

Panel on Lunar and Planetary Sciences Key Non-Polar Destinations Across the Moon to Address Decadal-level Science Objectives with Human Explorers Meeting No. 2

June 11, 2025

Virtual Meeting

ALL TIMES IN US EASTERN DAYLIGHT TIME (UTC-4:00)

WEDNESDAY, JUNE 11, 2025

OPEN SESSION

Livestream: [TBD](#)

2:00 PM	Welcome	Dr. Alex Evans, Panel Chair
2:05 PM	Pyroclastic Sciences Enabled by Astronauts on the Moon* (25-minute presentation and 20-minute discussion)	Dr. Lisa Gaddis, Director Emerita, Lunar and Planetary Institute
2:50 PM	Lunar Surface Evolution and Science Enabled by Human Explorers* (25-minute presentation and 20-minute discussion)	Dr. Emily Costello, Post-Doctoral Researcher, U. of Hawaii
3:35 PM	<i>Meeting Adjourns to Closed Session</i>	

*Invited Topic, Title to Be Announced

This agenda is a draft, subject to change, and was last updated on 6/5/2025 9:35 AM

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IMPORTANT NOTES

Members of the General Public:

- Remote access will be provided through a live stream on Vimeo. This will also be publicly available and posted on the Board website. You do not need to register.

Thank you all for your cooperation, and we look forward to a successful meeting.

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STATEMENT OF TASK

Task Initiated on April 8, 2025

The Panel on Lunar and Planetary Sciences will gather information and identify and articulate the science objectives related to planetary sciences and lunar geology and geophysics that would be most enabled by human explorers on the moon. Using NASA's 2022 *Moon to Mars Objectives*, the National Academies report *Origins, Worlds, and Life: A Decadal Strategy for Planetary Science and Astrobiology 2023-2032*, and other gathered information, the panel will:

- Identify key science objectives within planetary sciences and lunar geology and geophysics that can or must be done by human explorers on the lunar surface;
- Specify the key measurements, either in situ or via returned samples, needed to achieve these key science objectives and why human explorers would enable those measurements (as opposed to robotic assets)
- Detail any pre-placed assets (e.g., tools, mobility devices, robotic hardware, and equipment delivered to the lunar surface prior to human landing) that would be either necessary or enabling of these key measurements
- Prioritize potential non-polar landing sites or characteristics of landing sites that would be most enabling of these key science objectives and measurements

This panel is one of four operating under the aegis of “Key Non-Polar Destinations Across the Moon to Address Decadal-level Science Objectives with Human Explorers” and its steering committee. The panel will provide the steering committee with its findings and a science traceability matrix outlining each potential non-polar landing site (or characteristics of landing sites) and the science objectives it would enable. The panel will not produce recommendations as part of its input to the project's Steering Committee.