

# Mars Exploration Science Monthly Newsletter

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

December 2017

## Mars Science News

### Mars Missions Concepts for the Next Decade – a MEPAG Pre-Decadal Survey Forum

Forum: April 3, 2018 (preceding the regular meeting April 4-5)  
@ MEPAG meeting venue [TBC], Washington DC area

In preparation for the next Planetary Science Decadal Survey, MEPAG seeks to enable opportunities for identifying concepts in all mission classes that could make significant progress on compelling Mars science questions during 2023-2032. While the return of samples to be prepared by NASA's Mars 2020 rover continues to be a priority, there is a strong pool of concepts for (1) competed missions (including possible New Frontiers candidates), (2) small satellite missions enabled by strategic mission launch capabilities, and/or (3) follow-on flagship capabilities. These build on the extraordinary discoveries of past and ongoing missions, as well as new technological developments. MEPAG's goal is to generally support scientific mission concepts with enough detail to enable their serious consideration by the next Planetary Science Decadal Survey. The first event related to this aim will be a forum set aside on the first day of the next face-to-face MEPAG meeting (April 3-5, 2018). **The main goal of this forum will be to identify mission objectives and concepts that address high-priority Mars science questions, with an emphasis on the science that can be achieved** over the next two decades. These concepts would be presented (poster or short oral presentations) and discussed, with a summary overview and discussion included also in the regular meeting.

#### What do you need to do?

- To help us help gauge interest and scope, and to aid in planning this part of the MEPAG meeting, **please submit an expression of interest by end-of-day January 10, 2018, at <https://docs.google.com/forms/d/e/1FAIpQLSd7njskPVmtSxggbowL1wrZYvwIjmfA29W6cT87IBBOhMpgIQ/viewform>**. This webform requests your name, institution, email, and a tentative presentation title. (There is also room for additional comments about what you'd like to speak about and/or about the workshop itself.) Based in part on community response, we plan to distribute further instructions for actual concept submissions (e.g., a 0.5-1 page abstract) as well as more information about the aim and structure of the workshop by the end of January.
- Note that this forum is part of the MEPAG meeting. So, if applicable, be sure to **forecast your attendance** (see notice below).

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#### Forecasting reminder for Spring 2018 MEPAG meeting (April 3-5, 2018):

This is a reminder for all NASA/US Government employees and contractors to **forecast for the 2018 Spring MEPAG meeting (NCTS# 32452-18) before January 15** (and sooner is better). This 3-day MEPAG meeting will start with a one-day forum (April 3, see notice above). To be clear: if you wish to attend any portion of this MEPAG meeting (including the April 3 forum) and if you typically forecast your attendance at conferences such as LPSC, you must forecast before January 15.

## ISRU Technology Solicitation Notice and Virtual Forum

Please be aware of a recently posted NASA synopsis/solicitation notice describing the release of a new Appendix to the Next Space Technologies for Exploration Partnerships-2 (NextSTEP-2) Broad Agency Announcement (BAA). The In-Situ Resource Utilization (ISRU) Technology BAA Appendix seek proposals for trade studies, and for design, fabrication, and testing of ISRU component and subsystem technology. Note that minimum cost-sharing thresholds are required.

This ISRU Technology BAA solicitation was issued on Dec 4, 2017. A virtual Industry Forum is planned for Dec 11 at 1:00 pm EST. Details about the Industry Forum will be posted to the NextSTEP website (<https://www.nasa.gov/nextstep>). Additional background about NASA's ISRU activities is available at the following website: <https://www.nasa.gov/isru>.

