# Mars Exploration Science Monthly Newsletter

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

December 2015

## Mars Science News

#### 31st MEPAG meeting -- Save the Date

March 2-3, 2016

Silver Spring, MD

Please save the date for the 31st MEPAG meeting, to be held March 2-3, 2016, in Silver Spring, MD. More information will be sent out and posted on the MEPAG meeting webpage (<a href="http://mepag.jpl.nasa.gov/meetings.cfm">http://mepag.jpl.nasa.gov/meetings.cfm</a>) as it becomes available.

Note: AG meetings have been designated as conferences, and thus must be forecasted by NASA employees and contractors. We are close to the 90-day deadline for forecasting, so please forecast with your NASA Center ASAP.

#### **Planetary Science Nuggets Website**

A new website repository has been created for the collection of NASA SMD Planetary Science Nuggets for 2014-2015: <a href="http://www.lpi.usra.edu/nuggets/">http://www.lpi.usra.edu/nuggets/</a>

Planetary Science Nuggets are PowerPoint slides that have been provided to NASA's SMD Planetary Science Division by members of the scientific community to highlight important science results or mission activities. A subset of these submissions are selected by the Planetary Science Division to be presented to SMD leadership and potentially NASA leadership, OSTP, and the White House. The collection on this website represents those selected nuggets and will be updated as new nuggets are accepted. (On the website, you will also find a Powerpoint Presentation by Jim Green on how to prepare nuggets: <a href="http://www.lpi.usra.edu/opag/meetings/aug2015/presentations/day-1/2\_green.pdf">http://www.lpi.usra.edu/opag/meetings/aug2015/presentations/day-1/2\_green.pdf</a> Dr. Green encourages anyone in the planetary science community to submit nuggets.)

The nugget coordinator at JPL is Dr. Lindsay Hays (<u>Lindsay.E.Hays@jpl.nasa.gov</u>); mission nuggets should be communicated through the mission program scientist; and R&A science nuggets should be communicated through the Headquarters program scientist who funded the work.

#### Three-Day Training Course on Planetary Protection

Course: "Planetary Protection: Policies and Practices"

Dates: February 2-4, 2016

Location: Kennedy Space Center, Florida

We cordially invite all interested parties to participate in the upcoming course on Planetary Protection Policies and Practices, which is designed to familiarize current and future practitioners with NASA, ESA, and COSPAR planetary protection programs. The course provides an overview of applicable policies, practices and procedures necessary to implement a successful planetary protection program, emphasizing integration of managerial, administrative, and laboratory activities. It is supported by the NASA Planetary Protection Officer.

Go to: http://planetaryprotection.nasa.gov/course

Enrollment: 14 participants

Application: contact tasalb@msn.com

## NASA RFI: Developing a Community-based Roadmap for Planetary Data Services

Deadline: January 5, 2016

NASA is preparing to work with the planetary science community to develop a Roadmap for its Planetary Data Services - the data and sample management architecture that supports the robotic exploration of the Solar System - particularly, the Planetary Data System (PDS). This Roadmap will address actions for the years 2017-2026. NASA is seeking input from the planetary and data science communities in the form of a Request For Information (RFI) designated NNH15ZDA012L that has been posted on NSPIRES: http://nspires.nasaprs.com/. Questions should be addressed to Michael New (michael.h.new@nasa.gov).

## SSERVI "Planetary Evolution: Phobos and Deimos" lecture series

Online, Mondays at 3-4:30pm ET, September 14-December 7

NASA's Solar System Exploration Research Virtual Institute (SSERVI) announces the "Planetary Evolution: Phobos and Deimos" lecture series, organized by Dan Britt and Carle Pieters. Talks will be broadcast online every Monday at 3pm ET at: <a href="https://connect.arc.nasa.gov/marsmoons/">https://connect.arc.nasa.gov/marsmoons/</a> (The same link will be used for each seminar, active 30 mins before each talk).

All talks will be archived at: <a href="http://sservi.nasa.gov/event/planetary-evolution-phobos-and-deimos/">http://sservi.nasa.gov/event/planetary-evolution-phobos-and-deimos/</a>

#### Concepts needed for Future Operation of the Arecibo Observatory

Deadline: January 15, 2016

Community responses are requested on viable concepts for the future continued operation of the Arecibo Observatory, a scientific research and education facility located in Puerto Rico, owned by the National Science Foundation (NSF). Responses are due by January 15, 2016, to the Arecibo Observatory Program officer of the NSF Division of Astronomical Sciences, Dr. Ralph Gaume (rgaume@nsf.gov). For more information, please see the Dear Colleague Letter:

http://www.nsf.gov/pubs/2016/nsf16005/nsf16005.jsp.

