# 2026 PLANETARY SCIENCE TECHNOLOGY VIRTUAL WORKSHOP

**NASA PLANETARY EXPLORATION SCIENCE TECHNOLOGY OFFICE**

## DAY ONE | TUESDAY, DECEMBER 1, 2026

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|---|---|
| **WELCOME · 10:00 am – 10:10 am** | |
| **Erica Montbach**<br>NASA Planetary Exploration Science Technology Office | *Welcome and opening remarks* |
| **KEYNOTES · 10:10 am – 11:25 am** | |
| **Lindsay Hayes**<br>NASA Planetary Science Division | *Director, Planetary Science Division, Science Mission Directorate* |
| Q&A | |
| **Carolyn Mercer**<br>NASA Science Mission Directorate | *Chief Technologist, Science Mission Directorate* |
| Q&A | |
| **Erica Montbach**<br>NASA Planetary Exploration Science Technology Office | *Mars Exploration Program Technology Development, Science Mission Directorate* |
| Q&A | |
| **COMPOSITION & SPECTROSCOPY · 11:25 am – 12:45 pm** | |
| **David Blake**<br>Adjunct Professor / University of Hawai'i / Hawai'i Institute of Geophysics and Planetology | *In-Situ X-ray Instrumentation for Mineral Identification and Elemental Imaging* |
| **Kurt Retherford**<br>Southwest Research Institute | *Lunar Raman Deep Ultraviolet Visible Spectrograph (DUVIS) Concept* |
| **Julie Brisset**<br>University of Central Florida | *Mid-IR absorption made easy: detection of minerals and organics in-situ* |
| **Roger Wiens**<br>Purdue University | *New Evolving LIBS Capabilities for Ultralight Instruments for Geochemical and Icy Regolith Characterizations* |
| **Rebecca Schindhelm**<br>BAE Systems | *A Selective High-Resolution Metamaterial Filter for Infrared Spectroscopy* |
| **Ryan Blasé**<br>Southwest Research Institute | *Automated Lander Planetary Analog Composition Analyzer (ALPACA)* |
| Q&A | |
| **POSTER SESSION & LUNCH · 12:45 pm – 1:30 pm** | |
| **Room 1 · Stone & Neveu**<br>**Room 2 · Renno & Ono** | Bill Stone (Stone Aerospace, Inc.), Marc Neveu (NASA Goddard Space Flight Center)<br>Nilton O. Renno (University of Michigan), Hiro Ono (Georgia Institute of Technology) |
| **SAMPLING · 1:30 pm – 2:30 pm** | |
| **Kate Craft**<br>JHU Applied Physics Lab | *Search-for-Life Instrumentation Study* |
| **Anna Butterworth**<br>UC Berkeley | *Enceladus Plume Capture* |
| **Kathryn Bywaters**<br>Honeybee Robotics | *Instrumentation for In-Situ Surface and Subsurface Lunar Science* |
| **Tony Ricco**<br>NASA Ames Research Center | *Aqueous and Organic-Based Sample Processing Systems: Enabling Search-for-Life and Habitability Assessments* |
| Q&A | |
| BREAK · 2:30 pm – 2:40 pm | |
| **MOBILITY & AUTONOMY · 2:40 pm – 4:00 pm** | |
| **Ryan Watkins**<br>Jet Propulsion Laboratory | *GenAI for Spacecraft Design and Development: A PESTO Study* |
| **Hari Nayar**<br>Jet Propulsion Laboratory / California Institute of Technology | *ERNEST Autonomous Mobility with Reinforcement Learning* |
| **Nisar Ahmed**<br>Dept. Aerospace Engineering Sciences / University of Colorado Boulder | *Active Inference Meets Formal Methods: Exploration with High-latency, Low-bandwidth Communication* |
| **Yashwanth Kumar Nakka**<br>Georgia Institute of Technology | *Collaborative Autonomy for Planetary Exploration* |
| **Justin Lawrence**<br>Honeybee Robotics / Blue Origin | *Commercial Rovers for Planetary Science: From CLPS Lunar Missions to Mars* |
| **Gecheng Zha**<br>CoFlow Jet Aerospace, Inc, | *Mars Aerial and Ground Global Intelligent Explorer (MAGGIE)* |
| Q&A | |
| BREAK · 4:00 pm – 4:10 pm | |
| **MAPPING · 4:10 pm – 5:20 pm** | |
| **Daniel Cremons**<br>NASA Goddard Space Flight Center | *Demonstration of a Tunable Infrared Spectroscopic Imaging Lidar (TINSIL) for 4D Volatile Mapping at Kilometer Ranges* |
| **Anup Katake**<br>Jet Propulsion Laboratory | *ELSA — Exploration Lidar Sensor Assembly* |
| **Sean Gulick**<br>University of Texas at Austin | *Radar Mapping on the Moon: Adding the Third Dimension to Lunar Prospecting* |
| **Erwan Mazarico**<br>NASA Goddard Space Flight Center | *Swath-Mapping Lidar for Lunar Exploration and Science (SMiLES)* |
| **Paul Lucey**<br>University of Hawaii | *SpIRRL: Spectroscopic Infrared Reflectance LIDAR* |
| Q&A | |
| **CLOSE OF DAY ONE · 5:20 pm – 5:30 pm** | |

