

# Mars Exploration Science Monthly Newsletter

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

August 2015

## Mars Science News

### **3rd Announcement for the 2nd Landing Site Workshop for the Mars 2020 Rover**

August 4-6, 2015

DoubleTree, Monrovia, CA

The Second Landing Site Workshop for the 2020 Mars Rover mission will be held at the Doubletree Hotel, Arcadia, CA, on August 4-6, 2015. All members of the scientific community are encouraged to participate in the Mars 2020 site selection process. The primary goal of the second workshop will be to evaluate the ~30 candidate landing sites that emerged from the first workshop as well as any new sites proposed. The full text of the Third Announcement, agenda, remote connection information, and workshop logistics have been posted at: <http://marsnext.jpl.nasa.gov/>.

### **Final report of MEPAG HSO-SAG has been posted**

The final report of the Scientific Objectives for the Human Exploration of Mars Science Analysis Group (MEPAG HSO-SAG), "Candidate Scientific Objectives for the Human Exploration of Mars, and Implications for the Identification of Martian Exploration Zones" is now posted on the MEPAG website:

<http://mepag.jpl.nasa.gov/reports/HSO%20summary%20presentation%20FINAL.pdf>

This SAG was tasked with preparing an update to the forecast of our state of scientific knowledge of Mars (as of 5-8 years ahead of a human mission to be launched in the mid-2030s), preparing an update to the analysis of the most efficient methods for using robots and humans to perform scientific fieldwork on Mars, and preparing an updated analysis of the options and priorities for scientific objectives that could be logically and productively assigned to recurring human missions to the Martian surface. An additional task, describing the criteria that could be used to identify science sites of interest for future human exploration, has feed directly into the science region of interest criteria for the First Landing Site/Exploration Zone Workshop for Human Missions to the surface of Mars (<http://www.hou.usra.edu/meetings/explorationzone2015/> - below).

### **2nd Announcement of the First Landing Site/Exploration Zone Workshop for Human Missions to the Surface of Mars**

October 27-30, 2015

Lunar Planetary Institute (LPI), Houston TX

The purpose of this workshop is to identify and discuss candidate locations where humans could land, live and work on the martian surface. NASA hopes to engage scientists, technologists and experts in human exploration during the conference, fostering collaboration among the teams that will enable humans to explore Mars in the coming decades. Potential "Exploration Zones" will need to offer compelling science research while also providing resources that our astronauts can take advantage of during their pioneering of the Red Planet. First explorers will be limited to about 60 miles (100 km) of travel from their landing site due to life support and exploration technology requirements. The 2nd announcement provides the details on how to participate in the workshop. For More Information:

<http://www.nasa.gov/sites/default/files/atoms/files/second-landing-site-announcement.pdf>

<http://www.hou.usra.edu/meetings/explorationzone2015/>

## **Some Mars-relevant GSA sessions**

Abstract submission deadline: August 11, 2015

GSA meeting: November 1-4, 2015 in Baltimore, MD

Abstracts are due August 11. <http://www.geosociety.org/meetings/2015/sessions/topical.asp>.

### **T132: Mineralogy of Diagenesis on Earth and Mars: In Honor of Nicolas J. Tosca, 2015 MSA Awardee**

This session honoring Nick Tosca, winner of the 2015 MSA Award, will be devoted to recent experimental, theoretical, and observational advances in characterizing and interpreting the mineralogical relationships developed during aqueous diagenesis on both Earth and Mars.

### **T171. Exploring the Sedimentary Rock Record of Mars**

This forum will discuss advances in the study of Mars' ancient sedimentary rock record and will explore implications for surface processes and paleoenvironmental settings of Early Mars. Contributions relating to the study of sedimentary rocks on Mars through the analysis of rover, orbiter, and meteorite data are welcomed and encouraged.

