

Mars Exploration Science Monthly Newsletter

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

December 2020

Mars Science News

MASWG Report has been finalized

The final report of the Mars Architecture Strategy Working Group (MASWG) has been released by NASA. MASWG was charged by NASA's Planetary Science Division with determining what could and should be done in the scientific exploration of Mars in parallel with, and subsequent to, the Mars Sample Return campaign. A preliminary report was briefed by the MASWG Chair at MEPAG's VM9 meeting and feedback solicited in June 2020. The final report was presented to NASA this fall. Subsequently, MASWG briefed the Mars Panel of the Decadal Survey at their November 17 meeting. MASWG recommended a reinvigorated Mars Exploration Program that would address fundamental science objectives on habitability and possible life, climate evolution, and planetary evolution, as these are relevant to Mars, the other terrestrial planets, exoplanets, and planning for human exploration. The objectives were suggested to be achieved utilizing the full range of spacecraft size classes from small spacecraft up through New Frontiers-class, all integrated by a strategic Mars Exploration Program within the Planetary Sciences Division.

The MASWG final text report is available via the MEPAG web site at:

[https://mepag.jpl.nasa.gov/reports/MASWG NASA Final Report 2020.pdf](https://mepag.jpl.nasa.gov/reports/MASWG%20NASA%20Final%20Report%202020.pdf)

Mars Sample Return

NASA, ESA, and the worldwide science community are about to embark on one of the most complex and challenging robotic science campaigns ever attempted: Mars Sample Return (MSR). An early assessment of the technical, programmatic, and scientific readiness of the next flight missions intended to return samples to Earth was conducted by an Independent Review Board (IRB) this fall; their report was released November 10, 2020, and can be found at

https://www.nasa.gov/sites/default/files/atoms/files/nasa_esa_mars_sample_return_irb_report.pdf. The IRB recommended that, while there are issues that need to be addressed at this early stage, ***the Mars Sample Return Program should proceed.***

The MSR program, which reports directly to the NASA Associate Administrator for the Science Mission Directorate, was also reviewed in October by its Standing Review Board in a Mission Concept Review and is being considered for transition into Phase A (formulation), with a decision by NASA expected in December.

Decadal Survey Mars Panel

The **Planetary Science and Astrobiology Decadal Survey 2023-2032 Mars Panel** has been busy collecting information from NASA and the community, with 4 open meetings in November. Agendas and presentations can be found at:

[https://www.nationalacademies.org/our-work/planetary-science-and-astrobiology-decadal-survey-2023-2032-panel-on-mars - sectionPastEvents](https://www.nationalacademies.org/our-work/planetary-science-and-astrobiology-decadal-survey-2023-2032-panel-on-mars-sectionPastEvents). Meetings were devoted to: i) presentations from NASA Headquarters on Mars exploration (Nov. 2); ii) the IRB report on MSR and the MASWG briefing, plus a presentation on the need to better understand the ancient dynamo and crustal magnetism on Mars (Nov. 17); iii) a panel presentation on ice and climate science at Mars, together with reports on the international Mars Ice Mapper concept (Nov. 23); and iv) perspectives on Mars sample curation and on Planetary Protection, and two panels, one on Mars atmospheric science and the other on the search for extant life (Nov. 30). The next open meeting will be Dec 15, 2020 (no agenda yet). A prime activity for all the PSADS panels is recommendation, by early December, of selected missions for fast-paced study in the coming months to augment the ongoing Planetary Mission Concept studies.

MEPAG Virtual Meeting VM11

With all this activity, MEPAG is seeking to get updates on the reviews and status of MSR and the status of Mars Ice Mapper and other MEP activities, of progress on the MASWG recommendations and, of course, on preparations for the arrival of *Perseverance* and the other Mars missions launched in 2020 at a virtual meeting in February 2021. While the presentations to the Mars panel have been excellent, MEPAG is looking to get the key information out to the broader science and engineering Mars community. Watch for logistical information and an agenda in the coming weeks.

