



Flight Opportunities

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- June 24-27: NSMMS & CRASTE Joint Symposia • Madison, Wisconsin
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- July 30-Aug. 1: ASCEND • Las Vegas, Nevada

Enjoy!

The Flight Opportunities team

Give Feedback on National Space Tech Priorities by May 13

NASA's Space Technology Mission Directorate (STMD) is refining its strategy for **prioritizing technology investments** to evolve into a stronger and more resilient technology base for civil space. Annual input from stakeholders is pivotal to this process and our shared future success.

All U.S. businesses, organizations, agencies, and individuals with a vested interest in space technology are encouraged to **submit feedback on 187**

shortfalls – that is, identified technology areas that require further development to meet future exploration, science, and other mission needs. Responses are due May 13.

NASA's TechPort website provides details about the shortfall, and an **informational webinar recording** offers insight into the strategy, process, and feedback opportunity.

Questions? Contact hq-techport@mail.nasa.gov.

[Learn more about shaping the future of space technology with NASA.](#)



Recent Flights

Testing In-Space Manufacturing Techs and More in Flight

NASA's Flight Opportunities program supported the testing of a variety of technologies in a series of parabolic flights in spring 2024 aboard Zero Gravity Corporation's G-Force One. Researchers collected data for projects that aim to address several technology **shortfalls** across the civil space ecosystem – from advanced manufacturing and entry, descent, and landing technologies to cryogenic fluid management needed for long-duration space missions and more.

Some of these technologies also received support from NASA's **In Space Production Applications, Game Changing Development,** and **Small Business Innovation Research (SBIR)** programs. The spring 2024 parabolic campaigns ran February 26-March 1, March 5-8, and April 14-25.



A research team from Redwire tests the fluidics of a pharmaceutical in-space laboratory aboard Zero Gravity Corporation's G-Force One on March 1, 2024. Credits: Zero Gravity Corporation.

[Read more about the technologies tested on the spring parabolic flights.](#)

Tips for Integrating Your Payload with the Vehicle

During our past [Community of Practice webinars](#), researchers have shared their payload integration tips and tricks. Consider the following:

Use the guidelines from your flight provider: Each flight provider has their own information about how to integrate your technology with their vehicle. For example, your flight provider may provide an interface control document (ICD) that includes information about mechanical, electrical, and data interfaces. When extensive software is involved, there may be a separate software interface document. Be sure to follow your flight provider's guidance and reach out to them with any questions.

Focus on ease of access: Ensure hardware is easily accessible during and after installation on the flight vehicle while also meeting the flight provider's mechanical design requirements.

Fit-check everything beforehand: If possible, send a 3D printed model of your payload or critical payload mechanical interfaces to the flight provider to confirm fit.

More [tips for payload integration](#) are available in our Lessons Learned Library.

[Access and download our entire Lessons Learned Library.](#)



Credits: Astrobotic

Tech Transitions

OSIRIS-REx Research Opportunities and Continued Technology Impact

Earlier this month, NASA's Johnson Space Center released the [OSIRIS-REx sample catalogue](#), enabling scientists worldwide to request samples for their research. The first deadline for proposals is June 25, 2024 — read more on the [OSIRIS-REx blog](#).

The mission team also recently received acknowledgement via the [Robert J. Collier Trophy](#) and the [Robert H. Goddard Memorial Trophy](#).

NASA's Flight Opportunities program is happy to have been part of the team's journey that culminated in the first U.S. mission to deliver an asteroid sample to Earth.

OSIRIS-REx researchers matured their [regolith sampling system](#) through parabolic flight testing. During the flights, they evaluated their design and determined how much simulated asteroid rocks and dust the system could capture in reduced gravity.

[Learn more about accessing flight tests.](#)



Evaluating OSIRIS-REx sampling system in microgravity via Flight Opportunities. Credits: NASA/James Blair



NSMMS & CRASTE Joint Symposia **June 24-27, 2024 • Madison, Wisconsin**

The National Space & Missile Materials Symposium (NSMMS) and Commercial and Government Responsive Access to Space Technology Exchange (CRASTE) will co-locate events for the 12th year to discuss key technology issues related to space, missile, hypersonic systems, and other commercial space topics. Flight Opportunities Deputy Program Manager Greg Peters will present on how to engage with Flight Opportunities and the ways in which the program creatively leverages industry to accelerate the pace of technology development.

Details:

- NASA's Flight Opportunities Program: Increasing the Pace of Space (in the System Architecture Studies track)
 - Thursday, June 27 • 8:05-8:30 a.m. CDT
-

International Space Station Research & Development Conference (ISSRDC) **July 30-August 1, 2024 • Boston, Massachusetts**

Attendees at ISSRDC learn how harness the International Space Station and the unique conditions of space to help solve pressing research and technology development challenges. Technical sessions, panel discussions, and lightning talks will highlight space station research. The conference will explore how academia, industry, and government agencies are advancing fundamental science research, technological innovation, in-space manufacturing, and workforce development to drive commercialization and a sustainable space economy. Join Flight Opportunities team members and others from across NASA at this conference. Stay tuned for more updates!

ASCEND **July 30-August 1, 2024 • Las Vegas, Nevada**

ASCEND attendees from the civil, commercial, and national security space sectors and adjacent industries discuss the opportunities and challenges that come with increased activity in space through technical exchanges, debates, and collaboration. NASA's Flight Opportunities and Small Spacecraft Technology programs will host a panel to discuss how the agency can leverage its relationships with commercial partners and other stakeholders to close technology shortfalls more quickly.

Details:

- Evolving with Industry: Leveraging Nascent Commercial Capabilities to Accelerate Technology Development and Testing
- Thursday, August 1 • 4:30-5:30 p.m. PDT • Forum Ballroom 137

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NASA Flight Opportunities Program

Flight Opportunities is part of NASA's Space Technology Mission Directorate.