### **T177. When Water Meets Rock: Aqueous Alteration in the Solar System**

On Earth reaction pathways of water-rock reactions can be observed directly, but elsewhere in the solar system we are often left with the mineralogical and geochemical products of these interactions to interpret the processes. For planetary aqueous environments, such as Mars, carbonaceous chondrites, and comets/asteroids, big picture questions include: (1) whether observed aqueous minerals formed at the surface or in the subsurface and under ambient or hydrothermal conditions and (2) the durations and volumes of liquid water involved. The goal is to explore how exciting new results from mineralogic and geochemical studies based on orbital and landed measurements integrate with field, laboratory, meteoritical, and modeling investigations that address aqueous processes on planetary bodies.

### **The G. K. Gilbert award session**

This year's G. K. Gilbert awardee is Dr. Matt Golombek, from the Jet Propulsion Laboratory, and the session will focus on the topic of "Understanding Mars' geology, from orbiter to rover-based exploration." The session is focused on the expanded view of Martian surface geology afforded by mobile robotic platforms, including the Mars Pathfinder, Mars Exploration Rovers, and the Mars Science Laboratory missions. To submit to this session, please submit abstracts to the discipline pool and email the session co-chairs ([Debra Buczkowski](#) and [Devon Burr](#)) to let us know of your desire to present in the Gilbert session.

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## **Travel Grant available for students with Mars-related interests, for 2nd International Planetary Caves Conference**

Application due August 6, 2015 (abstract deadline)

Conference is October 20-23, 2015, in Flagstaff, AZ

The NASA Mars Program Office has announced that travel funding will be made available for up to three (3) undergraduate and graduate students who are U.S. citizens or legal residents, with Mars-related interests, to attend this workshop. The student travel grants are competitive and will reimburse travel expenses; awardees will also have the registration fee waived. Applications are due August 6, 2015 (same as the abstract deadline). NASA Headquarters will make the selections and students will be notified by the start of September. See the [MEPAG Student Opportunities](#) page for more information and the application. Questions about this program should be directed to Dr. Serina Diniega ([Serina.Diniega@jpl.nasa.gov](mailto:Serina.Diniega@jpl.nasa.gov)).


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

Due	Project
August 5	<b>AGU Fall Meeting</b> Abstract deadline
August 6	<b>2nd International Planetary Caves Conference</b> Abstract and Student Travel Grant Application deadline
August 11	<b>Geological Society of America Annual Meeting</b> Abstract deadline
August 25	<b>47th Meeting of the American Astronomical Society Division for Planetary Sciences (DPS 2015)</b> Abstract deadline
September 15	<b>Missions to Habitable Worlds</b> Registration deadline
September 28	<b>Geological Society of America Annual Meeting</b> Registration deadline

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

- “Conference” organizers: if we do not have it listed and you know this information, please forward the NCTS# (along with forecasting deadline, if known) to Meredith Cosby.
- Forecasters: when no deadline is noted, it is usually 90days in advance — sometimes further in advance if the conference is “Heavily Attended.” Also, 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.



## Upcoming Conferences and Workshops

Third Quarter, 2015		
	August 4-6, 2015 Pasadena, CA, USA	<b>2nd Landing Site Workshop for the Mars 2020 Rover</b> <a href="http://marsnext.jpl.nasa.gov/">http://marsnext.jpl.nasa.gov/</a> , NCTS# 22464-15
	August 10-12, 2015 Pasadena, CA, USA	<b>27th Annual Planetary Science Summer School</b> <a href="http://pscischool.jpl.nasa.gov">http://pscischool.jpl.nasa.gov</a>
	August 12-14, 2015 Flagstaff, AZ, USA	<b>6th Planetary Crater Consortium</b> <a href="http://www.planetarycraterconsortium.nau.edu/">www.planetarycraterconsortium.nau.edu/</a> , NCTS# 21792-15
	August 16-21, 2015 Prague, CZ	<b>Goldschmidt 2015</b> <a href="http://goldschmidt.info/2015/">http://goldschmidt.info/2015/</a>
<b>Updated</b>	September 3, 2015 Pasadena, CA	<b>Mars 2001 Odyssey PSG</b>
	September 8-11, 2015 Moffett Field, CA, USA	<b>Comparative Climates of Terrestrial Planets II</b> <a href="http://cctp2.arc.nasa.gov/">http://cctp2.arc.nasa.gov/</a> , NCTS# 22053-15
	September 16-17, 2015 Irvine, CA, USA	<b>NRC's Committee on Astrobiology and Planetary Science (CAPS)</b>
	September 21-26, 2015 Freiberg, GERMANY	<b>The Bridging the Gap III: Impact Cratering in Nature, Experiments and Modeling</b> <a href="http://www.hou.usra.edu/meetings/gap2015/">http://www.hou.usra.edu/meetings/gap2015/</a>
	September 27-October 2, 2015 Nantes, FRANCE	<b>European Planetary Science Congress</b> <a href="http://www.epsc2015.eu/home.html">http://www.epsc2015.eu/home.html</a> , NCTS# 21623-15

