Lunar Surface Innovation
CONSORTIUM

LSIC Dust Mitigation Focus Group

Monthly Meeting
November 17, 2022

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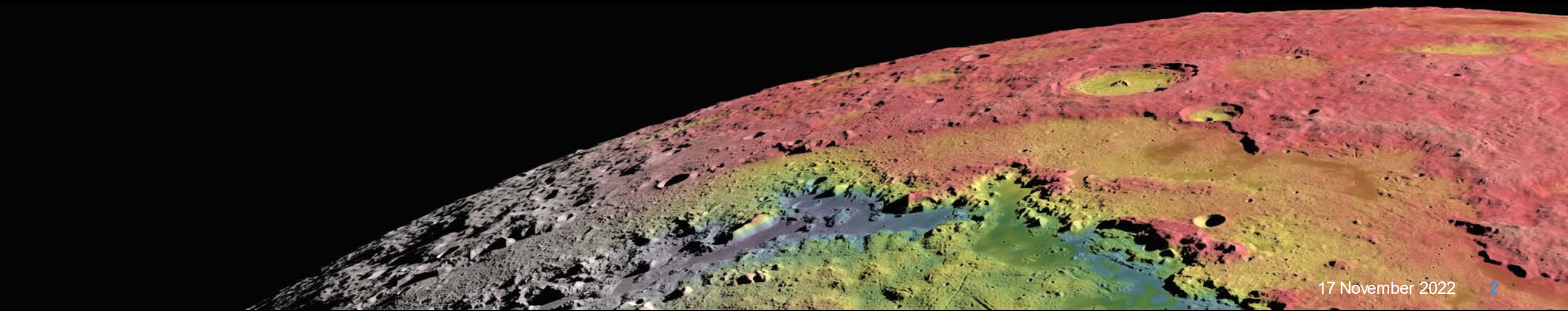
Lunar Surface Innovation
C O N S O R T I U M

Agenda

- Welcome, LSIC and Focus Group Updates
- Upcoming Opportunities and Meetings
- Recap from LSIC Fall Meeting
- Featured Technology Presentation:
  - Torin McCoy, Moon2Mars Deputy Chief Health and Performance Officer, NASA Johnson Space Center
    - “Crew Health and Lunar Dust: What To Know Before You Go”
- Discussion on Risks and Challenges of Lunar Dust on Human Health

