



Flight Opportunities

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Greetings from Flight Opportunities

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Enjoy!

The Flight Opportunities team

Opportunities

Reminder: Tech Flights Full Proposals Due May 22

For those who submitted a mandatory abstract for [NASA's Tech Flights solicitation](#), full proposals are due **this Friday, May 22 at 5 p.m. EDT** (please be aware that the cut-off time for submissions is firm).

All proposal materials should be submitted via [NSPIRES](#).

Need help?

- Review the [online FAQ](#), which we continue to update with relevant questions as we receive them.
- Review [slides](#) from our recent online Q&A sessions.
- Review the [NSPIRES help page](#).
- Contact the NSPIRES Help Desk at (202) 479-9376 or nspires-help@nasaprs.com.

We look forward to receiving your proposals.

Flight Opportunities Seeks Additional Flight Providers

NASA's Armstrong Flight Research Center has released a [solicitation](#) for additional [providers](#) to its Flight and Payload Integration Services contract for [Flight Opportunities](#). This contract allows companies to fly research and development technology payloads on suborbital vehicles that provide exposure to space and space-relevant environments. Demand for suborbital testing has increased as researchers develop technologies that will enable NASA's future missions to both the Moon and Mars. As such, NASA is issuing this solicitation to increase the available flight vehicle options for testing.

The contract requirements specify five flight profiles, for which three are currently being solicited:

- Reduced gravity with space environment
- Space environment with free-fall descent
- Controlled descent with controlled vertical landing

Respondents must primarily be a United States entity. Typical platforms will include (but are not limited to) spacecraft, sounding rockets, and entry, descent, and landing testbeds that have a demonstrated capability of meeting one or more of the above flight profiles.

Proposals are due no later than 12 p.m. PDT on June 15, 2020.

Interested respondents are invited to [view the full solicitation online](#). Questions related to this request for proposals (RFP) should be submitted to the contracting officer referenced in the solicitation.

NASA Releases Request for Information (RFI) for Microgravity Flight Services

NASA's Armstrong Flight Research Center is interested in obtaining information to identify potential commercial capabilities for Microgravity Flight Services (MFS) to provide brief periods of near zero, partial gravity, and hyper-gravity conditions, collectively referred to as microgravity, and associated capabilities for payload integration, safety, and airworthiness for various government research, technology development, and training missions. Details of the MFS requirements are available via PDF download on the [RFI listing](#).

Interested offerors/vendors having the required specialized capabilities to meet the requirement should submit a capability statement indicating the ability to perform all aspects of the effort described herein.

[Read the full RFI.](#)

ISS National Lab Issues Request for Proposals to Leverage External Facility for Materials Science and Device Testing

The International Space Station U.S. National Laboratory has announced a Request for Proposals (RFP) in the fields of materials science, device testing, and other research and development areas that require external space exposure. Investigators are encouraged to propose flight concepts that will leverage the **Materials International Space Station Experiment (MISSE) Flight Facility** from **Alpha Space Test and Research Alliance**, an in-orbit platform deployed externally onboard the ISS.

Proposals will be accepted through 5:00 p.m. EDT on May 22, 2020.

For more information, [read the full announcement](#).

Community News

Lending a Hand

We know that many of you in the Flight Opportunities community have contributed skills and expertise to address community needs that have arisen over the past couple of months. For example, a team from the University of Louisville is repurposing equipment from its suborbital flight tests to help aid COVID-19 testing efforts. Responding to the shortage of sample collection kits, Professor George Pantalos, along with student volunteers, repurposed the parabolic flight “glovebox”—a test apparatus including test articles, reservoirs to hold biofluids and documentation cameras—for use as a secondary containment chamber in order to assemble virus test kits. Using a similar method to assemble test units for their flight research, the team has created more than 4,500 test kits to date with plans to continue through the end of the current pandemic. The kits are sent out for community testing efforts before being returned to the university for reverse transcription polymerase chain reaction (RT-PCR) testing for COVID-19.

The team plans to deploy the hardware again in future flight tests for its ongoing **evaluation of using dehydrated red blood cells** for possible medical transfusion therapy in exploration space missions.



University of Louisville students help prepare COVID-19 test kits using “glovebox” hardware repurposed from parabolic flights. Credit: University of Louisville

Flight Opportunities Team Spotlight: Lucas Moxey



One of the newest members of the Flight Opportunities team, Lucas Moxey brings a wealth of technical experience to our group. He is a former operations manager and remote sensing data engineer for the National Oceanic and Atmospheric Administration and previously worked with NASA as an instrumentation engineer for projects including the F-15 Supersonic Research Testbed and the Ascent Abort 2 (AA-2) Orion mission. We talked with Lucas recently about his role with Flight Opportunities and the program initiatives he's working on.

Tell us a bit about your work with Flight Opportunities so far. What are you enjoying most about working with the principal investigators (PIs) on flight testing their technologies?

As a campaign manager, I have the opportunity to see first hand the maturation of cutting edge, game-changing space technologies. The level of innovation and resourcefulness that many of these Flight Opportunities-supported PIs bring into the program by means of their technologies is incredible, and even more so when considering the potential benefits that these might have for NASA missions, as well as for industry and others.

What is your typical involvement in the preparation process with PIs as they get their payloads ready for flight testing?

I seek to communicate with PIs at least once a month in order to keep our communication open and check on the status of the payload preparation and flight schedule. I feel it is important to touch base regularly as they begin preparing their payloads and throughout the process so that we can best support them. In addition, campaign managers are typically on site for the flights themselves.

What advice do you give PIs to help them be successful?

With regard to pre-flight recommendations, I think that avoiding last-minute untested hardware, software configuration or procedural changes prior to or during the test flight is very important. And in the event that last-minute changes are absolutely necessary, I recommend they ensure a thorough and rigorous calibration/validation/operational checkout is implemented prior to flight.

Aside from campaign management, what other activities are you involved with?

Quite a few new initiatives, actually. I'm currently working on ways to improve, expedite, and streamline our program's overall funding processes for the future. And I'm also working alongside the Flight Opportunities technology team members to help identify and pursue opportunities for partnerships and collaborations between our program and both NASA and non-NASA technology development programs. In addition, I'm conducting a payload performance analysis of previous flights that will give us valuable data about lessons learned and recommendations we can provide to PIs to help them be even more successful with future flight tests.

Mark Your Calendars for Upcoming Virtual Events

- **Commercial and Government Responsive Access to Space Technology Exchange (CRASTE) 2020:** June 22-25 (sessions offered virtually)
- **ISS R&D Conference:** August 3-6 (sessions offered virtually)

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Have ideas or feedback for the Flight Opportunities newsletter?

Drop us a line at:

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NASA Flight Opportunities Program

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