NASA Participation Guide SmallSat2022

smallsat.org

National Aeronautics and Space Administration

This compendium of Small Satellite Conference events is limited to those sponsored by NASA or that include NASA participation. Visit the SmallSat 2022 website for the complete list of conference events and to confirm scheduled times and locations.

Side Meetings

https://smallsat.org/extras/side-meetings

MONDAY, AUGUST 8

		LOCATION
9:00AM MT	**Introduction to Radiation Effects: Enabling Longer Duration and Harsher Environment SmallSat Missions** — *NASA Goddard Space Flight Center*	OM 121
10:00AM MT	**NASA Town Hall** — *NASA Small Spacecraft Systems Virtual Institute*	ESCL 130 (Auditorium)
11:30AM MT	**NASA JPL F Prime Open Source Flight Software Product Line** — *NASA Jet Propulsion Laboratory*	DBH Presidents Hall

TUESDAY, AUGUST 9

9:45AM MT	**Ask Me Anything Panel #1** — *NASA Small Spacecraft Systems Virtual Institute*	ESCL 130 (Auditorium)
12:45PM MT	**Ask Me Anything Panel #2** — *NASA Space Technology Mission Directorate*	ESCL 130 (Auditorium)

WEDNESDAY, AUGUST 10

9:45AM MT	**Ask Me Anything Panel #3** — *NASA Science Mission Directorate*	ESCL 130 (Auditorium)

Weekend Technical Sessions

LOCATION
Daines Concert Hall,
Fine Arts Center,
Utah State University

https://smallsat.org/conference/technical-sessions

SATURDAY, AUGUST 6

ADVANCED CONCEPTS - RESEARCH & ACADEMIA I	**Autonomous System-level Fault Diagnosis in Satellites Using Housekeeping Telemetry** — *NASA Goddard Space Flight Center*	8:45AM MT
ADVANCED CONCEPTS - RESEARCH & ACADEMIA II	**Small Satellite-sized Hypersonic Inflatable Aerodynamic Decelerators for Interplanetary Science Missions** — *NASA Langley Research Center*	4:15PM MT
	Flight Envelope Assessment of SmallSat Aerocapture Trajectories at Venus and Mars — *NASA Langley Research Center;*	5:30PM MT

SUNDAY, AUGUST 7

COORDINATING SUCCESSFUL EDUCATIONAL PROGRAMS	**Small Satellite Reliability Initiative (SSRI) Knowledge Base Tool: Use Case Review and Future Functionality and Content Direction** — *NASA Ames Research Center, NASA Goddard Space Flight Center*	9:00AM MT
SCIENCE/MISSION PAYLOADS - RESEARCH & ACADEMIA II	**Adapting on Orbit: Conclusions of the STP-H6 Spacecraft Supercomputing for Image and Video Processing Experiment** — *NASA Goddard Space Flight Center*	2:00PM MT
NEXT ON THE PAD - RESEARCH & ACADEMIA	**Snooping Around: Automated Observation Planning for the Signals of Opportunity P-Band Investigation (SNOOPI)** — *NASA Goddard Space Flight Center*	5:00PM MT

Weekday Technical Sessions

LOCATION
Taggart Student Center,
Utah State University

https://smallsat.org/conference/technical-sessions

MONDAY, AUGUST 8

BEYOND LEO	**The NASA Solar Cruiser Mission – Solar Sail Propulsion Enabling Heliophysics Missions** — *NASA Marshall Space Flight Center, NASA Goddard Space Flight Center*	**5:00PM MT**
	GTOSAT: Radiation Belt Dynamics from the Inside — *NASA Goddard Space Flight Center*	**5:15PM MT**
	Integration and Test of the Lunar Flashlight Spacecraft — *NASA Jet Propulsion Laboratory*	**Alternate**