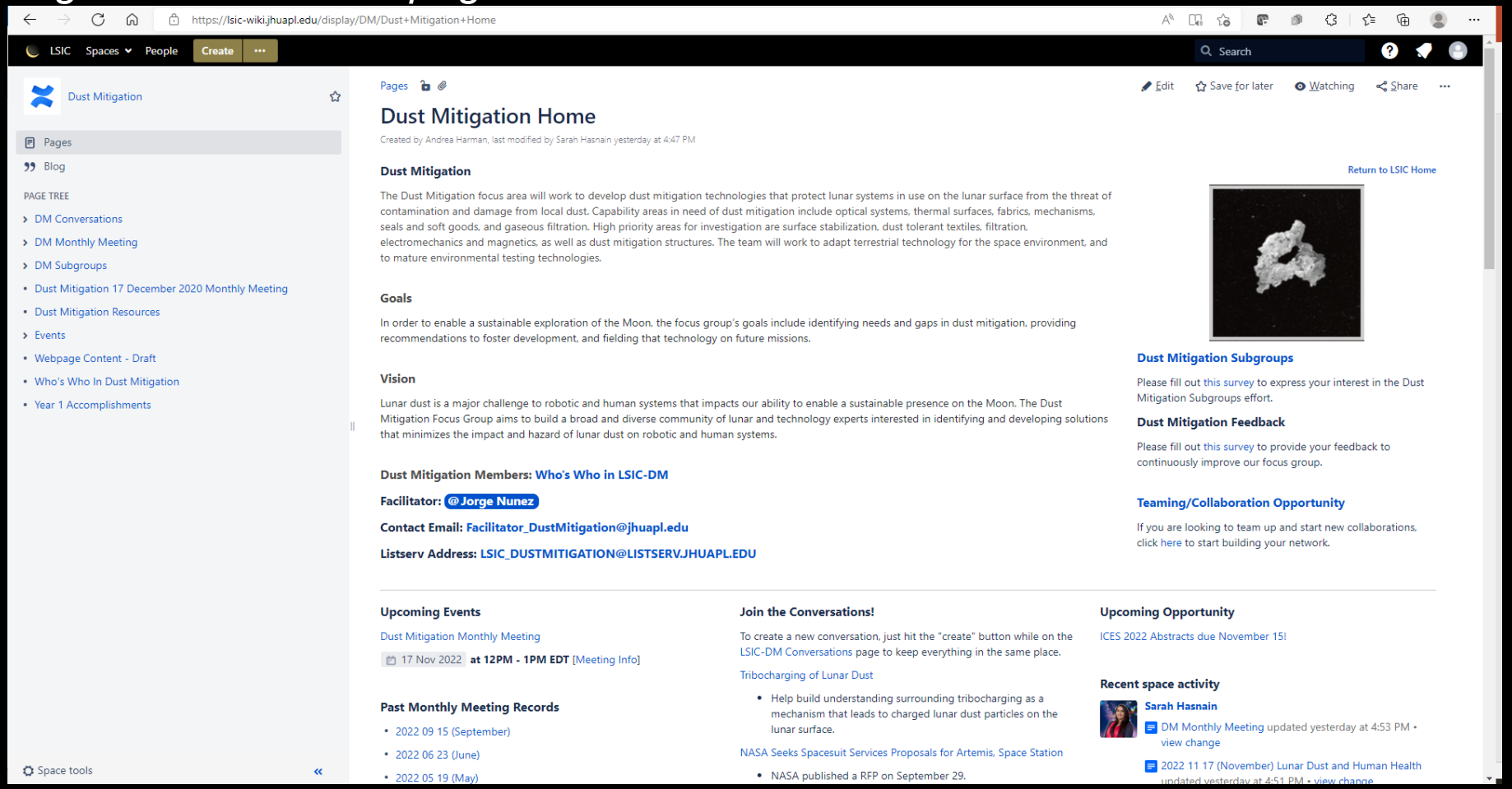


Artemis 1 Launch!

https://www.nasa.gov/artemis-1

LSIC Dust Mitigation Confluence Site

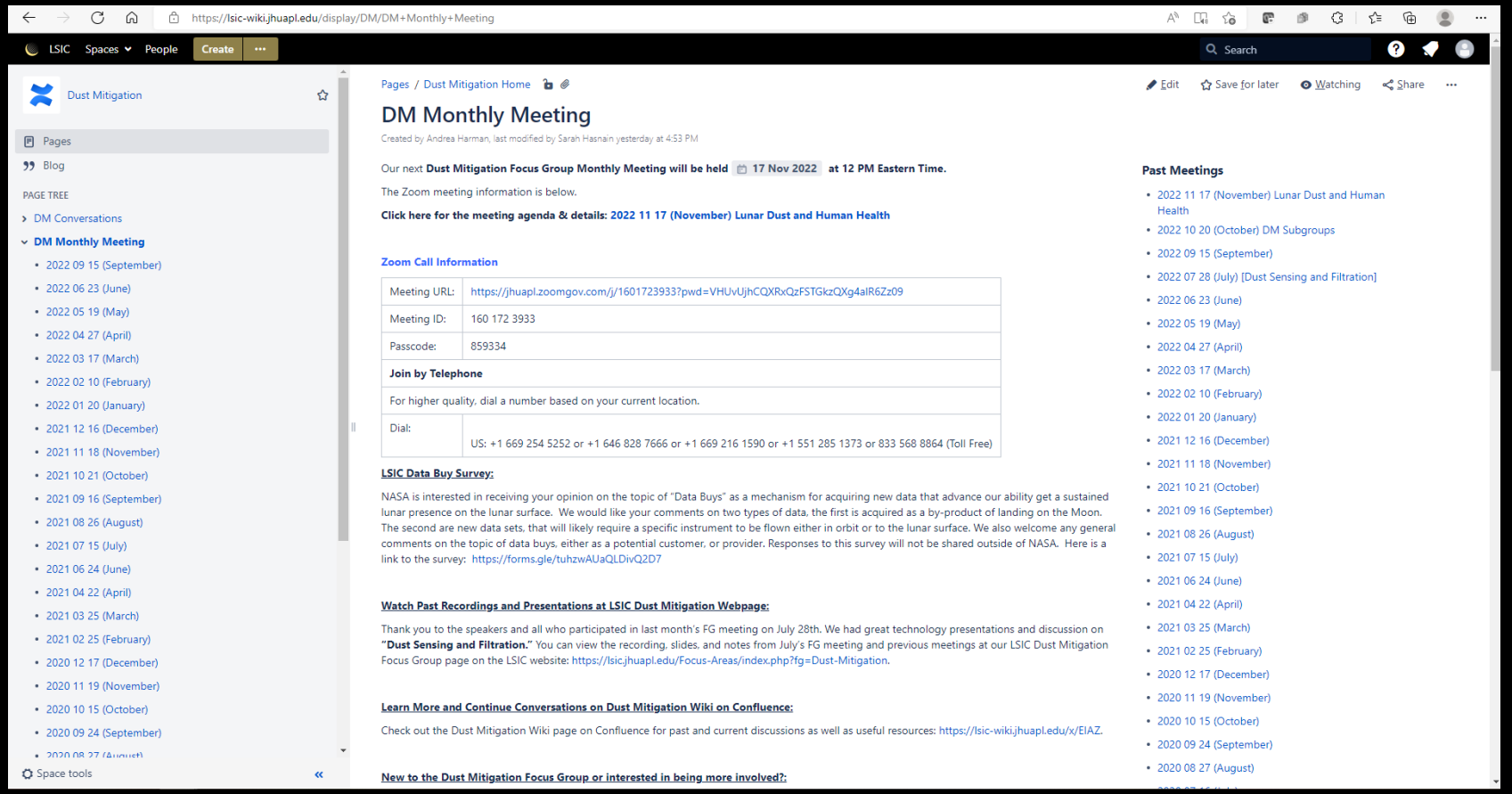
- Please contact Andrea Harman (ams573@alumni.psu.edu) to get set up with an account!
- *Dust Mitigation Discussion page and wiki*



