

Key Non-Polar Destinations Across the Moon to Address Decadal-level Science Objectives with Human Explorers: Panel on Heliophysics, Physics, and Physical Science Meeting No. 6

September 24-26, 2025

Hybrid Meeting

National Academy of Sciences Building, 2101 Constitution Avenue, NW, Washington, DC

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

WEDNESDAY, SEPTEMBER 24, 2025

OPEN SESSION

Livestream: <https://vimeo.com/event/5385457>

9:00 AM	The Seismic Environment of the Moon: Geophysical Goals and Noise Challenges with Gravitational Waves (30-minute presentation)	Dr. Philippe Lognonné* Professor, Université Paris Cité
9:30 AM	Gravitational Wave Detector Technologies for the Moon (30-minute presentation)	Dr. Jan Harms* Professor, Gran Sasso Science Institute
10:00 AM	Panel Discussion on a Lunar Gravitational Wave Detector: Science Cases and Technology (30-minute discussion period) Panelists: Dr. Phillippe Lognonné* Dr. Jan Harms*	
10:30 AM	<i>Break (15 minutes)</i>	
10:45 AM	Fundamental Physics Experiments Using Atomic Clocks on the Moon (25-minute presentation and 20-minute discussion)	Dr. David Leibbrandt Professor, UCLA
11:30 AM	Prospects for X-ray Interferometry from the Moon (25-minute presentation and 20-minute discussion period)	Dr. Kim Weaver Astrophysicist, NASA/GSFC
12:15 PM	<i>Working Lunch for Members, Speakers, and Invited Guests</i>	
1:00 PM	Construction of Interferometric Arrays for Astronomy from the Moon (20-minute presentation and 10-minute discussion)	Dr. Roger Angel* Astronomer, Steward Observatory Professor, University of Arizona

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- 1:30 PM** **Optical Long-Baseline Interferometry
from the Moon** **Dr. Pierre Kervella***
(30-minute presentation) Astronomer, Paris Observatory
- 2:00 PM** **A Lunar-Based UV/Optical Interferometer** **Dr. Kenneth Carpenter**
(30-minute presentation) Astrophysicist, NASA/GSFC
- 2:30 PM** **Panel Discussion on an Interferometer on the Moon:
Science Cases, Site Requirements, and Technology**
(30-minute discussion period)
Panelists: Dr. Pierre Kervella*
Dr. Kenneth Carpenter
- 3:00 PM** *Break to Closed Session*

THURSDAY, SEPTEMBER 25, 2025

OPEN SESSION

Livestream: <https://vimeo.com/event/5385446>

- 10:00 AM** **Lunar Paleoregoliths as Recorders of Solar System History** **Dr. Ian Crawford***
(25-minute presentation and 20-minute discussion) Prof., Birkbeck College, Univ. of London
- 10:45 AM** **Modeling the Dusty Plasma Environment on the Moon** **Dr. Andrew Poppe***
(25-minute presentation and 20-minute discussion) Associate Research Scientist,
Space Sciences Laboratory, Univ. of California, Berkeley
- 11:30 AM** **Science Objectives for a Lunar-Situated UV Spectrograph** **Dr. Majd Mayyasi***
(25-minute presentation and 20-minute discussion period) Senior Research Scientist, Boston Univ.
- 12:15 PM** *Working Lunch for Members, Speakers, and Invited Guests*
- 1:00 PM** *Adjourn to Closed Session*

FRIDAY, SEPTEMBER 26, 2025

The panel meets entirely in closed session.

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IMPORTANT NOTES

Presenters:

- Please do not include unpublished data, ITAR-controlled or sensitive information in your presentation.
- A National Academies Board staff member will ask you to sign a form before the meeting allowing us permission to use your likeness and presentation for our livestream video, which will be posted on our Board website after the meeting. Please get in touch with us before the meeting if you have any concerns about this usage.

Members and Presenters:

- Remote access will be provided through Zoom. This will allow you to participate in the meeting even if you can't be physically present.
- Please note that Zoom allows audio and any materials exchanged or viewed during the session to be recorded and shared.
- By participating in this activity, you agree to let your voice, likeness, and any materials you provide be recorded for use and dissemination. This includes any language, format, or media now known or later devised.
- You release the National Academies of Sciences, Engineering, and Medicine from any and all claims, liability, or damages arising from any such use. If you disagree, please do not join the session.

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.