

# Mars Exploration Science Monthly Newsletter

A publication of the Mars Program Office and the Mars Exploration Program Analysis Group (MEPAG)

March 2022

## Mars Science News

*With multiple meetings approaching (see below), we include this friendly reminder that prospective attendees forecast accordingly (individuals who are not required to forecast can ignore this reminder).*

### **Mars Exploration Program Analysis Group Meeting (MEPAG #39) — In-person/Virtual May 2–4, 2022, Denver, Colorado**

Please join us for an in-person/virtual meeting to discuss results of the Planetary Sciences and Astrobiology Decadal Survey, Goals for Next Decade Mars missions, and Science Objectives for Humans on Mars, in addition to MEP and MSR Program updates. The meeting will have a joint session with the Science Objectives for Human Exploration on Mars workshop, to be held in the same location, May 4–6.

At our VM#14 discussion, we laid down a framework for formulation of the next-decade strategy for the Mars program, building upon MEPAG scientific goals, the MASWG report, and other inputs (such as the upcoming Decadal Survey). Recordings and transcripts of VM#14 may be found [here](#)—our strategy discussion was in the afternoon of [Day 2](#).

This [continues](#) to be the time for the Mars community to provide their feedback and input to the process. In preparation for our May face-to-face MEPAG #39 meeting, please take some time to ask yourself:

- Is there something missing from existing discussions/reports?
- What science theme brought forward by the community is most important, and what step(s) are necessary to best advance the science?
- Are there additional mission ‘arcs’ to add to the examples in the MASWG report?
- Is there a vision of next steps you would like to communicate?

The May in-person MEPAG meeting will offer the opportunity for you to share your thoughts at a poster session and in plenary discussion. Take the time now to start getting your ideas together.

Stay tuned for information on early-career/student travel support and the in-person poster session. Details will be shared in future announcements. Questions or thoughts before the meeting? Please share them with [mepag@jpl.nasa.gov](mailto:mepag@jpl.nasa.gov)

### **Science Objectives for Human Exploration of Mars Workshop — In-person May 4–6, 2022, Denver, Colorado**

A human mission to Mars will be a landmark achievement and a golden opportunity to conduct groundbreaking science on Mars. The potential scope of the science activities is extraordinary. This workshop will identify the highest priority science objectives for a human mission to Mars, identify appropriate mission scenarios that best enable the science objectives, and define high-level concepts of operation, including equipment and instrumentation, needed to achieve the science objectives.

The workshop will immediately follow the May MEPAG meeting in Denver and is intended to be an in-person working workshop. Attendance and participation are not contingent on abstract submission, and registration is free. Registration for in-person attendance will be available through April 20, 2022, and virtual attendance through May 6, 2022.

For more information and to register, please visit the workshop website at:

<https://www.hou.usra.edu/meetings/marsexploration2022/>

## **Advancing IDEA in Planetary Science Conference — Virtual April 25–29, 2022**

Recently, there has been a transformation of thought in the planetary and astrobiological sciences regarding the principles of inclusion, diversity, equity, and accessibility (IDEA). NASA and other planetary science stakeholders have committed to fostering IDEA principles throughout their agencies and funded programs. NASA has added language to standard Announcements of Opportunity, requested information and feedback from the community on agency practices, and added inclusion as a core value. Additionally, for the first time, the Planetary Science and Astrobiology Decadal Survey requested white papers on the state of the profession from the community and will include those findings and recommendations in the survey report. The Decadal Survey on Astronomy and Astrophysics, which partially includes planetary science, has already released IDEA-related recommendations to advance the field. In the wake of these activities, the LPI's IDEA conference aims to leverage this momentum to ensure that the planetary science community can take giant leaps in advancing IDEA principles in the workforce over the next decade.

The goal of the conference is to bring together the planetary, astrobiological, and social science communities to (1) learn into lessons learned to date, (2) identify opportunities for improvement by listening to those most impacted in our community, and (3) make recommendations for actionable and tangible measures for advancing IDEA principles within planetary science. The conference will facilitate conversations and develop recommendations centered around the core principles of Inclusion, Diversity, Equity, and Accessibility. Registration is free and is open up until and through the duration of the conference.

