



Flight Opportunities

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Enjoy!

The Flight Opportunities team

Recent Flights

Aeroseismometer Technologies Tested on Recent Balloon Flights

Future detection of seismic activity on Venus is the goal of four aeroseismometers—three from Sandia National Laboratory and one from NASA's Jet Propulsion Laboratory (JPL)—flight tested on balloons from Raven Aerostar earlier this month. The instruments were rigged to Raven's Cyclone balloon systems, which flew at approximately 20 km altitude and 30 km horizontal range from ground chemical explosions to test seismic detection efficacy.

Flight Opportunities supported this **Sandia-led aeroseismometer** test as part of a Venus balloon-based seismology effort led by JPL. The recent flight tests will help Sandia and JPL scientists advance the state of the art for the use of aeroseismometers for potential future infrasound investigations on Venus as well as other planetary bodies. Such studies could reveal whether these planets exhibit similar seismic shifts to the earthquakes we experience on our home planet, and also may uncover valuable information about their interior structures.



Flight Opportunities Campaign Manager Paul De León provides remote support from his home office for Sandia National Laboratory and Raven Aerostar during the aeroseismometer flight test on July 10, 2020.



In a flight test over Lemitar, New Mexico, a balloon from Raven Aerostar carries technology from Sandia National Laboratory and NASA's Jet Propulsion Laboratory that could be used to aid seismology studies on Venus and other planets. Credit: Sandia National Laboratory

New NASA Lunar Tech Funding Opportunity for U.S. Universities

A new lunar surface technology research (LuSTR) opportunity from NASA's Space Technology Mission Directorate seeks U.S. universities' ideas to advance technologies needed for sustainable operations on the Moon. Via the [solicitation](#), NASA will fund lunar technology development and accelerate the readiness of systems and components.

LuSTR targets technology areas to support NASA's [Lunar Surface Innovation Initiative](#) and the [Artemis](#) program. In its inaugural year, LuSTR seeks proposals relating to in-situ resource utilization and sustainable power systems. Six topics, relating to these two lunar capabilities, describe the types of proposals NASA is requesting.

To learn more, read the [full NASA web feature](#).

NASA Advances Roadmap Toward Solicitation for Lunar Surface Investigations

NASA's Science Mission Directorate has published a [community announcement](#) on [NSPIRES](#) with a roadmap toward its Payloads and Research Investigations on the Surface of the Moon (PRISM) solicitation. PRISM will solicit development and flight of science-driven suites of instruments and technology demonstration payloads that will be flown on [Commercial Lunar Payload Services](#) (CLPS) landers. The Lunar Discovery and Exploration Program (LDEP) anticipates flying two CLPS landers to the lunar surface each year in 2021 and beyond. The PRISM solicitation will call for science investigations enabled by the provision of a suite of instruments to be delivered to predetermined lunar landing sites.

For more information, including anticipated timeframes for the solicitation release and proposal deadlines, read the full [community announcement](#).

News

Watch Jim Reuter's Free Webinar for AIAA

Jim Reuter, associate administrator for NASA's Space Technology Mission Directorate (STMD), presented a webinar for the American Institute of Aeronautics and Astronautics (AIAA) on June 29, 2020. In the free session, Reuter shares information about how STMD is enabling future NASA and commercial space missions, and offers insight about opportunities for involvement.

[Register here to view the pre-recorded webinar.](#)



Meet the Newest Member of the Technology Team: Gregory Peters

With a background as a geologist and entrepreneur, Gregory (“Greg”) Peters brings a wealth of technical experience to the Flight Opportunities team, along with a business sensibility familiar to organizations navigating the commercial space industry. We recently sat down with Greg to hear more about his background, what brought him to Flight Opportunities, and the projects he’s most looking forward to working on.

Tell us a bit about your career so far with NASA and with industry.

I worked at NASA’s Jet Propulsion Laboratory (JPL) from 2001 to 2008 in the planetary geosciences group, doing a lot of fascinating research with dirt and rocks. Very fun stuff. And then I spent about four years working for Firestar Technologies, a small company that developed advanced propulsion systems. So that was quite a leap from where I started at JPL, but certainly very valuable learning.

Then I returned to JPL in 2012 to work as a sampling scientist for the Mars Science Laboratory mission. I also served as what’s called a cognizant engineer for the geo analogs project for the Mars 2020 mission. Our team developed Mars rocks and regolith analogs to test the Mars 2020 sampling system. So, I’ve gone from rocks to rockets and back again twice now, and it’s been an interesting ride so far.

And what motivated you to transition to Flight Opportunities?

I really have been inspired by what the program is doing. I think Flight Opportunities is very important in this new exploration landscape that we’re encountering with the growth of the commercial space market. I also really like the program’s philosophy toward technology development, where each innovation is a seed loaded with potential and Flight Opportunities provides unique methods for cultivating those seeds. Traditionally it’s been difficult to get flight heritage for new technologies, and so this program with its structure that allows for a bit more risk is incredibly valuable in yielding higher rewards.

I understand you’re still getting your sea legs (or space legs as it were), having just started with the program in March. What projects are you most looking forward to?

I’m currently shadowing the campaign managers and will eventually be spending time on those activities to help researchers be successful with their flights. And I’m also spending a lot of time working with the tech team. As a geoscientist, I’m of course very interested in helping work with Flight Opportunities-supported technologies that deal with regolith, the geo properties of lunar soils, surface sample collection, that sort of thing. Dirt and landing mechanisms don’t always get along, so learning how to operate in those dusty environments is a really important aspect of developing technologies for planetary surfaces. It’s exciting that the program is positioned to help bring some of that innovation forward to NASA missions.

A personal or professional accomplishment that you're proud of?

The thing that I am most proud of in my professional life is that I came up with the concept of rasp sampling, which applies a spring-loaded rasp to the bottom of a scoop to collect a regolith sample. I built and tested the prototype in the lab, and then a flight version of the system was built by Honeybee Robotics and used on the Mars Phoenix mission to provide the first historical sample of water ice from another world. **And it worked!**

"I really like the program's philosophy toward technology development, where each innovation is a seed loaded with potential and Flight Opportunities provides unique methods for cultivating those seeds."

—Greg Peters

Events

Learn About NASA's PACE Initiative at the Small Satellite Conference August 1-6, 2020

John Kelly, program manager for Flight Opportunities, and Anh Nguyen, project manager with NASA's **Small Spacecraft Technology Program** (SSTP), will present information about NASA's Payload Accelerator for CubeSat Endeavors initiative, known as PACE. PACE leverages suborbital flight tests supported by Flight Opportunities to prove and de-risk technologies that have been selected for orbital missions as part of NASA's CubeSat Launch Initiative through SSTP. Register for the conference to learn more.

If you are interested in learning more about activities related to technologies for small spacecraft, consider **subscribing** to receive news from the **Small Spacecraft Systems Virtual Institute**.

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