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

| Due             | Project   |
|-----------------|---|
| December 10     | <b>Franco-Australian Astrobiology and Exoplanet School and Workshop</b> , Registration Deadline                           |
| December 15     | <b>Indication of Interest to serve on MEPAG Executive and Goals Committees</b>  |
| December 17     | <b>The Prebiotic Milieu Building the Evolution of Early Life</b> Registration Deadline                                    |
| January 9, 2018 | <b>49th Lunar and Planetary Science Conference</b> , Abstract Deadline  |
| January 9       | <b>NRC's Committee on Astrobiology and Planetary Science (CAPS)</b> , Abstract Deadline                                   |
| January 9       | <b>Planetary Science Deep Space SmallSat Studies</b> , Abstract Deadline  |
| January 10      | <b>MEPAG Forum</b> , Expression Of Interest   |
| January 10      | <b>European Geosciences Union General Assembly 2018</b> , Abstract Deadline   |
| January 16      | <b>2018 Southeastern Sectional Meeting of the Geological Society of America</b> , Abstract Deadline                       |
| January 19      | <b>Asia Oceania Geosciences Society</b> , Abstract Deadline   |
| January 20      | <b>Diversis Mundi (OPS-III): The Solar System in an Exoplanetary Context</b> , Registration Deadline                      |
| February 9      | <b>COSPAR 2018</b> , Abstract Deadline  |
| February 28     | <b>9th Workshop on Catastrophic Disruption in the Solar System (CD9)</b> , Abstract Deadline, Early 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 James Ashley ([James.W.Ashley@jpl.nasa.gov](mailto:James.W.Ashley@jpl.nasa.gov)).
- If no deadline is noted: it is usually 90 days in advance — 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.

### Fourth Quarter, 2017

|  |  |
|--|--|
| December 11-15, 2017<br>Pasadena, CA, USA    | <b>JWST Proposal and Planning Workshop</b><br><a href="#">JWST Proposal and Planning Workshop</a>  |
| December 11-15, 2017<br>New Orleans, LA, USA | <b>AGU Fall Meeting</b> NCTS# 28919-18<br><a href="https://fallmeeting.agu.org/2017/">https://fallmeeting.agu.org/2017/</a>                    |
| December 16-20, 2017<br>Canberra, Australia  | <b>Franco-Australian Astrobiology and Exoplanet School and Workshop</b><br><a href="http://faabexo.anu.edu.au/">http://faabexo.anu.edu.au/</a> |

## Upcoming Conferences and Workshops 2018

| First Quarter 2018   |   |   |
|--|---|---|
|  | January 9-11, 2018<br>Tokyo, Japan            | <b>Building Bridges from Earth to Life: From Chemical Mechanism to Ancient Biology</b><br><a href="https://elsi6sympo.com/">https://elsi6sympo.com/</a>   |
| <b>Updated!</b>  | January 10-12, 2018<br>Moffett Field, CA, USA | <b>Lunar Science for Landed Missions Workshop</b> NCTS# 31661-18<br><a href="https://lunar-landing.arc.nasa.gov/">https://lunar-landing.arc.nasa.gov/</a>   |
|  | January 14-19, 2018<br>Galveston, TX, USA     | <b>The Prebiotic Milieu Building the Evolution of Early Life</b><br><a href="https://www.grc.org/origins-of-life-conference/2018/">https://www.grc.org/origins-of-life-conference/2018/</a>                                       |
| <b>New!</b>  | January 17-18, 2018<br>Moffett Field, CA, USA | <b>18th Small Bodies Assessment Group Meeting</b><br><a href="https://www.lpi.usra.edu/sbag/meetings/">https://www.lpi.usra.edu/sbag/meetings/</a>  |
|  | February 12-16, 2018<br>Zurich, Switzerland   | <b>Water During Planet Formation and Evolution</b><br><a href="https://waterzurich.github.io/">https://waterzurich.github.io/</a>   |
|  | February 17-18, 2018<br>Ontario, Canada       | <b>Women in Planetary Science and Exploration</b> NCTS# 31744-18<br><a href="http://wpse2018.ca/">http://wpse2018.ca/</a>   |
|  | February 27-28, 2018<br>Madrid, Spain         | <b>From Mars Express to Exomars</b><br><a href="http://upwards.iaa.es/content/mars-express-exomars">http://upwards.iaa.es/content/mars-express-exomars</a>  |
|  | February 27-28, 2018<br>Houston, TX, USA      | <b>2nd COSPAR Workshop</b><br><a href="https://planetaryprotection.nasa.gov/COSPARHumans2018">https://planetaryprotection.nasa.gov/COSPARHumans2018</a>   |
|  | March 3-10, 2018<br>Big Sky, Montana, USA     | <b>IEEE Aerospace Conference</b> NCTS#30394-18<br><a href="http://www.aeroconf.org/">http://www.aeroconf.org/</a>   |
|  | March 5-9, 2018<br>Santiago, Chile            | <b>Diversis Mundi (OPS-III): The Solar System in an Exoplanetary Context</b><br><a href="http://www.eso.org/sci/meetings/2018/ops2018.html">http://www.eso.org/sci/meetings/2018/ops2018.html</a>                                 |
|  | March 18, 2018<br>The Woodlands, TX, USA      | <b>Planetary Science Deep Space SmallSat Studies</b> , NCTS# 32277-18<br><a href="https://www.hou.usra.edu/meetings/smallsat2018/">https://www.hou.usra.edu/meetings/smallsat2018/</a>  |
|  | March 19-23, 2018<br>The Woodlands, TX, USA   | <b>49th Lunar and Planetary Science Conference</b> NCTS# 30582-18<br><a href="https://www.hou.usra.edu/meetings/lpsc2018/">https://www.hou.usra.edu/meetings/lpsc2018/</a>  |
|  | March 27-29, 2018<br>Washington, DC, USA      | <b>NRC's Committee on Astrobiology and Planetary Sciences (CAPS)</b><br><a href="http://sites.nationalacademies.org/SSB/SSB_067577#Meetings_and_Events">http://sites.nationalacademies.org/SSB/SSB_067577#Meetings_and_Events</a> |