### Fourth Quarter, 2015

	October 6-9, 2015 Noordwijk, NETHERLANDS	<b>European Astrobiology Network Association (EANA15)</b> <a href="http://www.eana-net.eu/Conferences/EANA2015.html">http://www.eana-net.eu/Conferences/EANA2015.html</a>
	October 20-22, 2015 Columbia, MD	<b>2015 Meeting of Lunar Exploration Analysis Group</b> <a href="http://www.hou.usra.edu/meetings/leag2015/">http://www.hou.usra.edu/meetings/leag2015/</a> , NCTS# 23063-16
	October 20-23, 2015 Flagstaff, AZ, USA	<b>2nd International Planetary Caves Conference</b> <a href="http://www.hou.usra.edu/meetings/2ndcaves2015/">http://www.hou.usra.edu/meetings/2ndcaves2015/</a>
	October 20-22, 2015 Noordwijk, NETHERLANDS	<b>Third ExoMars 2018 Landing Site Selection Workshop</b> <a href="http://exploration.esa.int/mars/55991-third-exomars-2018-landing-site-selection-workshop/">http://exploration.esa.int/mars/55991-third-exomars-2018-landing-site-selection-workshop/</a>
	October 27-29, 2015 Washington DC, USA	<b>13th Meeting of the Venus Exploration Analysis Group</b> <a href="http://www.lpi.usra.edu/vexag/meetings/upcoming/">http://www.lpi.usra.edu/vexag/meetings/upcoming/</a> , NCTS code #22676-16
	October 28-29, 2015 Budapest, HUNGARY	<b>Missions to Habitable Worlds</b> <a href="http://life-origins2015.csfk.mta.hu/">http://life-origins2015.csfk.mta.hu/</a>
	November 1-4, 2015 Baltimore, MD, USA	<b>Geological Society of America Annual Meeting</b> <a href="http://community.geosociety.org/gsa2015/home">http://community.geosociety.org/gsa2015/home</a> , NCTS# 22522-16
	November 8-13, 2015 National Harbor, MD, USA	<b>47th Meeting of the American Astronomical Society Division for Planetary Sciences (DPS 2015)</b> <a href="http://aas.org/meetings/dps47">http://aas.org/meetings/dps47</a> , NCTS# 22069-16
	November 9-13, 2015 Foz do Iguacu, BRAZIL	<b>2nd Symposium of the Committee on Space Research (COSPAR 2015): Water and Life in the Universe</b>
	December 9-10, 2015 Noordwijk, NETHERLANDS	<b>Mars Express Science Working Team Meeting</b>
	December 14-18, 2015 San Francisco, CA, USA	<b>AGU Fall Meeting</b> <a href="http://fallmeeting.agu.org/2015/">http://fallmeeting.agu.org/2015/</a> , NCTS# 22185-16

