

# Mars Exploration Science Monthly Newsletter

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

December 2016

## Mars Science News

### **First Circular posted for MEPAG Meeting 33**

February 22-23, 2017 @ Monrovia, CA

Jeffrey Johnson, MEPAG Chair, cordially invites members of the Mars science and exploration communities, including our international colleagues, to attend the 2017 face-to-face meeting of the Mars Exploration Program Analysis Group (MEPAG), scheduled for February 22-23, 2017, at the Double-Tree Hotel in Monrovia, CA. The meeting will also be webcast for those who cannot attend in-person. The full first circular has been posted at <http://mepag.nasa.gov/meetings.cfm?expand=m33> — additional information about the meeting, as it becomes available, will be posted there.

This meeting will report on the overall status of Mars exploration. A special topic for discussion will be the final report from the **Mars International Collaboration Science Analysis Group** (MIC-SAG, see 2nd page of this newsletter) summarizing their recommendations on how to coordinate U.S. and international science and payload participation in the next orbiter mission to Mars in a manner that ensures completion of mission science objectives.

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### **Congratulations to the ExoMars Trace Gas Orbiter Project!**

Here is ESA's press release on the early (check-out) results of the Trace Gas Orbiter — their first observations from within Mars orbit: [http://www.esa.int/Our\\_Activities/Space\\_Science/ExoMars/First\\_views\\_of\\_Mars\\_show\\_potential\\_for\\_ESA\\_s\\_new\\_orbiter](http://www.esa.int/Our_Activities/Space_Science/ExoMars/First_views_of_Mars_show_potential_for_ESA_s_new_orbiter).

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### **Call for presentations issued for 3rd 2020 Mars Rover Landing Site Workshop**

February 8-10, 2017 @ Monrovia, CA

The 3rd landing site workshop for the 2020 Mars Rover mission will be held at the [Doubletree Hotel, Monrovia, CA](#), on February 8-10, 2017. Presentations are solicited on the science merits of the eight remaining candidate landing sites for the Mars 2020 mission. The full second announcement/call for presentations, workshop logistics, and a request for registration can be found at: [http://marsnext.jpl.nasa.gov/workshops/wkshp\\_2017\\_02.cfm](http://marsnext.jpl.nasa.gov/workshops/wkshp_2017_02.cfm). Prior science presentations and information about how the 2020 engineering constraints relate to these eight (and other) candidate 2020 landing sites can be found at <http://marsnext.jpl.nasa.gov/>.

The primary goal of the third workshop will be to further evaluate the eight candidate landing sites that emerged from the second workshop and reduce the number of candidate sites remaining under consideration to three or four. **Presenters at the workshop are expected to make a comprehensive, persuasive talk on why a specific site is the right one for the 2020 mission and payload, including how and where the science objectives of the mission can be accomplished.**

Persons wishing to make a presentation at the workshop should submit the title of their talk to [John Grant](#) and [Matt Golombek](#) by **January 13, 2017**. We request that persons planning to attend register by **January 31, 2017** at: <https://docs.google.com/forms/d/e/1FAIpQLSdP6JzSQISvaptQQUtDgUVaNT87VRwj9kagfduuY2tUM8HQdQ/viewform>, to aid with logistics.

A hotel block has been arranged at the workshop venue: DoubleTree by Hilton Hotel Monrovia - Pasadena Area, 924 West Huntington Drive, Monrovia, California, 91016, USA +1-626-357-1900. To book a room at \$159/night (plus taxes and fees) during February 7-12, please call the hotel and reference the "JPL-MEPAG" meeting, or reserve a room via the link provided on [the meeting webpage](#).

## ***Mars International Collaboration (MIC) SAG requests community input***

At [MEPAG meeting 32](#), Jim Watzin, the Director for NASA's Mars Exploration Program, requested that MEPAG convene a study to analyze and make recommendations regarding science team organization and operational models for the next Mars Orbiter. Thus, the Mars International Collaboration Science Analysis Group (MIC-SAG) was initiated and will provide a report outlining different models and the advantages/disadvantages of each. The MIC-SAG Terms of Reference and membership list are below.

As part of this effort, this group invites comments from Mars community members about their experiences within different science team models involving collaboration between a range of stakeholders -- including but not limited to experiences with multi-instrument, international, and/or commercial partners within science collection. To participate in this short survey, please visit <https://docs.google.com/forms/d/e/1FAIpQLSeAhNsNpTdjWueePbNRIMpLJSPW5oK57ZYxl0uagZtLIA8XLg/viewform>. Comments will be accepted until **January 15, 2017**, and can be provided anonymously.