## Second Quarter, 2018

|   |   |  |
|---|---|--|
|    | April 3-5, 2018<br>Washington, DC, USA        | <b>MEPAG Face-to-Face Meeting</b> , NCTS # 32452-18<br><a href="https://mepag.jpl.nasa.gov">https://mepag.jpl.nasa.gov</a>   |
| <b>New!</b>   | April 8-13, 2018<br>Vienna, Australia         | <b>European Geosciences Union General Assembly 2018</b><br><a href="https://egu2018.eu/home.html">https://egu2018.eu/home.html</a>   |
| <b>New!</b>   | April 9-12, 2018<br>Cleveland, OH, USA        | <b>ASCE International Conference on Engineering, Science, Construction and Operations in Challenging Environments</b> <a href="http://earthspaceconf.mst.edu/">http://earthspaceconf.mst.edu/</a>  |
| <b>New!</b>   | April 12-13, 2018<br>Knoxville, TN, USA       | <b>2018 Southeastern Sectional Meeting of the Geological Society of America</b><br><a href="https://www.geosociety.org/GSA/Events/Section_Meetings/GSA/Sections/se/2018mtg/techprog.aspx">https://www.geosociety.org/GSA/Events/Section_Meetings/GSA/Sections/se/2018mtg/techprog.aspx</a> |
|   | April 13-16, 2018<br>Reno, NV, USA            | <b>SoCIA 2018: Social and Conceptual Issues in Astrobiology</b><br><a href="http://spaceref.com/calendar/calendar.html?pid=9490">http://spaceref.com/calendar/calendar.html?pid=9490</a>   |
|   | April 24-26, 2018<br>St. Louis, MO, USA       | <b>Planetary Science Informatics and Data Analytics</b><br><a href="https://psida.rsl.wustl.edu/">https://psida.rsl.wustl.edu/</a>   |
|    | April 25-27, 2018<br>Berlin, Germany          | <b>2nd International Mars Sample Return Conference</b>   |
|   | April 29-30, 2018<br>Paris, France            | <b>iCubeSat 2018 - The 7th Interplanetary CubeSat Workshop</b><br><a href="https://icubesat.org/">https://icubesat.org/</a>  |
|   | May 1-3, 2018<br>Columbia, MD, USA            | <b>Mercury Conference</b><br><a href="https://www.hou.usra.edu/meetings/mercury2018/">https://www.hou.usra.edu/meetings/mercury2018/</a>   |
|  | May 5, 2018<br>Vandenberg AFB, CA, USA        | <b>Insight launch window opens</b>   |
|   | May 7-11, 2018<br>San Gabriel Valley, CA, USA | <b>Differentiation: Building the Internal Architecture of Planets</b> , NCTS# 28518-18<br><a href="https://www.hou.usra.edu/meetings/differentiation2018/">https://www.hou.usra.edu/meetings/differentiation2018/</a>  |
|  | May 14-17, 2018<br>Toulouse, France           | <b>2018 European Lunar Symposium</b><br><a href="https://els2018.arc.nasa.gov/">https://els2018.arc.nasa.gov/</a>  |
|   | May 14-17, 2018<br>Kobe, Japan                | <b>9th Workshop on Catastrophic Disruption in the Solar System (CD9)</b><br><a href="http://www.impact-res.org/CD2018/Catastrophic_Disruption_2018/Welcome.html">http://www.impact-res.org/CD2018/Catastrophic_Disruption_2018/Welcome.html</a>  |