For more information and to register, please visit the conference website at:

<https://www.hou.usra.edu/meetings/advancingidea2022/>

## **2022 NASA Planetary Science Summer School — Applications Due March 30, 2022**

Offered by the Jet Propulsion Laboratory in Pasadena, CA, PSSS is a 3-month long career development experience to learn the development of a hypothesis-driven robotic space mission in a concurrent engineering environment while getting an in-depth, first-hand look at mission design, life cycle, costs, schedule & the inherent trade-offs.

Engineering students close to completion of their MS degree, science & engineering doctoral candidates, recent PhDs, postdocs, & junior faculty who are U.S. Citizens or legal permanent residents (and a very limited number of Foreign Nationals from non-designated counties) are eligible. Applicants from diverse backgrounds are particularly encouraged to apply- we highly value diversity, equity, and inclusion.

Session 1: May 9-Aug 5

Session 2: May 23-Aug 19

With workload of a rigorous 3-hour graduate-level course, participants act as a planetary science mission team during the first 12 weeks of preparatory webinars, with the final culminating week mentored by JPL's Advance Project Design Team for refining the mission concept design & presenting it to a mock expert review board. The culminating week is typically at JPL, but in 2022 it is likely virtual due to Covid-19 pandemic concerns.

For more information and to apply, visit [go.nasa.gov/missiondesignschools](https://www.nasa.gov/missiondesignschools)

## **2022B NASA Keck Call for Proposals — Due March 17, 2022**

The NASA Exoplanet Science Institute is soliciting proposals to use NASA's portion of time on the Keck Telescopes for the 2022B observing semester (August 1, 2022 - January 31, 2023). All proposals are due by March 17, 2022 at 4 pm Pacific.

NASA intends the use of the Keck telescopes to be highly strategic in support of on-going space missions and/or high priority, long-term science goals. Proposals are sought to support the science goals and missions in all of the following discipline areas:

- OUR OWN SOLAR SYSTEM

- EXOPLANET EXPLORATION
- PHYSICS OF THE COSMOS
- COSMIC ORIGINS
- DIRECT MISSION SUPPORT PROPOSALS IN ANY OF THESE AREAS ARE ALSO ENCOURAGED

The opportunity to propose as a Principal Investigator for NASA time on the Keck Telescopes is open to all U.S.-based astronomers (a U.S.-based astronomer has their principal affiliation at a U.S. institution). Investigators from institutions outside of the U.S. may participate as Co-Investigators on proposals for NASA Keck time.

Please read the [Call for Proposals](#) for complete information, instrument availability, and application guidelines.

**Key Dates:**

March 3: deadline to request General Mission Support letter from NASA HQ

March 17: all proposals and supporting letters due to NExSci by 4 pm Pacific

Call for Proposals: <https://nexsci.caltech.edu/missions/KeckSolicitation/>

Questions: [KeckCFP@ipac.caltech.edu](mailto:KeckCFP@ipac.caltech.edu)

## Near-term Due Dates (next three months)

Due	Conference
March 5	<b>7<sup>th</sup> International Planetary Dunes Workshop</b> – Student Grant Applications Deadline
March 7	<b>The 35th Nordic Geological Winter Meeting 2022</b> - Abstract Deadline
March 14	<b>10<sup>th</sup> IAG International Conference on Geomorphology</b> – Abstract Deadline
March 20	<b>Low-Cost Science Mission Concepts for Mars Exploration</b> – Registration Deadline
March 25	<b>Planetary Science Informatics and Data Analytics</b> – Abstract Deadline
March 31	<b>10<sup>th</sup> IAG International Conference on Geomorphology</b> – Early Registration Deadline
March 31	<b>International Astronomical Union (IAU)</b> – Abstract Deadline
April 1	<b>The 35th Nordic Geological Winter Meeting 2022</b> – Registration Deadline
April 1	<b>Planetary Science: The Young Solar System</b> – Abstract Deadline
April 14	<b>European Astronomical Society Annual Meeting</b> – Early Registration Deadline
April 14	<b>Optimizing Planetary In Situ Surface-Atmosphere Interaction Investigation</b> – Abstract Deadline
April 15	<b>Forming and Exploring Habitable Worlds</b> – Abstract Deadline
April 15	<b>Forming and Exploring Habitable Worlds</b> – Early Registration Deadline
April 20	<b>Science Objectives for Human Exploration of Mars Workshop</b> – In-Person Registration Deadline
May 6	<b>Science Objectives for Human Exploration of Mars Workshop</b> – Virtual Registration Deadline
May 27	<b>Planetary Science Informatics and Data Analytics</b> – Registration Deadline
May 31	<b>International Astronomical Union (IAU)</b> – Registration Deadline

