demonstrations of innovative technologies that fulfill NASA needs and have significant potential for successful commercialization. Phase I early-stage research projects receive up to \$150,000 and last 6 months for SBIR and 13 months for STTR.



Not only are these programs a potential source of seed funding for technology development, but researchers with active SBIR/STTR awards **may be eligible for flight test and payload development** through Flight Opportunities.

Read the solicitations for SBIR (for businesses with 500 or fewer employees) and STTR (where the small business partners with a non-profit research institution such as a university or a research laboratory) to learn more. **Submit your Phase I proposal(s) by Mar. 11.**

MSI Students: Submit by Mar. 13 for Innovation and Tech Transfer Competition

The NASA MUREP Innovation and Tech Transfer Idea Competition (**MITTIC**) is currently accepting proposals from student teams at minority-serving institutions (MSIs). MITTIC provides a resumé-worthy experience and the opportunity to learn and demonstrate entrepreneurial skills.

In Phase 1, student teams choose one NASA intellectual property (IP) and use it to create a product or service with commercial applications. Teams selected for the Phase 2 "Space Tank Competition" can win up to \$20,000 plus a \$2,500 stipend for the principal investigator.



MITTIC "Space Tank" judging in 2019. Credits: Robert Markowitz

MUREP = Minority University Research and Education Project

Learn more about submitting an MITTIC proposal by the Mar. 13 deadline.

Wildland Fire Science, Management, and Disaster Mitigation Technology Development: ROSES A.59 Proposals Due Mar. 29

The current ROSES (Research Opportunities in Space and Earth Science) NASA research announcement includes **an appendix focused on demonstrating improved wildland fire management through the use of novel suborbital platforms**. ROSES is an omnibus announcement with many individual “program elements” that together cover the wide range of basic and applied research and technology in space and Earth sciences supported by NASA’s Science Mission Directorate (SMD).

Section 1.2 of the A.59 program element PDF provides information about the six technology areas of interest.



Credits: U.S. National Park Service/Noah Daniels

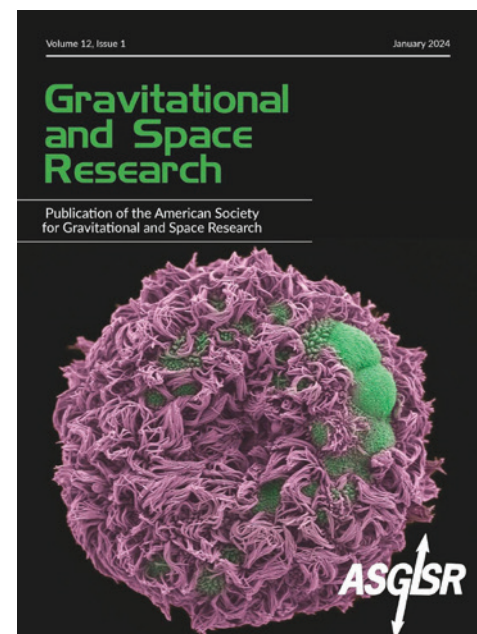
Read more about submitting a proposal by Mar. 29 to ROSES A.59 on NSPIRES.

Resources

Gravitational and Space Research: ASGSR’s journal

Gravitational and Space Research – the main journal of the American Society for Gravitational and Space Research (**ASGSR**) – publishes peer-reviewed manuscripts related to the impact of gravity and changes in the gravity vector on a range of life and physical space sciences, from astrobology to materials science to suborbital research.

Read the open-access journal here or learn more about **submitting a manuscript** for editorial consideration.





WEST 2024 (AFCEA and U.S. Naval Institute)

Feb. 13-15, 2024 • San Diego, California

WEST is a showcase of emerging systems, platforms, technologies, and networks that will impact all areas of current and future Sea Service operations. Senior military and government officials will discuss the challenges they face and how industry can help address them. Dr. Nathan Barnwell, principal investigator for the Stratospheric Optical Link Demonstration (SOLD) project that underwent flight testing through NASA's Flight Opportunities program, will have a booth. Dr. Anh Nguyen, Flight Opportunities portfolio integrator, will also attend to offer insights into leveraging flight testing to rapidly advance technologies and mechanisms for engaging with the program.

NASA Human Research Program Investigators' Workshop

Feb. 13-16, 2024 • Galveston, Texas

The Human Research Program Investigators' Workshop is a venue for reporting progress and results of scientists and principal investigators researching safe, productive, and efficient human spaceflight. Flight Opportunities and NASA's Commercially Enabled Rapid Space Science initiative (part of the agency's Biological and Physical Science Division) will present on accessing flight tests to advance technologies that meet U.S. space exploration priorities and support the expanding space economy, including those that support sustained human presence in space.

Details:

- Leveraging Suborbital Flight Testing to Advance Science and Technology in the Expanding Space Economy (poster session)
 - Tues., Feb. 13 • 4:30-6:00 p.m. CST • Exhibit Hall A
-

FAA Commercial Space Transportation Conference

Feb. 21-22, 2024 • Washington, D.C.

This two-day symposium features government officials, policymakers, and thought leaders from around the country. Speakers will discuss all aspects of the commercial space industry, ranging from launch infrastructure to airspace integration to the future of low Earth orbit, the Moon, and beyond. Attendees can gain a better understanding of the policy landscape and an enhanced network of professionals within the industry.

Lunar and Planetary Science Conference 2024

Mar. 11-15, 2024 • The Woodlands Texas (near Houston)

LPSC brings together a diverse group of international experts in planetary research to showcase the latest science, research, and discoveries in the field. More than 2,000 planetary scientists and students will present their findings that provide new insights and a better understanding of the solar system.

Let us know if you're attending LPSC 2024.

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NASA-FlightOpportunities@mail.nasa.gov

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NASA Flight Opportunities Program

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