Near-term Due Dates (next three months)

Due	Conference
December 31	43rd COSPAR Scientific Assembly – Early Registration Deadline
January 5	52nd Lunar and Planetary Science Conference - Abstract Deadline
January 13	EGU General Assembly 2021 – Abstract Deadline
January 29	43rd COSPAR Scientific Assembly – 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.
- We have noted conference changes we are aware of – but the impact of COVID-19 continues to evolve. If we show a conference as still happening in the next few months, it is advisable to check the website and confirm with conference organizers.
- VM = virtual meeting.

Fourth Quarter <i>continued</i>		
NEW	December 1-3, 2020 Virtual Meeting	Refining Planetary Protection Requirements for Human Missions to Mars https://bit.ly/338EFvF
NEW	December 7, 2020	The Planetary Science Data Analysis Workshop Series https://nyu.zoom.us/webinar/register/WN_t5to9wjtRYublyp4L-qedw
	December 7-11, 2020 Virtual Meeting	AGU Fall Meeting https://www.agu.org/fall-meeting
NEW	December 15, 2020 Virtual Meeting	Planetary Science and Astrobiology Decadal Survey 2023-2032 Panel on Mars Meeting No. 5 https://www.nationalacademies.org/event/12-15-2020/planetary-science-and-astrobiology-decadal-survey-2023-2032-panel-on-mars-meeting-no-5

2021 First-Second Quarter		
	January 11 -15, 2021 Virtual Meeting	237th Meeting of the American Astronomical Society https://aas.org/meetings/aas237
	January 28-February 4, 2021 Sydney, Australia	43rd COSPAR Scientific Assembly NCTS #42197.21 http://www.cospar2020.org/
	March 6-13, 2021 Virtual Meeting	IEEE Aerospace Conference https://www.aeroconf.org/
	March 15-19 2021 Virtual Meeting	52nd Lunar and Planetary Science Conference https://www.hou.usra.edu/meetings/lpsc2021/
	April 25-30, 2021 Vienna, Austria	EGU General Assembly 2021 https://www.egu2021.eu/
	May 10-12, 2021 Long Beach, CA	Space Tech Expo https://www.spacetecheexpo.com
	May 17-20, 2021 Glasgow, Scotland	IEEE Int'l Instrumentation & Measurement Technology Conf. (I2MTC 2021) https://i2mtc2020.ieee-ims.org/
	June 8-11, 2021 Orleans, France	Mercury 2020, Current and future science of the innermost planet https://mercury2020.ias.u-psud.fr/main_1st.php
	June 28-July 2, 2021 Flagstaff, AZ	5th Planetary Data Workshop https://www.hou.usra.edu/meetings/planetdata2021/

Seasons on Mars

	MY35	MY36	MY37
Start of Northern Spring / L _s 0	03/23/2019	02/07/2021	12/26/2022
Start of Northern Summer / L _s 90	10/08/2019	08/25/2021	07/13/2023
Start of Northern Autumn / L _s 180	04/08/2020	02/24/2022	01/12/2024
Start of Northern Winter / L _s 270	09/02/2020	07/21/2022	06/07/2024

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

Federal Holiday	2020	2021
New Year's Day	Wed. Jan. 1	Fri. Jan. 1
Martin Luther King, Jr. Day	Mon. Jan. 20	Mon. Jan. 18
President's Day	Mon. Feb. 17	Mon. Feb. 15
Memorial Day	Mon. May 25	Mon. May 31
Independence Day (Observed)	Fri. July 3*	Mon. July 5*
Labor Day	Mon. Sept. 7	Mon. Sept. 6
Columbus Day	Mon. Oct. 12	Mon. Oct. 11
Veterans' Day	Wed. Nov. 11	Thu. Nov. 11
Thanksgiving Day	Thu. Nov. 26	Thu. Nov. 25
Christmas Day	Fri. Dec. 25	Sat. Dec. 25

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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>

If you wish to withdraw from the electronic mailing list that this newsletter is sent out to, please send an email from your email account to mepag-removesignup@jpl.nasa.gov.

To be added to this list and receive this monthly newsletter and other Mars Science announcements, or to update your MEPAG directory information (which contains the email list used for sending out this newsletter), send an email to mepag-signup@jpl.nasa.gov from the email account you'd like added, with your full name and institution.