https://lsic-wiki.jhuapl.edu/display/DM/Dust+Mitigation+Home

Join the Discussion on Confluence Site

- Please contact Andrea Harman (ams573@alumni.psu.edu) to get set up with an account!
- *Dust Mitigation Discussion page and wiki*
  - 1. Sign-in to add a comment
  - 2. Add comment at bottom of page
  - 3. You can comment before, during, or after today's meeting



https://lsic-wiki.jhuapl.edu/x/GoAZ

Updates and Communications

- Monthly LSIC newsletter – New edition came out early November 2022
  - https://lsic.jhuapl.edu/Resources/LSIC-Resources.php
  - Mailing list
  - The listserv goes to all participants. Use with caution. But feel free to use!
  - Please make sure to add LSIC_DUSTMITIGATION@LISTSERV.JHUAPL.EDU to safe senders list.
  - If we need smaller, focused lists we can set those up
- Updates to the webpage - https://lsic.jhuapl.edu/Our-Work/Focus-Areas/index.php?fg=Dust-Mitigation
  - Notes, slides, recordings from telecons posted here
- Wiki is ready!
  - Confluence is free to you and available to all registered LSIC members
  - To request an account, please email Andrea Harman: ams573@alumni.psu.edu
- Lightning Talks at monthly focus group meetings
  - Anyone can volunteer to give a featured talk (~15 mins)
  - Email me if you want to sign up: Facilitator_DustMitigation@jhuapl.edu

Follow the Code of Conduct for all Focus Group communications

https://lsic.jhuapl.edu/Resources/LSIC-Resources.php

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Space Technology Funding Opportunities

Current Tech Development Opportunities

- Space Technology Research Institutes (STRI) Solicitation »
  - Invited Full Proposals were Due November 3, 2022
- NASA Space Technology Graduate Research Opportunities – Fall 2023 (NSTGRO23) »
  - Proposals were Due November 2, 2022
- Announcement for Partnership Proposals (AFPP) to Advance Tipping Point Technologies »
  - Final Proposals Due November 22, 2022
- NASA Payloads and Research Investigations on the Surface of the Moon »
  - Proposals Due December 20, 2022
- NASA Innovative Advanced Concepts (NIAC) 2022 Phase II Call for Proposals »
  - Proposals Due January 18, 2023

Future Solicitation and Opportunities

- NASA Innovation Corps Pilot »
  - Proposals may be submitted at any time through March 29, 2023, but applications will be reviewed in intervals on the following dates: July 22, 2022; Sept. 16, 2022; Nov. 17, 2022; and Jan 20, 2023

NASA PRISM 3 Solicitation

- This third Payloads and Research Investigations on the Surface of the Moon (PRISM) program element solicits proposals for an investigation that includes development and flight of science-driven suites of instruments that will be delivered to the lunar surface by the Commercial Lunar Payload Services (CLPS).
- This PRISM call is for science investigations that will be delivered to the lunar surface in mid-Calendar Year 2027.
- This delivery will go to a safe landing site identified and justified by the proposer that resides within ±75o of the lunar equator.
- Both nearside and far side destinations are open to consideration.
- This PRISM call provides the opportunity to leverage survive-the-night services and mobility services provided by the CLPS provider.
- **Step 1 due: October 24; Step 2 due: December 20;**
- Questions and comments concerning PRISM may be directed to Debra Needham and Ryan Watkins at HQ-PRISM@mail.nasa.gov.