| <b>New!</b>   | May 21-24, 2018<br>Houston, TX, USA           | <b>Ocean Worlds 3: Water-silicate Interactions</b><br><a href="https://www.hou.usra.edu/meetings/oceanworlds2018/">https://www.hou.usra.edu/meetings/oceanworlds2018/</a>  |
|   | June 3-8, 2018<br>Honolulu, HI, USA           | <b>Asia Oceania Geosciences Society</b><br><a href="http://www.asiaoceania.org/aogs2018/public.asp?page=home.htm">http://www.asiaoceania.org/aogs2018/public.asp?page=home.htm</a><br>Session Title: <i>New views of ancient Mars</i>  |
|   | June 11-15, 2018<br>Boulder, CO, USA          | <b>15th International Planetary Probe Workshop (IPPW-15)</b><br><a href="https://www.colorado.edu/event/ippw2018/">https://www.colorado.edu/event/ippw2018/</a>  |
| <b>New!</b>   | June 12-15, 2018<br>Golden, CO, USA           | <b>Space Resources Roundtable</b><br><a href="http://www.isruinfo.com/">http://www.isruinfo.com/</a>   |
| <b>New!</b>   | June 12-15, 2018<br>Golden, CO, USA           | <b>Planetary &amp; Terrestrial mapping Science Symposium</b><br><a href="https://www.deltion.ca/ptmss">https://www.deltion.ca/ptmss</a>  |
| <b>New!</b>   | June 12-14, 2018<br>Knoxville, TN, USA        | <b>Planetary Geologic Mappers Annual Meeting</b><br><a href="https://www.hou.usra.edu/meetings/pgm2018/">https://www.hou.usra.edu/meetings/pgm2018/</a>  |
| <b>New!</b>   | June 12-15, 2018<br>Pasadena, CA, USA         | <b>Geobiology 2018</b><br><a href="http://web.gps.caltech.edu/GBcourse/">http://web.gps.caltech.edu/GBcourse/</a>  |
|  | June 18-22, 2018<br>Lakewood, CO, USA         | <b>Amazonian Climate Workshop</b><br><a href="https://www.hou.usra.edu/meetings/amazonian2018/">https://www.hou.usra.edu/meetings/amazonian2018/</a>   |

## Second Quarter, 2018

|             |   |   |
|-------------|---|---|
| <b>New!</b> | June 19-22, 2018<br>Kharkiv, Ukraine      | <b>Atmosphereless Solar System Bodies in the Space Exploration Era</b><br><a href="http://www.astron.kharkov.ua/conference/ssb/18/index.php">http://www.astron.kharkov.ua/conference/ssb/18/index.php</a> |
|             | June 23– July 1, 2018<br>Chamonix, France | <b>EUCOP 2018: 5th European Conference on Permafrost</b><br><a href="https://eucop2018.sciencesconf.org/">https://eucop2018.sciencesconf.org/</a>   |
| <b>New!</b> | June 23– July 1, 2018<br>Petnica, Serbia  | <b>Workshop in Geology and Geophysics in the Solar System</b><br><a href="http://petnica.rs/planetary2017/">http://petnica.rs/planetary2017/</a>  |
|             | June 24-29, 2018<br>Rotorua, New Zealand  | <b>Astrobiology Australasia Meeting</b><br><a href="#">Astrobiology Australasia Meeting</a>   |
| <b>New!</b> | June 26-28, 2018<br>Houston, TX, USA      | <b>NASA Exploration Science Forum 2018</b><br><a href="https://nesf2018.arc.nasa.gov/">https://nesf2018.arc.nasa.gov/</a>   |