### ***Mars International Collaboration Science Analysis Group Terms of Reference***

Accepted November 11, 2016

The next orbiter mission to Mars may be extremely cost constrained and could be limited in the number of US instruments that can be selected.

**Goal** – To increase participation and coordination in contributed and selected instruments during design, development and operations of the next orbiter mission to Mars and, by doing so, to ensure that the science objectives will be met and that the international Mars science community will be maintained and enhanced.

The Mars International Collaboration Science Analysis Group (MIC-SAG) will consider the process of selection and the roles of science team members of an orbiter team to design, develop, integrate, and operate payload elements, the majority of which may be provided by international and/or commercial partners reducing significant costs to NASA.

The significant challenges that the study group will address include:

- How to organize an international team so that high-priority science is conducted to advance the goals of NASA and MEP, and be consistent with recommendations of the [Decadal Survey](#), guided in part by the [Next Mars Orbiter Science Analysis Group report \(2015\)](#);
- How to craft opportunities for U.S. scientists while forming collaborations with international and commercial partners;
- How to select an effective science team that preserves the science integrity of the mission through design, development and mission operations, perhaps including phasing of its members;
- How to capture different modes of scientist participation to compare and contrast.

The MIC-SAG is requested to develop different models for scientists' participation in the mission and delineate the pros and cons of the different approaches.

#### **MIC-SAG members**

Bruce Jakosky (Chair, CU/LASP)	
Jim Bell (ASU)	Don Hassler (SWRI)
Barbara Cohen (MSFC)	Alfred McEwen (UA/LPL)
Joy Crisp (JPL)	Kim Seelos (APL)
Frank Eparvier (LASP)	Roger Yelle (UA/LPL)

#### **MIC-SAG ex-officio members**

Rich Zurek (Lead; MPO)
Serina Diniega (MPO)
Jeffrey Johnson (MEPAG Chair)
Michael Meyer (MEP Lead Scientist)

## ***3rd Planetary Data Workshop: June 12-25, 2017***

The 3rd Planetary Data Workshop will be held in Flagstaff, AZ to cover a range of planetary data topics, including mission data availability and tools, data access capabilities, data user training, GIS, planetary mapping, PDS data, services, and capabilities. Please submit an [Indication of Interest](#) by Friday, February 10, 2017, to receive reminders about this meeting.

## Call for Papers: Icarus Special Issue on Mars polar research

The Scientific Organizing Committee of the [Sixth International Conference on Mars Polar Science and Exploration](#) is organizing a special issue of *Icarus* related to Mars Polar research. In recognition of the broad scope, interdisciplinary nature, and strong international interest in this topic, they welcome the participation of any interested scientist with relevant theoretical, experimental, or field experience. This special issue is open to all interested authors with Mars Polar related research to publish, whether they attended the conference or not. Please email questions or notices of intent to guest editors, [Adrian Brown](#) and [Michael Sori](#).

Manuscripts should be submitted through [Icarus' EVISE website](#); Authors must select “**Mars Polar Science VI**” when they reach the “Article Type” step in the submission process. The paper submission deadline is **February 1, 2017**, with final publication of the Special Issue in Fall 2017.

## Planetary Science Vision 2050 Workshop

February 27-March 1, 2017 @ NASA HQ, Washington DC

<http://www.hou.usra.edu/meetings/V2050/>

NASA's Planetary Science Division (PSD) is planning a community workshop that is meant to provide PSD with a very long-range vision of what planetary science may look like in the future. The workshop will gather the leading experts in Solar System planetary science and related disciplines, together with experts in space technologies, to identify potential science goals and enabling technologies that can be implemented by the end of the 2040s and would support the next phase of Solar System exploration. **Participation in this workshop will be space-limited and requires submission of an abstract.** Abstracts are due **December 9, 2016**.

