

Committee on Key Non-Polar Destinations Across the Moon to Address Decadal-level Science Objectives with Human Explorers

Meeting No. 3

November 11-13, 2025

Hybrid Meeting

NAS Beckman Center (Board Room), 100 Academy Way, Irvine, California

ALL TIMES IN US PACIFIC STANDARD TIME (UTC-8:00)

TUESDAY, NOVEMBER 11, 2025

Committee meets in closed session

WEDNESDAY, NOVEMBER 12, 2025

OPEN SESSION

Livestream: <https://vimeo.com/event/5500400>

CLICK HERE TO JOIN

10:00 AM	Welcome	Dr. James Day, Co-Chair / Mr. Daniel Dumbacher, Co-Chair
10:05 AM	The Necessity of Human Exploration on the Surface of the Moon (25-minute presentation and 20-minute discussion)	Dr. Dean Eppler, Aerospace Corporation
10:50 AM	Astronaut Perspective on Human Capabilities in Space and on Lunar Surface (25-minute presentation and 20-minute discussion)	Dr. Tom Marshburn, Chief Astronaut, Sierra Space
11:35 PM	<i>Working Lunch for Members, Speakers, and Invited Guests</i>	
12:45 PM	Human Exploration in the 2023 Planetary Science and Astrobiology Decadal Survey <i>Origins, Worlds and Life</i> (25-minute presentation and 20-minute discussion)	Mr. Orlando Figueroa, Member, Planetary Science Decadal Survey 2023
1:30 PM	<i>Break into Closed Session</i> (15-minute break)	

* remote participant

This agenda is a draft, subject to change, and was last updated on 11/6/2025 2:13 PM

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THURSDAY, NOVEMBER 13, 2025

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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.

STATEMENT OF TASK

Task Initiated on March 17, 2025

The National Academies of Sciences, Engineering, and Medicine will convene an ad hoc committee to address the topic of “Key Non-Polar Destinations across the Moon to Address Decadal-level Science Objectives with Human Explorers.” To address this topic, the committee will:

- Define a strategy and provide a prioritized list of high-value human sortie destinations for lunar exploration across the Moon (except for the poles), along with any time-ordering constraints, using published documentation, expert testimony, and other input, as appropriate.
 - A sortie is defined here as two crew members to the surface for 1-4 EVAs, destination-dependent.
 - Site prioritization might be based on addressing single highest-priority objectives at a single destination.
 - Discuss whether the number or sequence of destinations explored influences the prioritization, e.g., if exploration at one site would benefit from a preceding mission to another destination.
- For each target destination identified, provide
 - Key science objectives to be addressed at that location, tied to the National Academies report *Origins, Worlds, and Life: A Decadal Strategy for Planetary Science and Astrobiology 2023-2032* (OWL) and NASA's Moon to Mars Objectives.
 - Key measurements, made in situ, needed to achieve the identified science objectives.
 - Key measurements that can or must be enabled via samples collected and returned to terrestrial labs to achieve the identified science objectives
 - Justification for why these measurements or sample collection efforts would require or would most effectively be enabled by human explorers (as opposed to robotic rovers or sample return)
 - Discussion of what, if any, pre-placed assets would be necessary or enabling to accomplish these measurements (e.g., tools, mobility devices, robotic hardware, and equipment delivered to the lunar surface prior to human landing)
 - Key resources available at this destination that might be useful for in-situ resource utilization.
- Produce a report that describes the recommended strategy, that also includes at a minimum:
 - Science traceability matrices for each target destination.
 - A visual summary of targeted geographic locations on the Moon and the associated key science objectives addressed.

* remote participant