TUESDAY, AUGUST 9

SCIENCE/MISSION PAYLOADS	**Small Spacecraft Sample Return Mission Concept to Support Gateway and Lunar Science** — *NASA Ames Research Center, NASA Kennedy Space Center*	**8:45AM MT**
	The Electrojet Zeeman Imaging Explorer (EZIE) Mission and the Microwave Electrojet Magnetogram (MEM) Radiometer Instrument — *NASA Jet Propulsion Laboratory*	**9:00AM MT**
	Science Conops for Application of Sport Mission Data to Study Large (~1000km) Ionospheric Plasma Depletions — *NASA Marshall Space Flight Center; NASA Goddard Space Flight Center*	**9:15AM MT**
	Enabling Big Science in a Small Satellite - The Global L-band Observatory for Water Cycle Studies (Glows) Mission — *NASA Goddard Space Flight Center*	**9:30AM MT**
FUTURE DIRECTIONS	**Cislunar Small Satellites and the Artemis Program** — *NASA Headquarters*	**11:05AM MT**
	Safe Space Conduct: NASA Best Practices for SmallSats — *NASA Headquarters*	**11:45AM MT**

WEDNESDAY, AUGUST 10

ADVANCED TECHNOLOGIES III	**Disksat: Demonstration Mission for a Two-dimensional Satellite Architecture** — *NASA Space Technology Mission Directorate*	**10:45AM MT**
	Developing Lunar Flashlight and Near Earth Asteroid Scout Flight Software Concurrently Using Open Source F Prime Flight Software Framework — *NASA Jet Propulsion Laboratory*	**11:15AM MT**
RECENT LAUNCHES	**Near Earth Asteroid Scout - Mission Update** — *NASA Marshall Space Flight Center, NASA Jet Propulsion Laboratory*	**2:00PM MT**
PROPULSION	**Development of Ascent Propellant Thrusters and Propulsion Systems** — *NASA Marshall Space Flight Center*	**Alternate**

THURSDAY, AUGUST 11

COMMUNICATIONS	**Performance Evaluation of Silicon Mach-Zehnder Modulator After Cosmic Radiation to Enable Small Satellite Laser Communication** — *NASA Goddard Space Flight Center*	**10:45AM MT**
	Cosmic Radiation Reduced Photo-thermal Dispersion in Silicon Micro-ring Resonators — *NASA Goddard Space Flight Center*	**11:15AM MT**

Swifty Sessions

LOCATION
Fieldhouse Stage /
NASA Hyperwall

https://smallsat.org/conference/swifties

Swifty Sessions 2 — WEDNESDAY, AUGUST 10 — 9:45AM - 10:45AM MT

Biosentinel: to the Moon or Beyond? — *NASA Ames Research Center*

Iris Transponder Enhancements for Deep Space and Lunar Operations — *NASA Jet Propulsion Laboratory*

Swifty Sessions 3 — THURSDAY, AUGUST 11 — 9:45AM - 10:45AM MT

Adaptive: Visualization Tool for the Future NASA Geodynamics Constellation Mission — *NASA Ames Research Center*

Mission Operations, Cubed: NASA Marshall Operations Support for SmallSats — *NASA Marshall Space Flight Center*

Attitude Determination and Control System Design with Orbit Considerations for the GTOSat Mission
— *NASA Wallops Flight Facility, NASA Goddard Space Flight Center, NASA Katherine Johnson IV&V Facility*

NASA Short Talks

LOCATION
Fieldhouse Stage /
NASA Hyperwall

https://smallsat.org/conference/nasa-short-talks

TUESDAY, AUGUST 9 — 3:30PM - 4:30PM MT

NASA Space Technology Mission Directorate Envisioned Future Capabilities for SmallSats
— *NASA Small Spacecraft Technology Program, NASA Headquarters*

NASA Innovative Science Missions — *NASA Science Mission Directorate, NASA Headquarters*

Status of Small Satellite Developments at the Jet Propulsion Laboratory — *NASA Jet Propulsion Laboratory, California Institute of Technology*

CubeSat Launch Initiative Update - Lessons Learned — *NASA Launch Services Program, NASA Kennedy Space Center*

Flying with NASA as a Rideshare Payload — *NASA Launch Services Program, NASA Kennedy Space Center*

The SmallSat Tech Resource You Didn't Know You Needed — *NASA Marshall Space Flight Center*

Ten CubeSats Loose in Deep Space: NASA's Artemis I and Its Smallsat Payloads — *NASA Marshall Space Flight Center*