LSIC Activities

Recent and Upcoming LSIC Meetings and Workshops (https://lsic.jhuapl.edu/Events/)

- LSIC Fall Meeting (11/02 – 11/03)
  - University of Texas – El Paso
  - Agenda and registration posted on LSIC website
  - https://lsic.jhuapl.edu/Events/Agenda/index.php?id=350
- LSIC Dust Mitigation Focus Group Meeting (12/15)
  - End of Year Recap & Look Forward

Other Recent and Upcoming Dust Mitigation Related Workshop and Meetings

- AIAA ASCEND Conference (10/24-26)
  - https://www.ascend.events/
- Commercial Lunar Payload Services Survive the Night Technology Workshop (12/06-08)
  - Cleveland, OH/Virtual; Program Available;
  - Registration for In-Person US Citizens: 11/22 (International was 10/31); Virtual Registration: 12/08
  - https://www.hou.usra.edu/meetings/clps2022/

LSIC Fall Meeting

- Dates: November 2-3, 2022
- University of Texas at El Paso (UTEP), Virtual and In-Person
- The LSIC 2022 Fall Meeting concentrated on understanding NASA's plans and technology investments relevant to building a sustained presence on the lunar surface.
- The event featured interrelationships between the six focus areas identified by the Consortium, with a specific focus on how they relate to excavation and construction.
- The fall meeting featured individual invited talks, group and panel discussions, as well as poster sessions, breakout groups, and networking opportunities.
- Tours of University of Texas, El Paso facilities, White Sands Test Facility, and ICON's 3D printed barracks at Fort Bliss.

- **Fall Meeting Website:** https://lsic.jhuapl.edu/Events/Agenda/index.php?id=200
- Recordings and Presentations will be posted on the Fall Meeting Website soon!

Get Involved with Dust Mitigation

- Sign-up to Receive LSIC and Dust Mitigation FG Updates:
  - Fill out the LSIC Survey and indicate interest in Dust Mitigation to receive news and event invitations:
  - https://lsic.jhuapl.edu/News/Sign-Up.php
- Help us improve the Dust Mitigation Focus Group!
  - Feedback survey: https://docs.google.com/forms/d/e/1FAIpQLSdjuTIK_TLMnCM4_aSMLAzLS762qtzbgmcOd2fgizICsab6KQ/viewform
- Join one of the Dust Mitigation Subgroups!
  - Dust Mitigation Subgroup Membership/Leaders survey:
  - https://docs.google.com/forms/d/e/1FAIpQLScB6iT2fgPqj2zIaP0s-rwWQDQ04TPfgVyiC5zn0AQPAT5CZA/viewform
  - Still looking for subgroup lead for Monitoring and Filtration Subgroup!
- Interested in Teaming/Collaborating with Others?
  - Add yourself to our Who's Who page: https://lsic-wiki.jhuapl.edu/display/DM/Who%27s+Who+In+Dust+Mitigation
- Looking for info on lunar dust or dust mitigation resources?
  - Checkout our resources page on the Dust Mitigation Wiki page on Confluence: https://lsic-wiki.jhuapl.edu/x/94Rf

LSII | Data Buys Survey

- NASA is interested to learn more about the interest in the LSIC community of NASA conducting data buys from commercial providers
- There are two types of data to consider
  - Data acquired as a by product of landing on the Moon
  - Dedicated data that require a specific instrument to be flown
- What kind of data access is required?
  - Does NASA buy an entire data set and put it in PDS?
  - Do users buy data directly from the providers?
- Survey Link: https://forms.gle/tuhzwAUaQLDivQ2D7

LSIC | Surface Power Focus Group December Telecon

Surface Power Telecon: December 1st 11:00 ET

Speakers: Dr. Matt Clement, Dr. Sean Young, Dr. Joe Kozak Samantha Andrade, Julie Peck, Joseph Kozak (JHU/APL, Surface Power FG team members)

Topic: Surface Power Focus Group Year in Review and Feedback Forum

Agenda:

- Community Updates
- Review of 2022 Telecons and Workshops:

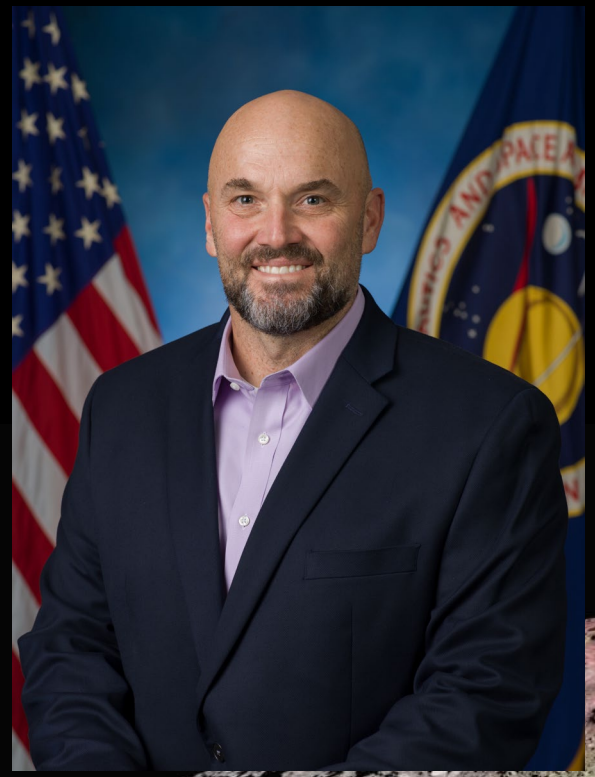
-Anthony Calomino: FSP RFP (Jan)
-Ansel Barchowsky: Tethered Pwr (Mar)
-Low Temperature Workshop (Jul)
-MOSA subgroup (Feb)
-LIVE RFI Breakouts (May)
-Popcorn Networking (Aug)
-Ian Jakupca: RFCs (Mar)
-Martin Naredorf: Stds Gov (Jun)
-David Sadey: ISPSIS (Sep)
-Annette Dolbow/Lee Mason/Jeff Csank: Integration and Testing (Oct)

- Survey and Community Feedback

Zoom Link for Dec 1st 11:00 ET:

https://jhuapl.zoomgov.com/j/1617206812?pwd=ZWhlaW5XRURsRmxJcWd4b1ZoeFFwUT09

Today's Technology Presentation
"Crew Health and Lunar Dust: What To Know Before You Go"



Torin McCoy

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NASA Johnson Space Center

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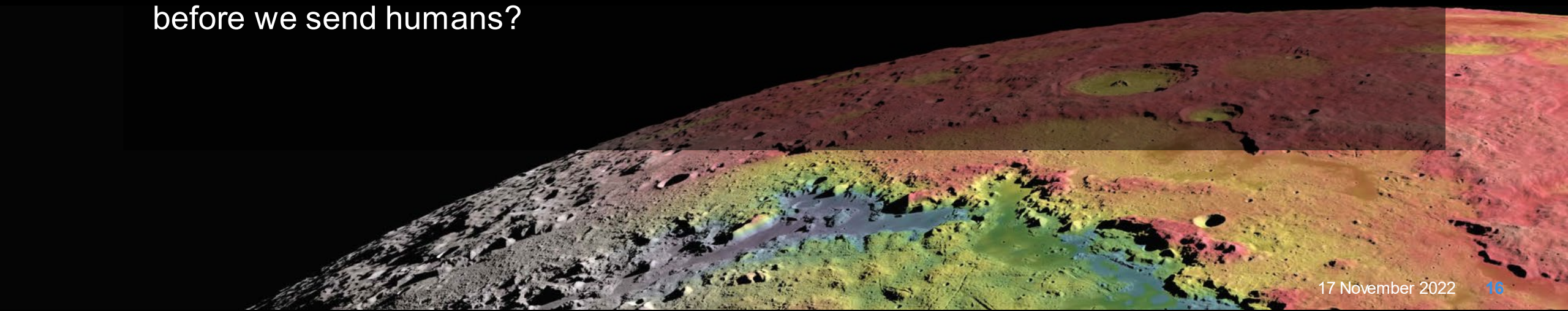
Lunar Dust and Human Health Discussion

- What gaps exist in our understanding of lunar dust and dust environment?
- What data do we still need to help improve our understanding of risks to future astronaut crews?
- What plans are in place to ensure we get the data we need to close those gaps?
- Do upcoming CLPS missions help get the data we need?
- Are current testing facilities and simulants sufficient for testing that needs to be done?
- What experiments and technology demonstrations need to be flown on CLPS missions before we send humans?



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