



# Flight Opportunities

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## In This Issue

### News:

- Zero Gravity Corporation Receives NASA IDIQ Contract

### Community of Practice:

- October Webinar: An Open Conversation About Suborbital Flight Testing
- Lessons From the Launchpad: Test Your Payload Prior to Delivery

### Opportunities:

- Educators and Students: Join us for the TechRise Virtual Field Trip September 24
- NASA Tech Flights: Invitations for full proposals have been sent

### Events:

- ASGSR 2021 Meeting: November 3-6
- ASCEND 2021: November 8-17

Enjoy!

The Flight Opportunities team



Zero Gravity Corporation's G-FORCE ONE parabolic aircraft at Orlando Sanford International Airport in Florida.  
Credit: Zero Gravity Corporation

## Zero Gravity Corporation Receives NASA IDIQ Contract

NASA has awarded an Indefinite Delivery Indefinite Quantity (IDIQ) contract to Zero Gravity Corporation (ZERO-G) for flight and payload integration services. IDIQ-contracted companies can provide flight services to NASA internal research payloads for the purpose of technology testing and demonstration (see details below). ZERO-G also continues to provide flight services to many external researchers awarded funding through the Flight Opportunities Tech Flights solicitation.

### ***How NASA Researchers Can Apply for Testing Payloads on Suborbital Flights***

**Open calls for NASA-funded research** enable internal NASA personnel to request support for suborbital flight testing with NASA IDIQ-contracted U.S. **commercial flight providers**. These open calls are ongoing, and internal NASA researchers may request a flight at any time, pending availability of flights. **Contact Flight Opportunities** to request more information.

## Community of Practice

### Join us for the October Community of Practice Webinar

***An Open Conversation About Suborbital Flight Testing***  
**Wednesday, October 6, 2021**  
**10 a.m. PDT**

The Flight Opportunities Community of Practice initiative is designed to capture, organize, and communicate lessons learned by suborbital researchers. In this month's session, we'll be opening up the conversation so that our audience can participate with live questions and comments to an expert panel of Flight



Opportunities-supported investigators. We encourage the community to join this interactive discussion with their peers to engage in dialog about important flight test topics including:

- Designing a successful experiment
- Building a robust payload
- Pre-launch preparation
- On-site flight logistics

*Mark your calendar for this engaging conversation and keep an eye on your inbox for attendance details in the coming weeks. To learn more about this initiative and to view the recordings of previous webinars, please visit the [Community of Practice page](#) on our website.*

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## Lessons From the Launchpad

### **Test Your Payload Prior to Delivery**

*Flight testing is designed to help you understand what works – and what doesn't – with your technology and payload. But pre-testing your payload before flight will help ensure that anomalies or surprises could not have been foreseen in the lab. It is critical to test all of the known factors so that the flight can be used for testing the unknowns. Important pre-testing steps include:*



**Rehearse payload activation procedures** prior to launch in order to have a realistic time estimate and to observe potential delays and anomalies. Adjust the timeline as needed and prepare for any impact that individual changes may have on the full experiment. Make sure any human-in-the-loop activation steps are well understood by the team members involved.

**Conduct comprehensive and representative integration tests** prior to flight, including electromagnetic interference testing, in order to identify potential radio frequency impacts on payload systems.

**Test the payload in the most operationally realistic manner possible** by means of a thorough environmental test (e.g., temperature, vibration) in order to assess potential impacts on electrical/mechanical actuation systems.

*Do you have other pre-delivery payload testing tips to share with the Flight Opportunities community? [Email them to the newsletter editor](#) for possible publication in a future issue.*



## **Educators and Students: Join us for the TechRise Virtual Field Trip Sept. 24**

Students can drop in to watch any portion of this four-hour virtual event, which will feature NASA astronaut Reid Wiseman and Dr. Raven the Science Maven. Students can also participate in a moderated Q&A chat with NASA experts, view demonstrations of sample NASA TechRise experiment ideas, and explore a virtual expo hall with flight provider representatives from Blue Origin, Raven Aerostar, and UP Aerospace.

### **Attend the Virtual Field Trip**

**September 24, 2021**

**9 a.m. - 1 p.m. PDT**

[Register here](#) (Click on “Events” at the top of the page.)

Visit the [TechRise Student Challenge website](#) for full details and to get started on your entry. Entries are due November 3, 2021.

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## **2021 Tech Flights Full Proposal Invitations Sent**

Thank you to all who submitted a mandatory preliminary proposal for this year's [Tech Flights solicitation](#). Notifications have been sent to all applicants.



## Mark Your Calendars

### **American Society for Gravitational and Space Research (ASGSR) 2021 Meeting: November 3-6, 2021 - Baltimore, Maryland**

Join Flight Opportunities personnel for a session focused on lessons learned and best practices for suborbital flight testing. Stay tuned for more details.

### **ASCEND 2021**

#### **November 15-17, 2021 - Las Vegas, Washington, D.C., and online**

Join Flight Opportunities Program Manager John Kelly for the virtual collaborative session “Expanding Suborbital Testing: NASA Flight Opportunities and Commercial Partners Advance New Capabilities” scheduled for November 8, 2021 at 11:45 a.m. PDT. (Date and time subject to change; refer to the [ASCEND program](#) for up-to-date session information.)

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Have ideas or feedback for the Flight Opportunities newsletter?

Drop us a line at:

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STAY CONNECTED:



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