Technology Educational Satellite-13: The First Experimental Artificial Intelligence/Machine Learning (AI/ML) Nanosat with a Neuromorphic Processor — *NASA Ames Research Center*

WEDNESDAY, AUGUST 10 — 3:30PM - 4:30PM MT

NASA Small Spacecraft Systems Virtual Institute - Overview — *Small Spacecraft Systems Virtual Institute, NASA Ames Research Center*

NASA TechRise Student Challenge — *Flight Opportunities Program, NASA Armstrong Flight Research Center*

Starling Swarm Technology Demonstration: Mission Objectives and Preparations for Launch
— *NASA Small Spacecraft Technology Program, NASA Ames Research Center*

Celebrating Success, Learning, and Pioneering New SmallSat Architectures
— *Small Satellite and Special Projects Office, NASA Wallops Flight Facility*

Jet Propulsion Laboratory Deep Space SmallSat Capabilities — *NASA Jet Propulsion Laboratory, California Institute of Technology*

Status of NASA Small Spacecraft Technology Program Investments in Laser Communications
— *NASA Small Spacecraft Technology Program, NASA Ames Research Center*

NASA Advanced Multi-Mission Operations System (AMMOS) Mission Control Products
— *NASA Jet Propulsion Laboratory, California Institute of Technology*

F Prime Flight Software and Embedded Systems Framework — *NASA Jet Propulsion Laboratory, California Institute of Technology*

Payload Accelerator for CubeSat Endeavors-2 and Beyond — *NASA Small Spacecraft Technology Program, NASA Ames Research Center*

Poster Sessions

https://smallsat.org/conference/posters

WEEKEND POSTER SESSION 2 — SUNDAY, AUGUST 7

9:00am to 5:00pm with dedicated viewing: 10:15am to 11:00am & 3:30pm to 4:15pm

CubeSat Radiation Hardness Assurance Beyond Total Dose: Evaluating Single Event Effects
— *NASA Goddard Space Flight Center*

Evaluating Network Performance of Containerized Test Framework for Distributed Space Systems
— *NASA Ames Research Center*

WEEKDAY POSTER SESSION 1 — TUESDAY, AUGUST 9

9:00am to 12:00pm with dedicated viewing: 9:45am to 10:45am

Learning From Past Missions for Today's Case Studies — *NASA Ames Research Center*

WEEKDAY POSTER SESSION 3 — WEDNESDAY, AUGUST 10

9:00am to 12:00pm with dedicated viewing: 9:45am to 10:45am

High Performance Compact Computing Systems Using SpaceVNX+ and HPSC — *NASA Jet Propulsion Laboratory*

WEEKDAY POSTER SESSION 4 — WEDNESDAY, AUGUST 10

1:00pm to 5:00pm with dedicated viewing: 3:30pm to 4:30pm

Flight and Direct to Earth/Space Relay Communication System Architecture for GSFC CubeSat Missions
— *NASA Goddard Space Flight Center*

WEEKDAY POSTER SESSION 5 — THURSDAY, AUGUST 11

9:00am to 12:00pm with dedicated viewing: 9:45am to 10:45am

Pandora SmallSat Data Simulation and Target Selection — *NASA Goddard Space Flight Center*

NASA Exhibits

LOCATION
Taggart Student Center, Juniper Lounge

https://smallsat.org/exhibitors/exhibit-hall

Exhibit Hours

All exhibits are open:

MON 11AM - 5PM
TUES 9AM - 5PM
WED 9AM - 5PM
THUR 9 AM -12PM

Booth #	NASA Organization
Booth 74	NASA Ames Research Center Engineering
Booth 75	NASA Goddard Space Flight Center / Wallops Flight Facility
Booth 76	NASA Advanced Multi-Mission Operations System (AMMOS)
Booth 77	NASA Space Technology Mission Directorate
Booth 78	NASA Marshall Space Flight Center
Booth 79	NASA Jet Propulsion Laboratory
Booth 80	NASA Kennedy Space Center – Launch Services Program
Booth 81	NASA Science Mission Directorate

NASA Hyperwall

LOCATION
Fieldhouse Stage

All times outside of NASA Short Talks and Swifties	**NASA Small Spacecraft Programming**