NASA Small Spacecraft Systems Virtual Institute
A Quarterly Brief of NASA's Small Spacecraft Community Resources

In This Issue - May 2022

Now Open: NASA TechFlights 2022
Mandatory Preliminary Proposals Due June 2

The NASA 2022 TechFlights solicitation is now open! This year, TechFlights offers up to $750,000 per awardee toresearchers from U.S.-based industry, academia,and private research institutions to rapidly test promising technologies on commercial flight vehicles. In addition to flight testing with commercial suborbital flight providers, this year Flight Opportunities is joined by NASA's Small Spacecraft Technology program, which will allow researchers to propose flight tests of payloads hosted on commercial orbital platforms. Awardees will receive a grant or cooperative agreement to purchase flights directly from any eligible U.S. commercial flight provider that best suits their technology demonstration. Read the full NASA announcement.

Learn More and Submit a Proposal

- Read the full solicitation on NSPIRES
- Download the infographic with key facts about the 2022 solicitation
- Mandatory preliminary proposals due: June 2, 2022
- Full proposals (by invitation) due: August 29, 2022
- Subscribe to the Flight Opportunities newsletter for reminders and updates

NASA Solicitation Due Date Summary

Due Dates	Announcement for Partnership Proposals (AFPP) to Advance Tipping Point Technologies

May 31 July 28	Invitation for Final Proposal Submission Final Proposals Due
May 31 July 28	Space Technology Announcement of Collaboration Opportunity Invitation for Final Proposal Submission Final Proposals Due

See solicitations for complete schedule of due dates and times.

	Technology Advancement Utilizing Suborbital and Orbital Flight Opportunities "TechFlights"
June 2 July 11 Aug 29	Mandatory Preliminary Proposals Due Preliminary Proposal Downselect Date Full Proposals Due

See solicitation for complete schedule of due dates and times.

	Third Stand Alone Mission of Opportunity Notice SALMON-3 - Earth Venture Instrument - 6
June 2 Sept 1	EVI6 Mandatory NOIs Due Proposal Due

See solicitation for complete schedule of due dates and times.

Research Opportunities in Space and Earth Sciences – 2022 (ROSES-2022) Programs listed below offer CubeSat / SmallSat elements.

May 24	• B.4 Heliophysics Guest Investigators - HGIO22 Step-1 Proposals Due May 24
June 22	• B.11 Heliophysics Flight Opportunities for Science and Technology - Full Proposal Due June 22
Dec 15	• D.3 Astrophysics Research and Analysis Program - Closes December 15
Mar 29, '23	• B.12 Heliophysics Data Environment Enhancements - HDEE22 last day to submit proposals to ROSES 2022
Jan 27, '23	• D.13 Astrophysics Pioneers - Mandatory Notice of Intent Due January 27, 2023

See solicitation for complete schedule of due dates and times.

Small Spacecraft / CubeSat Events

June 7-9	24th Annual Small Payload Ride Share Symposium – U.S. Air Force Academy, CO (in-person and virtual)
June 8	NASA SmallSat Technology Partnerships Technology Exposition (virtual)

June 15	Low-Cost Mission Concepts for Mars Exploration – Small Spacecraft Systems Virtual Institute Community of Practice (virtual)
July 16-24	COSPAR 2022 44th Scientific Assembly – Megaron Athens International Conference Center, Athens, Greece (In-person and virtual)
August 6-11	Small Satellite Conference – Utah State University, Logan, Utah (In-person)
April 17-21, '23	The 5th COSPAR Symposium on Space Science with Small Satellites – Nanyang Technological University, Singapore

Leveraging Commercial Space for Earth and Ocean Remote Sensing - A Study Report

The study provides an independent assessment of the feasibility and implications of creating and exploiting partnerships for developing, deploying, and operating a system of satellites and supporting infrastructure capable of sensing ocean, coastal, atmospheric, and hydrologic data of sufficient scientific quality to enable prediction models and to support near real time applications of national interest. It will identify and describe, to the extent possible, promising options for such a system.

This report is released by
The National Academies of Sciences, Engineering, and Medicine

Access the Report and Additional Resources

New Space Mission Design Tool Listed

F Prime Flight Software Product Line

F Prime is an open-source flight software product line developed at JPL and tailored to small-scale systems such as CubeSats, SmallSats, and instruments. F Prime comprises several elements: an architectural approach that decomposes flight software into discrete components with well-defined interfaces that communicate over ports; a C++ framework providing core capabilities such as message queues and an OS abstraction layer; a suite of tools for specifying components and their connections and automatically generating a partial implementation from the specification; a growing collection of generic components for basic features such as command dispatch, event logging, and memory management that can be incorporated without modification into new flight software projects; and a suite of tools for testing flight software at the unit and integration levels.

Visit the Space Mission Design Tools Page to Learn More

Special Notice - New US National Science Foundation Initiative

Regional Innovation Engines

A bold new initiative of the US National Science Foundation, the Regional Innovation Engines (NSF Engines) program catalyzes innovation ecosystems across the United States to advance critical technologies, address societal challenges, nurture diverse talent, and promote economic growth and job creation. With the potential for each Engine to receive up to $160 million over 10 years, the program supports the development of regional coalitions, spanning academia, industry, nonprofits, government, and communities of practice, to engage in use-inspired research, translation of research results to society, and workforce development. The NSF Engines

program aims to unlock the Nation's geography of innovation, unleashing a new era of innovation and competitiveness for the US.

The NSF Engines program is seeking regional teams of industry, academia, government, nonprofits, civil society, and communities of practice to catalyze and foster innovation ecosystems across the U.S. to:

- Advance critical technologies
- Address societal challenges
- Promote and stimulate economic growth and job creation
- Spur sustainable, regional innovation and nurture diverse talent

Attend an Upcoming Informational Session or Virtual Roadshow

More Opportunities to Engage

NASA Solicitations | Conferences & Events | Information Search | Webinar Series | NASA Resources

Around the Agency

Highlights and links to NASA centers engaged in small spacecraft activities

Image Credit: Spaceflight Inc.

Launch Window

NASA Launch Portal

Looking for a ride? NASA's Launch Portal is a resource to provide SmallSat/CubeSat developers an opportunity to find potential secondary launch opportunities on flights that are support upcoming NASA SmallSat/CubeSat missions.

Recent NASA Launches

Wondering what NASA has launched lately? Visit our listing of recently launched and deployed small spacecraft. Each mission highlight offers information on launch date and vehicle, orbit, deployment status and mission description.

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