**All times are Eastern.** Questions to HQ-PESTO@mail.nasa.gov.

# 2026 PLANETARY SCIENCE TECHNOLOGY VIRTUAL WORKSHOP

**NASA PLANETARY EXPLORATION SCIENCE TECHNOLOGY OFFICE**

## DAY TWO | WEDNESDAY, DECEMBER 2, 2026

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|---|---|
| **WELCOME · 10:00 am – 10:10 am** | |
| **Michael Lienhard**<br>NASA Planetary Exploration Science Technology Office | *Welcome and opening remarks* |
| **KEYNOTES · 10:10 am – 11:25 am** | |
| **Audrey Morris Eckart**<br>NASA Human Spaceflight Mission Directorate | *Moon Base: Strategic Investments to Close Architecture Gaps* |
| Q&A | |
| **Maxwell Briggs**<br>NASA Innovation Program Office | *RTMD Innovation Program Office Overview* |
| Q&A | |
| **Brad Bailey**<br>NASA Exploration Science Strategy Integration Office | *Exploration Science Strategy and Integration Office, Science Mission Directorate* |
| Q&A | |
| **COMPOSITION & SPECTROSCOPY · 11:25 am – 12:45 pm** | |
| **Goutam Chattopadhyay**<br>NASA Jet Propulsion Laboratory, California Institute of Technology | *Ultra-Compact Terahertz Instruments for Planetary Observations* |
| **Jorge Núñez**<br>Johns Hopkins University Applied Physics Laboratory | *The Advanced Multispectral Infrared Microimager (AMIM): A new tool for future in situ exploration of the Moon and Beyond at the Microscale* |
| **Mauricio Ayllon Unzueta**<br>Lawrence Berkeley National Laboratory | *An In-situ Nuclear Spectrometer with 3D Resolution* |
| **Craig Hardgrove**<br>Arizona State University | *Compact Gamma-Ray and Neutron Spectrometers: From Lunar Flight to Field Prospecting* |
| **David Blewett**<br>JHU Applied Physics Lab | *Mahina Multispectral Imager: Snapshot Camera for the Moon and Beyond* |
| **Patrick Gasda**<br>Los Alamos National Laboratory | *Luminescence spectroscopy on the Moon and Mars* |
| Q&A | |
| **POSTER SESSION & LUNCH · 12:45 pm – 1:30 pm** | |
| **Room 1 · Peretz, Hunter & Spiers** | Eliad Peretz (NASA), Gary Hunter (NASA Glenn Research Center), Elizabeth Spiers (UT Austin - Institute for Geophysics) |
| **GEOPHYSICS · 1:30 pm – 2:30 pm** | |
| **Hannes Kraus**<br>Jet Propulsion Laboratory | *Magnetometer Science and Instrument R&D at JPL* |
| **Justin Atchison**<br>Johns Hopkins Univ. Applied Physics Laboratory | *OpGrav - Precise Small Body Mass Measurements during High-Speed Flybys* |
| **Daniella DellaGiustina**<br>University of Arizona | *The Seismometer to Investigate Interior Asteroid Structure (SIIAS)* |
| **Romy Hanna**<br>University of Texas at Austin | *X-ray Computed-Tomography Imager for Targeted Exploration in 3D (XCITE3D)* |
| Q&A | |
| BREAK · 2:30 pm – 2:40 pm | |
| **ENTRY, DESCENT & LANDING (EDL) · 2:40 pm – 3:40 pm** | |
| **Aaron Brandis**<br>NASA Ames Research Center | *Entry and Descent Model and Technology Development for Science Missions* |
