

# Mars Exploration Science Monthly Newsletter

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

July 2018

## Mars Science News

### **MEPAG Virtual Meeting 2 (VM2) presentations and summary are available**

The 2<sup>nd</sup> virtual MEPAG meeting in 2018 (VM2) was held Monday, June 25, 2:00 - 4:00 pm EDT; there were ~120 unique log-ins. Presentations at this virtual meeting included developments regarding MEP plans for Mars Sample Return, the recent revisions proposed within the MEPAG Goals Document, and reports from recent Mars-focused conferences, including the 2nd International Mars Sample Return Conference. Additionally, recent and upcoming MEPAG activities, as well as ongoing options for science analysis group (SAG) activities, were discussed. Presentations and the meeting summary are available online:

<https://mepag.jpl.nasa.gov/meetings.cfm?expand=vm2>.

### **Comments invited regarding proposed changes to MEPAG Goals Document**

From the MEPAG Goals Chair: “The MEPAG Goals Committee reps for Goals II and III have identified a significant discrepancy between the current state of the field, and the existing (2015) MEPAG Goals document in the area of Polar Science and aeolian processes. This discrepancy was highlighted following the 6th International Mars Polar Science and Exploration Conference (2016), and the summary report outlining the priorities as identified by the Polar Science Community. Over the last year, the MEPAG Goal II & III committee members have worked with the Polar Science Community to develop a proposed set of changes to the MEPAG Goals Document, specifically just Goals II & III.

A key step in revising the MEPAG Goals Document is the incorporation of inputs from a broad cross-section of the community. It is crucial that we receive feedback from the Mars community at large to ensure that the Goals Document faithfully represents a consensus view of the priorities of our whole community. Therefore, we invite you to review the proposed changes, and we solicit your feedback on them.”

Comments are solicited through **Friday, August 10, 2018**. Both positive and negative comments are welcomed, and comments can be submitted anonymously. For more information and the link to the comment collection form, please see the **Spring 2018 MEPAG Goals (III/Obj. A & B and III/Obj. A) – Proposed Update**, which is posted along with the 2015 MEPAG Goals Document at <https://mepag.jpl.nasa.gov/reports.cfm?expand=science>.

### **iMOST report (.pptx) on MSR objectives/samples/investigations is available**

The iMOST (International Mars Sample Return Objectives & Samples Team) planning team, chartered by IMEWG (the International Mars Exploration Working Group), has completed the PPT summary of their recent analysis of Mars Sample Return objectives, samples, and investigations. This document has been posted at <https://mepag.jpl.nasa.gov/reports/iMOST%20presentation%20package.pptx> for the community’s reference and use (it has been posted in native PPT form, so that individual slides can be extracted and used in other presentations). A parallel text version of this analysis is nearing completion and will also be published.

### **MPO Student Travel Grant available for Late Mars workshop**

The NASA Mars Program Office has announced that travel awards are available for up to three US undergraduate or graduate students engaged in relevant Mars-related research, for the Late Mars workshop which will be held October 1-3, 2018 in Houston, TX (<https://www.hou.usra.edu/meetings/latemars2018/>). An application (including a submitted abstract) must be submitted by **July 18, 2018** (the abstract deadline). For more info and the application, see <https://mepag.jpl.nasa.gov/student.cfm?expand=student>.

## Some Mars-relevant sessions within the 2018 Fall AGU Meeting

10-14 December 2018 @ Washington DC

Abstract and Town Hall submission deadline: 1 August 2018 (Early abstract submission deadline: 25 July 2018)

The following are some of the Mars-related sessions to be held at the 2018 Fall AGU Meeting. A complete description of the event and abstract submission instructions are available on the meeting web page (<https://fallmeeting.agu.org/2018/welcome/>).

- [P002 - Analogue studies of gradient systems relevant to astrobiology on ocean worlds and Mars](#)
- [P011 - Comparative planetology and the solar system as a gateway to the exoplanets](#)
- [P012 - Concepts for future planetary science missions](#)
- [P013 - Curiosity's exploration of Vera Rubin Ridge, Gale Crater, Mars: Redox interfaces as indicators of past habit. environ.](#)
- [P015 - Diagenesis on Mars and clues from terrestrial systems](#)
- [P026 - Mars global climate modeling: From the surface to the exobase](#)
- [P034 - Processes in the present-day atmosphere of Mars](#)
- [P035 - Radar investigations of planetary surface and subsurfaces](#)
- [P046 - "The new Mars underground": Science and exploration of a new deep frontier](#)
- [P054 - The use of analog environments in preparing for the exploration and characterization of planetary surfaces](#)
- [P058 - Unanswered questions in Mars atmospheric science: What future observations are best suited to addressing them?](#)
- [EP004 - Aeolian research at the interface of sedimentary, atmospheric, and biological processes](#)
- [EP031 - Planets as experiments, surface processes in extraterrestrial environments](#)
- [SM007 - Magnetospheres in the inner solar system](#)