## Upcoming Conferences

- Note that for civil servants and those under contract with NASA, foreign and NASA-sponsored conferences generally need to be forecasted via NCTS. Forecasting to NCTS is usually due 60 days in advance for domestic meetings. If you are unsure whether an event is a conference or not, or when the deadline may be, please consult with your NASA Center conference forecasting/travel unit.
- The situation for COVID-19 continues to evolve, so here are conferences with both in-person and virtual formats. It is advisable to check with the websites of the conference and confirm with the organization of any changes.

## 2022

March 5-12, 2022 Big Sky, MT	<b>IEEE Aerospace Conference 2022</b> <a href="https://www.aeroconf.org/">https://www.aeroconf.org/</a>
March 7-11, 2022 The Woodlands, TX, USA	<b>LPSC 2022 53<sup>rd</sup> Lunar &amp; Planetary Science Conference</b> <a href="https://www.hou.usra.edu/meetings/lpsc2022/">https://www.hou.usra.edu/meetings/lpsc2022/</a>
March 20-22, 2022 Lancaster, PA, USA	<b>Geological Society of America Northeast Section Meeting 2022</b> <a href="https://tinyurl.com/GSA2022NE">https://tinyurl.com/GSA2022NE</a>
March 29-31, 2022 Pasadena, CA, USA/Hybrid	<b>Low-Cost Science Mission Concept for Mars Exploration</b> NCTS:45344-22 <a href="https://www.hou.usra.edu/meetings/lowcostmars2022/">https://www.hou.usra.edu/meetings/lowcostmars2022/</a>
April 3-8, 2022 Vienna Austria	<b>EGU 2022</b> <a href="https://www.egu22.eu/">https://www.egu22.eu/</a>
April 25-29, 2022 Virtual	<b>Advancing IDEA in Planetary Science</b> <a href="https://www.hou.usra.edu/meetings/advancingidea2022/">https://www.hou.usra.edu/meetings/advancingidea2022/</a>
May 2-4, 2022 Denver, CO, USA	<b>Mars Exploration Program Analysis Group (MEPAG #39)</b> <a href="https://mepag.jpl.nasa.gov">https://mepag.jpl.nasa.gov</a>
May 4-6, 2022 Denver, CO, USA / Virtual	<b>Science Objectives for Human Exploration of Mars Workshop</b> <a href="https://www.hou.usra.edu/meetings/marsexploration2022/">https://www.hou.usra.edu/meetings/marsexploration2022/</a>
May 11-13, 2022 Reykjavik, Iceland	<b>The 35<sup>th</sup> Nordic Geological Winter Meeting 2022</b> <a href="https://jfi.is/ngwm-2022/">https://jfi.is/ngwm-2022/</a>
May 15-20, 2022 Atlanta, GA USA	<b>AbSciCon 2022</b> <a href="https://www.agu.org/abscicon">https://www.agu.org/abscicon</a>
May 17-19, 2022 Washington, D.C., USA	<b>The Humans to Mars Summit (H2M)</b> <a href="https://www.h2msummit.com/">H2M Summit</a>
May 17-20, 2022 Alamosa, Colorado	<b>The 7<sup>th</sup> International Planetary Dunes Workshop</b> <a href="https://www.hou.usra.edu/meetings/dunes2022/">https://www.hou.usra.edu/meetings/dunes2022/</a>
May 22-27, 2022 Chiba, Japan	<b>Japan Geoscience Union Meeting 2022</b> <a href="https://tinyurl.com/jpgumeeting">https://tinyurl.com/jpgumeeting</a>
June 5-11, 2022 Quy Nhon, Vietnam	<b>Planetary Science: The Young Solar System</b> <a href="https://www.icisequynhon.com/conferences/2022/planetary_system/index.html">https://www.icisequynhon.com/conferences/2022/planetary_system/index.html</a>
June 12-17, 2022 Golden Colorado, USA	<b>Ground Penetrating Radar (GPR 22)</b> <a href="https://learn.mines.edu/gpr2022/">https://learn.mines.edu/gpr2022/</a>
June 14-17, 2022 Paris, France	<b>7th Mars Atmosphere Modelling &amp; Observations</b> <a href="http://www-mars.lmd.jussieu.fr/paris2022/">http://www-mars.lmd.jussieu.fr/paris2022/</a>
June 21-23, 2022 Madrid, Spain	<b>Planetary Science Informatics &amp; Data Analytics Conference</b> <a href="https://www.cosmos.esa.int/web/psida-2022/home">https://www.cosmos.esa.int/web/psida-2022/home</a>