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

Due	Project
December 9	<b>Planetary Science Vision 2050 Workshop</b> , Abstract deadline
January 10	<b>Lunar and Planetary Science Conference</b> , Abstract deadline
January 11	<b>European Geosciences Union General Assembly</b> , Abstract deadline
January 13	<b>3rd Mars 2020 Rover Landing Site Selection Workshop</b> , Presentation Title deadline
January 18	<b>AbSciCon</b> , Abstract deadline
February 14	<b>2017 GSA Cordilleran Section</b> , Abstract 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 Meredith Cosby ([Meredith.A.Cosby@jpl.nasa.gov](mailto:Meredith.A.Cosby@jpl.nasa.gov)).
- If no deadline is noted: it is usually 90days 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 if 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, 2016

December 5-6, 2016 Irvine, CA, USA	<b>Academies' Search for Life Workshop/A Workshop on Searching for Life Across Space and Time</b> <a href="http://SearchingForLife.eventbrite.com">http://SearchingForLife.eventbrite.com</a> , For those unable to attend in person, the live workshop webcast will be available at: <a href="https://livestream.com/accounts/15221519/events/6098927">https://livestream.com/accounts/15221519/events/6098927</a>
December 12-16, 2016 San Francisco, CA, USA	<b>AGU Fall Meeting</b> <a href="http://fallmeeting.agu.org/2016/">http://fallmeeting.agu.org/2016/</a> , NCTS# 25415-17

## First Quarter, 2017

	January 2-3, 2017 Grapevine, TX, USA	<b>Exoplanets Exploration Program Analysis Group (ExoPAG) meeting</b> <a href="https://exoplanets.nasa.gov/exep/events/159/">https://exoplanets.nasa.gov/exep/events/159/</a>
	January 11-13, 2017 Tucson, AZ, USA	<b>16th Meeting of the NASA Small Bodies Assessment Group (SBAG)</b> <a href="http://www.lpi.usra.edu/sbag/">http://www.lpi.usra.edu/sbag/</a> NCTS# 27699-17
	January 11-13, 2017 Boulder, CO, USA	<b>The Dust, Atmosphere and Plasma Environment of the Moon and Small Bodies Workshop</b> <a href="http://impact.colorado.edu/dap_meeting.html">http://impact.colorado.edu/dap_meeting.html</a>
	January 17-20, 2017 Granada, SPAIN	<b>Sixth International Workshop on the Mars Atmosphere: Modelling and Observations</b> <a href="http://www-mars.lmd.jussieu.fr/granada2017/">http://www-mars.lmd.jussieu.fr/granada2017/</a> , NCTS# 26193-17
<b>New!</b>	January 31—February 1, 2017 Kiruna, SWEDEN	<b>Mars Express Science Working Team Meeting</b> Contact Dmitri Titov ( <a href="mailto:dmitri.titov@esa.int">dmitri.titov@esa.int</a> )
	February 8-10, 2017 Pasadena, CA, USA	<b>Mars 2020 Rover Third Landing Site Workshop</b> <a href="http://marsnext.jpl.nasa.gov">http://marsnext.jpl.nasa.gov</a> , NCTS# 26193-17
	February 22-23, 2017 Monrovia, CA, USA	<b>Mars Exploration Program Analysis Group (MEPAG) Meeting 33</b> <a href="http://mepag.jpl.nasa.gov/meetings.cfm">http://mepag.jpl.nasa.gov/meetings.cfm</a>
<b>Updated!</b>	February 22-23, 2017 Atlanta, GA, USA	<b>Outer Planets Assessment Group (OPAG) Meeting</b> <a href="http://www.lpi.usra.edu/opag/">http://www.lpi.usra.edu/opag/</a> NCTS# 28089-17
	February 27-March 1, 2017 Washington, DC, USA	<b>Planetary Science Vision 2050 Workshop</b> <a href="http://www.hou.usra.edu/meetings/V2050/">http://www.hou.usra.edu/meetings/V2050/</a> NCTS# 28002-17
	March 4-11, 2017 Big Sky, MT, USA	<b>IEEE Aerospace Conference</b> <a href="https://www.aeroconf.org/">https://www.aeroconf.org/</a> , NCTS# 26165-17
	March 20-24, 2017 The Woodlands, TX, USA	<b>Lunar and Planetary Science Conference</b> <a href="http://www.hou.usra.edu/meetings/lpsc2017/">http://www.hou.usra.edu/meetings/lpsc2017/</a> , NCTS# 26280-17
	March 28-30, 2017 Washington, DC, USA	<b>NRC's Committee on Astrobiology and Planetary Science (CAPS)</b>