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

Due	Project
July 5	<b>European Planetary Science Congress (EPSC) 2018</b> , Presenter Registration Deadline
July 10	<b>Ninth Moscow International Solar System Symposium (9M-S3)</b> , Abstract Deadline
July 12	<b>50th Meeting of the AAS Division for Planetary Sciences</b> , Hartmann Student Travel Grant Deadline
July 15	<b>European Astrobiology Conference (EANA 2018)</b> , Early Registration Deadline
July 17	<b>Bombardment: Shaping Planetary Surfaces and Their Environments</b> , Abstract Deadline
July 18	<b>Late Mars Workshop</b> , Abstract and Student Travel Grant Application Deadlines
July 24	<b>COSPAR 2018</b> , Registration Deadline <b>Lunar Polar Volatiles</b> , Registration Deadline
July 26	<b>Europa Deep Dive 2: Composition</b> , Abstract Deadline <b>50th Meeting of the AAS Division for Planetary Sciences</b> , Early Abstract Deadline
July 30	<b>Comparative Climatology of Terrestrial Planets III</b> , Early Registration Deadline
July 31	<b>European Planetary Science Congress (EPSC) 2018</b> , Early Registration Deadline
August 1	<b>9th Planetary Crater Consortium</b> , Abstract Deadline <b>American Geophysical Union Fall Meeting</b> , Abstract Deadline
August 1	<b>Experimental Analysis of the Outer Solar System Workshop</b> , Registration Deadline
August 11	<b>International Venus Conference 2018</b> , Registration Deadline
August 13	<b>Comparative Climatology of Terrestrial Planets III</b> , Early Registration Deadline
August 14	<b>2018 GSA Annual Meeting</b> , Abstract Deadline, Abstract Deadline
August 17	<b>European Astrobiology Conference (EANA 2018)</b> , Early Registration Deadline
September 10	<b>Europa Deep Dive 2: Composition</b> , Early Registration Deadline
September 21	<b>Ninth Moscow International Solar System Symposium (9M-S3)</b> , Registration Deadline
September 25	<b>Europa Deep Dive 2: Composition</b> , Registration Deadline

## Upcoming Conferences and Workshops

### A note about “conferences” and this calendar of events

- Missing NCTS#s (and forecasting deadline, if anomalous) can be sent to Barbara Saltzberg ([Barbara.A.Saltzberg@jpl.nasa.gov](mailto:Barbara.A.Saltzberg@jpl.nasa.gov)).
- If no deadline is noted: it is usually 60 days in advance for domestic meetings — sometimes further in advance if the conference is “Heavily Attended.”
- Please do not assume our noting of NCTS# is complete. If you are unsure whether an event is a conference or not, or when the forecasting deadline may be, please consult with your NASA Center conference forecasting/travel unit.