<b>NEW</b>	June 27-July 1, 2022 Valencia, Spain	<b>European Astronomical Society Annual Meeting</b> <a href="https://eas.unige.ch/EAS2022/index.jsp">https://eas.unige.ch/EAS2022/index.jsp</a>
	June 28-July 1, 2022 Boise, Idaho	<b>Optimizing Planetary In Situ Surface-Atmosphere Interaction Investigation</b> <a href="https://www.hou.usra.edu/meetings/planetinsitu2022/">https://www.hou.usra.edu/meetings/planetinsitu2022/</a>
	July 4-8, 2022 Oxford, UK	<b>Rocky Worlds II</b> <a href="https://www.rockyworlds.org">https://www.rockyworlds.org</a>
	May 2-5, 2022 Denver, Colorado, USA	<b>Science Objectives for Human Exploration of Mars Workshop</b> <a href="https://www.hou.usra.edu/meetings/marsexploration2022/">https://www.hou.usra.edu/meetings/marsexploration2022/</a>
	July 16-24, 2022 Athens, Greece	<b>COSPAR 2022 44<sup>th</sup> Scientific Assembly</b> <a href="https://www.cosparathens2022.org/">https://www.cosparathens2022.org/</a>
	July 25-29, 2022 Hybrid/Pasadena, CA, USA	<b>2022 Sagan Summer Workshop: Exoplanet Science in the Gaia Era</b> <a href="https://nexsci.caltech.edu/workshop/2022/">https://nexsci.caltech.edu/workshop/2022/</a>
<b>NEW</b>	August 2-11, 2022 Busan, Korea	<b>International Astronomical Union (IAU)</b> <a href="https://www.iau.org/science/meetings/future/2600/">https://www.iau.org/science/meetings/future/2600/</a>
	September 12-16, 2022 Coimbra, Portugal	<b>10<sup>th</sup> IAG International Conference on Geomorphology</b> <a href="https://www.icg2022.eu/home.html">https://www.icg2022.eu/home.html</a>
	September 18-23, 2022 Granada, Spain	<b>Europlanet Science Congress (EPSC)</b> <a href="https://www.europlanet-society.org/european-planetary-science-congress/">https://www.europlanet-society.org/european-planetary-science-congress/</a>
	November 7-13, 2022 Edinburgh, Scotland	<b>Forming and Exploring Habitable Worlds</b> <a href="https://www.habitableworlds.co.uk">https://www.habitableworlds.co.uk</a>

Seasons on Mars

	MY36	MY37	MY38	MY39
Start of Northern Spring / L <sub>s</sub> 0	02/07/2021	12/26/2022	11/12/2024	09/30/2026
Start of Northern Summer / L <sub>s</sub> 90	08/25/2021	07/13/2023	05/29/2025	04/17/2027
Start of Northern Autumn / L <sub>s</sub> 180	02/24/2022	01/12/2024	11/29/2025	10/17/2027
Start of Northern Winter / L <sub>s</sub> 270	07/21/2022	06/07/2024	04/25/2026	03/12/2028

U.S. Federal holidays to consider when scheduling conferences/workshops/meetings



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Please send Mars Community Announcements and calendar items for inclusion in next month's newsletter to:

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This newsletter (and all previous months') is also posted on the MEPAG website: <http://mepag.jpl.nasa.gov>

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