## 8th International Summer School on Radar/SAR Systems

15-22 July 2016

Remagen-Rolandseck, GERMANY

Fraunhofer FHR, one of Europe's leading radar research institutes and has pioneered radar and SAR research and development over the decades, announces the 8th International Summer School on Radar/SAR, 15-22 July 2016 in the picturesque Upper Middle Rhine region (Haus Humboldtstein). We cordially invite students, PhD candidates, post-docs and anyone else eager to broaden and deepen their understanding of radar and SAR techniques to participate in our truly international summer school.

Lecture topics will include:

- \* Radar fundamentals (Weiß, Fraunhofer FHR, Germany)
- \* SAR fundamentals (Lombardo, University la Sapienza, Italy)
- \* Radar Remote Sensing (Rosen, JPL/NASA, USA)
- \* SAR interferometry (Fornaro, IREA, Italy)
- \* Antenna and other hardware aspects (Heberling, RWTH-Aachen, Germany) \* THz Imaging (Pohl, Fraunhofer FHR, Germany)
- \* MIMO Radar and Waveform Design (Lesturgie, ONERA, France) \* Moving target recognition (Gierull, DRDC, Canada)
- \* Compressed Sensing with Radar (Ender, Fraunhofer FHR, Germany)

Outside of the lecture theatre there will be ample time to enjoy the surrounds of the beautiful Rhine Valley and the cities of Cologne and/or Bonn. Summer school participants will also be taken on a technical tour of the Fraunhofer FHR institute,. Due to kind sponsorship from Airbus Defence&Space (an EADS company) the summer school, inclusive full board and lodging, will cost 600 Euro for students, 900 Euro for Ph.D. candidates, and 1200 Euro for all others.

For more information and the Application form, visit: <a href="http://www.radarsummerschool.fraunhofer.de">http://www.radarsummerschool.fraunhofer.de</a>.

Questions can be sent to: <a href="matthias.weiss@fhr.fraunhofer.de">matthias.weiss@fhr.fraunhofer.de</a>.

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

Due	Project		
December I	I Ith International Conference on Permafrost (ICOP) 2016, Abstract deadline IEEE Aerospace Conference, Registration deadline European Geosciences Union General Assembly 2016, Student travel grant application (via conference) deadline		
December II	Water in the Universe: From Clouds to Oceans, Abstract deadline International Venus Conference, Student travel grant application (via VEXAG) deadline		
January 12	LPSC Abstract deadline		
January 13	European Geosciences Union General Assembly 2016, Abstract deadline		
January 22	International Venus Conference, Abstract and student travel grant application (via conference) deadlines		
January 29	Martian Gullies and their Earth Analogues, Abstract deadline		
February 5	Water in the Universe: From Clouds to Oceans, Early Registration deadline		
February 12	41st Scientific Assembly of the Committee on Space Research (COSPAR 2016), Abstract deadline		
February 15	ASCE Earth and Space 2016 Conference, Registration deadline		

#### 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@ipl.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.

# Upcoming Conferences and Workshops

	Fourth Quarter, 2015				
	December 3, 2015 Virtual Workshop	Polar Regolith (SSERVI workshop without walls) <a href="http://sservi.nasa.gov/polar-regolith-workshop/">http://sservi.nasa.gov/polar-regolith-workshop/</a>			
	December 9-10, 2015 Noordwijk, NETHERLANDS	Mars Express Science Working Team Meeting			
	December 14-18, 2015 San Francisco, CA, USA	AGU Fall Meeting <a href="http://fallmeeting.agu.org/2015/">http://fallmeeting.agu.org/2015/</a> , NCTS# 22185-16			
December 15-16, 2015 Noordwijk, NETHERLANDS International Symposium on Moon 2020-2030: A New Era of Coordinate and Robotic Exploration http://spaceflight.esa.int/humanrobotics/		·			