### Third Quarter, 2018

	July 1-9, 2018 Denham, Australia	<b>Astrobiology Grand Tour</b> <a href="#">Astrobiology Grand Tour</a>
	July 14-22, 2018 Pasadena, CA, USA	<b>42nd COSPAR Scientific Assembly</b> NCTS# 28500-18 <a href="http://cospar2018.org/">http://cospar2018.org/</a>
	July 22-27, 2018 Moscow, Russia	<b>81st Annual Meeting of The Meteoritical Society</b> , NCTS# 32898-18 <a href="http://metsoc81-moscow.ru/">http://metsoc81-moscow.ru/</a>
	July 29, 2018 Cambridge, MA, USA	<b>Exoplanet Exploration Program Analysis Group (ExoPAG)</b> , NCTS# 33921-18 <a href="https://exoplanets.nasa.gov/exep/events/205/exopag-18/">https://exoplanets.nasa.gov/exep/events/205/exopag-18/</a>
	August 7-9, 2018 Laurel, MD, USA	<b>Lunar Polar Volatiles</b> , NCTS# 32572-18 <a href="https://www.hou.usra.edu/meetings/lunarvolatiles2018/">https://www.hou.usra.edu/meetings/lunarvolatiles2018/</a>
	August 8-10, 2018 Boulder, CO, USA	<b>The 9<sup>th</sup> Planetary Crater Consortium</b> <a href="http://www.planetarycraterconsortium.nau.edu/">http://www.planetarycraterconsortium.nau.edu/</a>
	August 12-17, 2018 Boston, MA, USA	<b>Goldschmidt Conference 2018</b> , NCTS# 32184-18 <a href="https://goldschmidt.info/2018/">https://goldschmidt.info/2018/</a> Session: 11d: From Source to Sink - Geochemical Sulfur Cycles on Earth and Mars
	August 12-17, 2018 Boulder, CO, USA	<b>Cassini Science Symposium</b> , NCTS# 33060-18 <a href="http://laspl.colorado.edu/home/2018-cassini-science-symposium">http://laspl.colorado.edu/home/2018-cassini-science-symposium</a>
	August 15-17, 2018 Fayetteville, AR, USA	<b>Experimental Analysis of the Outer Solar System Workshop</b> , NCTS# 33887-18 <a href="https://www.hou.usra.edu/meetings/exoss2018/">https://www.hou.usra.edu/meetings/exoss2018/</a>
	August 16-17 Green Belt, MD, USA	<b>3rd Planetary CubeSat Science Symposium</b> , NCTS# 34422-18 <a href="https://cubesats.gsfc.nasa.gov/symposium.html">https://cubesats.gsfc.nasa.gov/symposium.html</a>
	August 27-30, 2018 Houston, TX, USA	<b>Comparative Climatology of Terrestrial Planets III</b> , NCTS# 32374-18 <a href="https://www.hou.usra.edu/meetings/climatology2018/">https://www.hou.usra.edu/meetings/climatology2018/</a> Student and Early Career travel awards — applications due June 13
	September 11-14, 2018 Niseko, Japan	<b>International Venus Conference 2018</b> , NCTS# 31333-18 <a href="https://www.cps-jp.org/~akatsuki/venus2018/">https://www.cps-jp.org/~akatsuki/venus2018/</a>
	September 11-12, 2018 Pasadena, CA USA	<b>Outer Planets Assessment Group (OPAG) Meeting</b> , NCTS# 34029-18 <a href="https://www.lpi.usra.edu/opag/">https://www.lpi.usra.edu/opag/</a>
	September 12-13, 2018 Berlin, Germany	<b>International Workshop on Instrumentation for Planetary Missions (IPM) 2018</b> NCTS# 34186-18 <a href="https://ipm2018.org/">https://ipm2018.org/</a>
	September 12-14, 2018 Irvine, CA, USA	<b>NASEM Committee on Astrobiology and Planetary Science (CAPS)</b> <a href="http://sites.nationalacademies.org/SSB/SSB_067577#Meetings_and_Events">http://sites.nationalacademies.org/SSB/SSB_067577#Meetings_and_Events</a>
	September 16-21, 2018 Berlin, Germany, USA	<b>European Planetary Science Congress (EPSC) 2018</b> , NCTS# 32031-18 <a href="https://www.epsc2018.eu/">https://www.epsc2018.eu/</a>
	September 24-27, 2018 Honolulu, HI, USA	<b>Multispectral, Hyperspectral, and Ultraspectral Remote Sensing Technology, Techniques and Applications VII</b> <a href="http://spie.org/AE/conferencedetails/multispectral-hyperspectral-and-ultraspectral-remote-sensing?SSO=1">http://spie.org/AE/conferencedetails/multispectral-hyperspectral-and-ultraspectral-remote-sensing?SSO=1</a>

### Third Quarter, 2018

	September 24-28, 2018 Berlin, Germany	<b>European Astrobiology Conference (EANA 2018)</b> <a href="http://www.eana-net.eu/index.php?page=Conferences/EANA2018">http://www.eana-net.eu/index.php?page=Conferences/EANA2018</a>
	Sept. 30-Oct. 3, 2018 Flagstaff, AZ, USA	<b>Bombardment: Shaping Planetary Surfaces and Their Environments,</b> NCTS# 28520-18 <a href="https://www.hou.usra.edu/meetings/bombardment2018/">https://www.hou.usra.edu/meetings/bombardment2018/</a>