## Second Quarter, 2017

<b>New!</b>	April 23—28, 2017 Vienna, AUSTRIA	<b>European Geosciences Union General Assembly</b> <a href="http://www.egu2017.eu/">http://www.egu2017.eu/</a> NCTS# 27025-17 PS8.2: Hyperspectral Data Measurements and Analysis to Support Planetary Exploration
	April 24-27, 2017 Phoenix, AZ, USA	<b>Astrobiology Science Conference</b> <a href="http://www.hou.usra.edu/meetings/abscicon2017/">http://www.hou.usra.edu/meetings/abscicon2017/</a> , NCTS# 27507-17
	May 15-19, 2017 Boulder, CO, USA	<b>International Conference on Mars Aeronomy</b> <a href="http://lasp.colorado.edu/meetings/marsaeronomy2017/index.php">http://lasp.colorado.edu/meetings/marsaeronomy2017/index.php</a> , NCTS# 26278-17
	May 16-19, 2017 St. George, UT, USA	<b>Fifth International Planetary Dunes Workshop</b> <a href="http://www.hou.usra.edu/meetings/dunes2017/">http://www.hou.usra.edu/meetings/dunes2017/</a>

### Second Quarter, 2017—cont.

<b>New!</b>	May 23—25, 2017 Honolulu, HI, USA	<b>2017 GSA Cordilleran Section</b> <a href="https://www.geosociety.org/GSA/Sections/cd/2017mtg/home.aspx">https://www.geosociety.org/GSA/Sections/cd/2017mtg/home.aspx</a> T16 New Developments in the Geology and Geochemistry of Mars, T17 Volcanism Across the Solar System, T18 Deposition and Diagenesis of Volcaniclastic Sediments on Earth and Mars, T19 Mars On Earth: Understanding Mars Through Earth Surface Processes
<b>Updated!</b>	May 30-31, 2017 Cambridge, UK	<b>6th Interplanetary CubeSat Workshop</b> <a href="https://icubesat.org">https://icubesat.org</a> NCTS# 27834-17
	June 13-15, 2017 Greenbelt, MD, USA	<b>17th Meeting of the NASA Small Bodies Assessment Group</b> <a href="http://www.lpi.usra.edu/sbag/">http://www.lpi.usra.edu/sbag/</a>
	June 12-16, 2017 The Hague, Netherlands	<b>14th International Planetary Probe Workshop (IPPW-14)</b>

### Third-Fourth Quarter, 2017

<b>Updated!</b>	July 13-15, 2017 Houston, TX, USA	<b>Dust in the Atmosphere of Mars and Its Impact on the Human Exploration of Mars</b> <a href="http://www.hou.usra.edu/meetings/marsdust2017/">http://www.hou.usra.edu/meetings/marsdust2017/</a> NCTS#28194-17
	July 24-27, 2017 Santa Fe, NM, USA	<b>Meteoritical Society Meeting</b> <a href="http://meteoriticalsociety.org/?page_id=18">http://meteoriticalsociety.org/?page_id=18</a>
<b>New!</b>	August 22 –25, 2017 Houston, TX, USA	<b>Accretion: Building New Worlds</b> <a href="http://www.hou.usra.edu/meetings/accretion2017/">http://www.hou.usra.edu/meetings/accretion2017/</a>
	September 13-14, 2017 Washington, DC, USA	<b>NRC'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>
<b>New!</b>	September 25—29, 2017 Adelaide, AUSTRALIA	<b>68th International Astronautical Congress</b> <a href="http://www.iac2017.org/">http://www.iac2017.org/</a> NCTS# 27783-17
	December 11-15, 2017 New Orleans, LA, USA	<b>American Geophysical Union Fall Meeting (AGU)</b>

### Seasons on Mars

	MY34	MY35	MY36
<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	3/25/2016	4/14/2017	3/30/2018	4/19/2019
Rosh Hashanah	10/03/2016	9/21/2017	9/10/2018	9/30/2019
Yom Kippur	10/12/2016	9/30/2017	9/19/2018	10/09/2019
(Note that Jewish holidays start at sundown the previous evening)				
Thanksgiving Day, Canada	10/10/2016	10/09/2017	10/08/2018	10/14/2019
Thanksgiving Day, U.S.	11/24/2016	11/23/2017	11/22/2018	11/28/2019
Christmas Day	12/25/2016	12/25/2017	12/25/2018	12/25/2019

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

Meredith Cosby at [Meredith.A.Cosby@jpl.nasa.gov](mailto:Meredith.A.Cosby@jpl.nasa.gov).

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

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