| **Michael Wright**<br>NASA Ames Research Center | *SMD Relevant EDL Technology Investments in the RTMD/LAND portfolio* |
| **Ethiraj Venkatapathy**<br>NASA Ames Research Center | *Entry System Technologies* |
| **Soumyo Dutta**<br>NASA Langley Research Center | *Global Reference Atmospheric Model (GRAM)* |
| Q&A | |
| **ATMOSPHERES & VOLATILES · 3:40 pm – 4:35 pm** | |
| **Jason Kriesel**<br>OKSI | *Lunar Capillary Absorption Spectrometer (LuCAS) demonstrating sensitive volatile abundance and isotope analysis* |
| **Scot Rafkin**<br>Southwest Research Institute | *The Saturn Composition Tunable Laser Spectrometer (SCTLS) Concept* |
| **James B Abshire**<br>University of Maryland and NASA Goddard | *Mini-MARLI, a small lidar for measuring atmospheric wind and aerosol profiles from Mars Orbit* |
| **Joel F. Campbell**<br>NASA Langley Research Center | *Two micron differential absorption lidar for pressure measurement on Mars* |
| Q&A | |
| BREAK · 4:35 pm – 4:45 pm | |
| **POWER · 4:45 pm – 5:45 pm** | |
| **Jaymon Birch**<br>NASA Radioisotope Power Systems | *Radioisotope Power Systems (RPS) for Planetary Exploration: Current Capabilities and Future Developments* |
| **Gilly Elor**<br>Stone Aerospace | *Power over Fiber to Enable a Lunar Underground eXplorer (LUX)* |
| **Dean Bergman**<br>Honeybee Robotics, a Blue Origin Company | *Development of a 10 kW Power Tower system for Moon Base* |
| **Scott Schaire**<br>NASA Goddard Space Flight Center | *Heliophysics Technologies Accelerating NASA's Moon Base and Planetary Exploration* |
| Q&A | |
| **CLOSE AND PROGRAM OFFICER DISCUSSION · 5:45 pm – 5:55 pm** | |

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## POSTER SESSION | BREAKOUT ROOMS

### DAY ONE · TUESDAY, DECEMBER 1, 2026

| ROOM 1 · STONE & NEVEU | |
|---|---|
| **Bill Stone**<br>Stone Aerospace, Inc. | *TVAC-Radiation Tests on Survival of Microbes in Europan and Enceladan Ices* |
| **Marc Neveu**<br>NASA Goddard Space Flight Center | *Planetary Ice Plume Simulator Development* |

| ROOM 2 · RENNO & ONO | |
|---|---|
| **Nilton O. Renno**<br>University of Michigan | *Using passive electromagnetic signals to detect sub millimeters orbital debris and micro meteoroids* |
| **Hiro Ono**<br>Georgia Institute of Technology | *AI-driven Adaptive Planetary Mobility for the Moon, Mars, and Beyond* |

### DAY TWO · WEDNESDAY, DECEMBER 2, 2026

| ROOM 1 · PERETZ, HUNTER & SPIERS | |
|---|---|
| **Eliad Peretz**<br>NASA | *ZODIAC-Technology Development in Support of Capturing Celestial Dust and Meteorites* |
| **Gary Hunter**<br>NASA Glenn Research Center | *A Lunar Instrument Package for Surface Radiation Mapping and Active ISRU Prospecting* |
| **Elizabeth Spiers**<br>UT Austin - Institute for Geophysics | *Accessing the Alien Abyss: Charting a Course for Europa & Enceladus Ocean Exploration* |