First Quarter, 2016				
	January 13, 2016 Tempe, AZ, USA  Mars Odyssey 2001 PSG			
January 27-29, 2016 Orlando, FL, USA		14th Meeting of the NASA Small Bodies Assessment Group (SBAG) <a href="http://www.lpi.usra.edu/sbag/">http://www.lpi.usra.edu/sbag/</a> , NCTS# 23764-16		
New! March 2-3, 2016 Silver Spring, MD, USA  MEPAG Meeting #31 <a href="http://mepag.jpl.nasa.gov/meetings.cfm">http://mepag.jpl.nasa.gov/meetings.cfm</a> , NCTS# 24324-16				

First Quarter, 2016—contd				
March 4, 2016  20-Day Insight Launch Window Opens				
	March 5-12, 2016 Big Sky, MT, USA	IEEE Aerospace Conference http://www.aeroconf.org/, NCTS# 22854-16		
	March 14, 2016	20-Day 2016 ExoMars Launch Period Opens		
	March 21-25, 2016 The Woodlands, TX, USA  Lunar and Planetary Science Conference (LPSC)  http://www.hou.usra.edu/meetings/lpsc2016/, NCTS# 23351-16			
March 29-31, 2016 Washington DC, USA  NRC's Committee on Astrobiology and Planetary Science (CAPS)		NRC's Committee on Astrobiology and Planetary Science (CAPS)		

	Second Quarter, 2016				
	April 4-8, 2016 Oxford, UK	International Venus Conference http://venus2016.uk/			
	April 11-15, 2016 Orlando, FL, USA	ASCE Earth and Space 2016 Conference: 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> , NCTS# 23397-16 Symp. 1: Granular Materials in Space Explorat., Symp. 2: Explorat. & Utilizat. of ET Bodies			
	April 12-15, 2016 Noordwijk, NETHERLANDS	Water in the Universe: From Clouds to Oceans <a href="http://www.congrexprojects.com/2016-events/16a06">http://www.congrexprojects.com/2016-events/16a06</a>			
New!	April 17-22, 2016 Vienna, AUSTRIA	European Geosciences Union General Assembly 2016 <a href="http://egu2016.eu/home.html">http://egu2016.eu/home.html</a> , NCTS# 23760-16 Session PS2.3: Mars Science and Exploration			
	May 17 –19, 2016 Washington, DC, USA	Humans to Mars Summit http://h2m.exploremars.org/			
	May 24-25, 2016 Oxford, UK	iCubeSat 2016, the 5th Interplanetary CubeSat Workshop <a href="http://icubesat.org/">http://icubesat.org/</a>			
New!	June 20-24, 2016 Potsdam, GERMANY	I Ith International Conference on Permafrost (ICOP) 2016  http://icop2016.org/index.php/program  Session #16 "Planetary Permafrost and Earth Analogues"			

	Third Quarter, 2016				
July 30-August 7, 2016 Istanbul, TURKEY  41st Scientific Assembly of the Committee on Space Research (and Associated Events http://www.cospar-assembly.org					
	August 7-12, 2016 Berlin, GERMANY	Annual Meetings of the Meteoritical Society			
	September 5-9, 2016 Reykjavik, ICELAND	6th International Conference on Mars Polar Science and Exploration <a href="http://www.hou.usra.edu/meetings/marspolar2016/">http://www.hou.usra.edu/meetings/marspolar2016/</a> , NCTS# 23841-16			
	September 14-15, 2016 Irvine, CA, USA	NRC's Committee on Astrobiology and Planetary Science (CAPS)			
	September 28, 2016	Insight Arrival at Mars			

Fourth Quarters, 2016			
October 16-21, 2016 Pasadena, CA, USA  Joint DPS-EPSC Meeting			
	October 19, 2016	2016 ExoMars (TGO and EDM) Arrival at Mars	

Seasons on Mars				
	MY33	MY34	MY35	
Start of Northern Spring / $L_s$ 0	6/18/2015	5/05/2017	3/23/2019	
Start of Northern Summer / $L_{\rm s}$ 90	1/03/2016	11/20/2017	10/08/2019	
Start of Northern Autumn / $L_s$ 180	7/04/2016	5/22/2018	4/08/2020	
Start of Northern Winter / L <sub>s</sub> 270	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, 818-354-0226.

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

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 <a href="mailto:mepag-removesignup@jpl.nasa.gov">mepag-removesignup@jpl.nasa.gov</a>.
- 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: <a href="http://goo.gl/forms/WilmhPIM9V">http://goo.gl/forms/WilmhPIM9V</a> (also linked on the MEPAG website <a href="http://mepag.nasa.gov/">http://mepag.nasa.gov/</a>, under Updates).