### Fourth Quarter, 2018

	October 1-3, 2018 Houston, TX, USA	<b>Late Mars Workshop,</b> NCTS# 34492-19 <a href="https://www.hou.usra.edu/meetings/latemars2018/">https://www.hou.usra.edu/meetings/latemars2018/</a>
<b>Updated!</b>	October 8-12, 2018 Moscow, Russia	<b>Ninth Moscow International Solar System Symposium (9M-S3)</b> <a href="https://ms2018.cosmos.ru/">https://ms2018.cosmos.ru/</a>
	October 9-11, 2018 Houston, TX, USA	<b>Europa Deep Dive 2: Composition,</b> NCTS# 34828-19 <a href="https://www.hou.usra.edu/meetings/europadeepdive2018/">https://www.hou.usra.edu/meetings/europadeepdive2018/</a>
	October 16-18 Glendale, CA, USA	<b>4th Mars 2020 Rover Landing Site Selection Workshop,</b> NCTS# 34492-19 <a href="https://marsnext.jpl.nasa.gov/workshops/wkshp_2018_10.cfm">https://marsnext.jpl.nasa.gov/workshops/wkshp_2018_10.cfm</a>
	October 21-26, 2018 Knoxville, TN, USA	<b>50th Meeting of the AAS Division for Planetary Sciences,</b> NCTS# 32241-19 <a href="https://aas.org/meetings/dps50">https://aas.org/meetings/dps50</a> <i>Hartmann Student Travel Grant: due July 12 <a href="https://dps.aas.org/meetings/hartmann-application">https://dps.aas.org/meetings/hartmann-application</a> — primarily intended for students, but also open to post-doctoral scientists.</i>
	November 4-7, 2018 Indianapolis, IN, USA	<b>2018 GSA Annual Meeting</b> <a href="https://www.geosociety.org/GSA/Events/Annual_Meeting/GSA/Events/gsa2018.aspx">https://www.geosociety.org/GSA/Events/Annual_Meeting/GSA/Events/gsa2018.aspx</a> <i>T51: Planetary Aeolian Geology from Outcrop to Orbit: Nathan Bridges Memorial Session</i>
	November 6-8, 2018 Laurel, MD, USA	<b>16th Venus Exploration Analysis Group meeting,</b> NCTS# 34829-19 <a href="https://www.lpi.usra.edu/vexag/">https://www.lpi.usra.edu/vexag/</a>
	November 26, 2018	<b>Insight landing</b>
	December 10-14, 2018 Washington, DC, USA	<b>American Geophysical Union Fall Meeting,</b> NCTS# 31561-19 <a href="https://fallmeeting.agu.org/2018/">https://fallmeeting.agu.org/2018/</a>

### 2019

<b>New!</b>	March 2-9, 2019 Big Sky ,MT	<b>IEEE Aerospace Conference</b> <a href="https://www.aeroconf.org/">https://www.aeroconf.org/</a>
	March 18-22, 2019 The Woodlands, TX, USA	<b>50th Lunar and Planetary Science Conference</b> <a href="https://www.hou.usra.edu/meetings/lpsc2019/">https://www.hou.usra.edu/meetings/lpsc2019/</a>
	March 26-28, 2019 Washington, DC, USA	<b>NASEM's Committee on Astrobiology and Planetary Science (CAPS)</b> <a href="http://sites.nationalacademies.org/SSB/SSB_067577#Meetings_and_Events">http://sites.nationalacademies.org/SSB/SSB_067577#Meetings_and_Events</a>
	July 22-26, 2019 Pasadena, CA, USA	<b>9th International Conference on Mars</b> <a href="https://www.hou.usra.edu/meetings/ninthmars2019/">https://www.hou.usra.edu/meetings/ninthmars2019/</a>
	September 11-12, 2019 Irvine, CA, USA	<b>NASEM's Committee on Astrobiology and Planetary Science (CAPS)</b> <a href="http://sites.nationalacademies.org/SSB/SSB_067577#Meetings_and_Events">http://sites.nationalacademies.org/SSB/SSB_067577#Meetings_and_Events</a>
	September 22-25, 2019 Phoenix, AZ, USA	<b>2019 GSA Annual Meeting</b> <a href="https://www.geosociety.org/GSA/Events/Annual_Meeting/GSA/Events/gsa2019.aspx">https://www.geosociety.org/GSA/Events/Annual_Meeting/GSA/Events/gsa2019.aspx</a>
	October 2019 [TBD]	<b>Habitability in the Solar System</b> <i>Date and location are not set yet—proposed: Yellowstone Nat'l Park, WY, USA</i>

**Seasons on Mars**

	<b>MY34</b>	<b>MY35</b>	<b>MY36</b>
<b>Start of Northern Spring / L<sub>s</sub> 0</b>	5/05/2017	3/23/2019	2/07/2021
<b>Start of Northern Summer / L<sub>s</sub> 90</b>	11/20/2017	10/08/2019	8/25/2021
<b>Start of Northern Autumn / L<sub>s</sub> 180</b>	5/22/2018	4/08/2020	2/24/2022
<b>Start of Northern Winter / L<sub>s</sub> 270</b>	10/16/2018	9/02/2020	7/21/2022

**Special holidays to consider when scheduling conferences/workshops/meetings**

Good Friday	3/30/2018	4/19/2019	4/10/2020	4/2/2021
Rosh Hashanah	9/10/2018	9/30/2019	9/19/2020	9/7/2021
Yom Kippur	9/19/2018	10/09/2019	9/28/2020	9/16/2021
(Note that Jewish holidays start at sundown the previous evening)				
Thanksgiving Day, Canada	10/08/2018	10/14/2019	10/12/2020	10/11/2021
Thanksgiving Day, U.S.	11/22/2018	11/28/2019	11/26/2020	11/25/2021
Christmas Day	12/25/2018	12/25/2019	12/25/2020	12/25/2021

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

Barbara Saltzberg at [Barbara.a.Saltzberg@jpl.nasa.gov](mailto:Barbara.a.Saltzberg@jpl.nasa.gov)

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