### First Quarter, 2016

	January 7, 2016	<b>20-Day ExoMars Launch Period Opens</b>
	March 4, 2016	<b>20-Day Insight Launch Window Opens</b>
	March 5-12, 2016 Big Sky, MT, USA	<b>IEEE Aerospace Conference</b> <a href="http://www.aeroconf.org/">http://www.aeroconf.org/</a> , NCTS# 22854-16
	March 21-25, 2016 The Woodlands, TX, USA	<b>Lunar and Planetary Science Conference (LPSC)</b> <a href="http://www.hou.usra.edu/meetings/lpsc2016/">http://www.hou.usra.edu/meetings/lpsc2016/</a> , 23351-16
	March 29-31, 2016 Washington DC, USA	<b>NRC's Committee on Astrobiology and Planetary Science (CAPS)</b>

## Second Quarter, 2016

	April 4-8, 2016 Oxford, UK	<b>International Venus Conference</b> <a href="http://venus2016.uk/">http://venus2016.uk/</a>
<b>New!</b>	April 11-15, 2016 Orlando, FL, USA	<b>ASCE Earth and Space 2016 Conference:</b> 15th Biennial ASCE International Conference on Engineering, Science, Construction, and Operations in Challenging Environments <a href="http://earthspaceconf.mst.edu/">http://earthspaceconf.mst.edu/</a> , 23397-16 Of particular interest -- Symposium 1: Granular Materials in Space Exploration, Symposium 2: Exploration and Utilization of Extraterrestrial Bodies
<b>New!</b>	April 12-15, 2016 Noordwijk, NETHERLANDS	<b>Water in the Universe: From Clouds to Oceans</b> <a href="http://www.congrexprojects.com/2016-events/16a06">http://www.congrexprojects.com/2016-events/16a06</a>
	May 24-25, 2016 Oxford, UK	<b>iCubeSat 2016, the 5th Interplanetary CubeSat Workshop</b> <a href="http://icubesat.org/">http://icubesat.org/</a>

## Third-Fourth Quarters, 2016

	July 30-August 7, 2016 Istanbul, TURKEY	<b>41st Scientific Assembly of the Committee on Space Research (COSPAR 2016) and Associated Events</b> <a href="http://www.cospar-assembly.org">http://www.cospar-assembly.org</a>
	August 7-12, 2016 Berlin, GERMANY	<b>Annual Meetings of the Meteoritical Society</b>
	September 5-9, 2016 Reykjavik, ICELAND	<b>6th International Conference on Mars Polar Science and Exploration</b>
	September 14-15, 2016 Irvine, CA, USA	<b>NRC's Committee on Astrobiology and Planetary Science (CAPS)</b>
	September 28, 2016	<b>Insight Arrival at Mars</b>
	October 16-21, 2016 Pasadena, CA, USA	<b>Joint DPS-EPSC Meeting</b>
	October 19, 2016	<b>ExoMars 2016 (TGO and EDM) Arrival at Mars</b>

## Seasons on Mars

	MY33	MY34	MY35
<b>Start of Northern Spring / L<sub>s</sub> 0</b>	6/18/2015	5/05/2017	3/23/2019
<b>Start of Northern Summer / L<sub>s</sub> 90</b>	1/03/2016	11/20/2017	10/08/2019
<b>Start of Northern Autumn / L<sub>s</sub> 180</b>	7/04/2016	5/22/2018	4/08/2020
<b>Start of Northern Winter / L<sub>s</sub> 270</b>	11/28/2016	10/16/2018	9/02/2020

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

Good Friday	4/3/2015	3/25/2016	4/14/2017	3/30/2018
Rosh Hashanah	9/14/2015	9/16/2016	9/20/2017	9/10/2018
Yom Kippur	9/23/2015	9/25/2016	9/29/2017	9/19/2018

(Note that Jewish holidays start at sundown the previous evening)

Thanksgiving Day, Canada	10/12/2015	10/8/2016	10/9/2017	10/8/2018
Thanksgiving Day, U.S.	11/26/2015	11/22/2016	11/23/2017	11/22/2018
Christmas Day	12/25/2015	12/25/2016	12/25/2017	12/25/2018

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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), 818-354-0226.

All announcements listed in this newsletter will be posted on the MEPAG website, available at:

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