## Third Quarter, 2018

|   |   |  |
|---|---|--|
|   | July 1-9, 2018<br>Denham, Australia         | <b>Astrobiology Grand Tour</b><br><a href="#">Astrobiology Grand Tour</a>  |
|   | July 14-22, 2018<br>Pasadena, CA, USA       | <b>COSPAR 2018</b> NCTS# 28500-18<br><a href="https://www.cospar-assembly.org/">https://www.cospar-assembly.org/</a>   |
|   | July 22-27, 2018<br>Moscow, Russia          | <b>81st Annual Meeting of The Meteoritical Society</b>   |
|  | August 7-9, 2018<br>Laurel, MD, USA         | <b>Lunar Polar Volatiles</b><br><a href="https://www.hou.usra.edu/meetings/lunarvolatiles2018/">https://www.hou.usra.edu/meetings/lunarvolatiles2018/</a>  |
| <b>New!</b>   | August 27-30, 2018<br>Houston, TX, USA      | <b>Comparative Climatology of Terrestrial Planets III</b><br><a href="https://nesf2018.arc.nasa.gov/">https://nesf2018.arc.nasa.gov/</a>   |
|  | September 11-14, 2018<br>Niseko, Japan      | <b>International Venus Conference 2018</b><br><a href="https://www.cps-jp.org/~akatsuki/venus2018/">https://www.cps-jp.org/~akatsuki/venus2018/</a>  |
|   | September 12-13, 2018<br>Irvine, CA, USA    | <b>NRC's Committee on Astrobiology and Planetary Science (CAPS)</b><br><a href="http://sites.nationalacademies.org/SSB/SSB_067577#Meetings_and_Events">http://sites.nationalacademies.org/SSB/SSB_067577#Meetings_and_Events</a> |
|   | Sept. 30-Oct. 3, 2018<br>Flagstaff, AZ, USA | <b>Bombardment: Shaping Planetary Surfaces and Their Environments,</b><br>NCTS# 28520-18 <a href="http://www.lpi.usra.edu/first-billion-years/">http://www.lpi.usra.edu/first-billion-years/</a>                                 |

## Fourth Quarter, 2018

|   |   |   |
|---|---|---|
|  | October 1-3, 2018<br>Houston, TX, USA       | <b>Late Mars Workshop</b><br><a href="https://www.hou.usra.edu/meetings/latemars2018/">https://www.hou.usra.edu/meetings/latemars2018/</a>  |
|   | November 4-7, 2018<br>Indianapolis, IN, USA | <b>2018 GSA Annual Meeting</b><br><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> |
|  | November 26, 2018                           | <b>Insight landing</b>  |

## Seasons on Mars

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

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

|   |            |            |            |          |
|---|------------|------------|------------|----------|
| Good Friday   | 4/14/2017  | 3/30/2018  | 4/19/2019  | 4/10/20  |
| Rosh Hashanah   | 9/21/2017  | 9/10/2018  | 9/30/2019  | 9/19/20  |
| Yom Kippur  | 9/30/2017  | 9/19/2018  | 10/09/2019 | 9/28/20  |
| (Note that Jewish holidays start at sundown the previous evening) |            |            |            |          |
| Thanksgiving Day, Canada  | 10/09/2017 | 10/08/2018 | 10/14/2019 | 10/12/20 |
| Thanksgiving Day, U.S.  | 11/23/2017 | 11/22/2018 | 11/28/2019 | 11/26/20 |
| Christmas Day   | 12/25/2017 | 12/25/2018 | 12/25/2019 | 12/25/20 |

## Editors

|                   |  |              |
|-------------------|--|--------------|
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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)

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 this newsletter is sent out to, please send an email from your email account to [mepag-removesignup@jpl.nasa.gov](mailto: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), please fill out the online form: [mepag-signup@jpl.nasa.gov](mailto:mepag-signup@jpl.nasa.gov) (also linked on the MEPAG website <http://mepag.nasa.gov/>, under Updates).