

Mars Exploration Science Monthly Newsletter

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

January 2017

Mars Science News

Registration open for MEPAG Meeting 33

February 22-23, 2017 @ Monrovia, CA

<http://mepag.nasa.gov/meetings.cfm?expand=m33>

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 is currently planned for 2 full days, and will be webcast for those who cannot attend in-person. 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 3rd page of this newsletter).

The second circular, including hotel block information and draft agenda, will be posted in the near-future to [the meeting website](#). If you plan to attend, please register by February 15 at https://docs.google.com/forms/d/e/1FAIpQLScKNwrLQ9agkofYm8ZzzYnqcjCiH4BmvI2AC2roe_CE7ynSFQ/viewform — registration is not required, but this information will help us with logistics planning and name badge generation.

Save the date: Mars 2020 Rover Landing Site Engineering Telecon

January 31, 2017 10-12pm PST

Save the date! Materials presented will be relevant for the 3rd Landing Site Workshop presentations and discussion will be presented at this pre-workshop "Landing Site Engineering" webcast. Connection and content information will be posted at the Landing Site workshop website by mid-January: <http://marsnext.jpl.nasa.gov>.

Reminder: Call for presentations for 3rd 2020 Mars Rover Landing Site Workshop

February 8-10, 2017 @ Monrovia, CA

http://marsnext.jpl.nasa.gov/workshops/wkshp_2017_02.cfm

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. 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. Presentations are solicited on the science merits of the eight remaining candidate landing sites for the Mars 2020 mission. **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/1FAIpQLSdP6JzSOISvaptQOUtDgUVaNT87VRwJ9kagfduuY2tUM8HQdQ/viewform>, to aid with logistics. 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. 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/>. 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, call the hotel and reference the "JPL-MEPAG" meeting, or use the link provided on [the meeting webpage](#).

Finding Signs of Past Rock-hosted Life, Telecons and Working Group

<http://web.gps.caltech.edu/~rocklife2017/>

Motivated by the suite of habitable environments available to Mars-2020 for in situ exploration and sample collection, a NASA-sponsored working group is convening a set of web-hosted telecons, open to the community. The telecon schedule is below, and presentation materials are posted for those that have occurred.

- Telecon 1: Martian Environment: Evidence for Rock-Hosted Waters, December 19
What is the evidence for ancient Mars environmental conditions? What is the likelihood of habitats for rock-hosted life?
- Telecon 2: Metabolisms and Niches for Terrestrial Rock-Hosted Life, December 20
Where rock-hosted life found on earth today? What are its metabolisms and products?
- Telecon 3: Paleo-Rock-Hosted Life Biosignature Detection and Characterization, January 13, 8:30AM PST
How do we detect signs of paleo (non-extant) rock-hosted life? Where/how do we find evidence for this on Earth?
- Telecon 4: Advanced Instrumentation Techniques for Finding Biosignatures, Week of January 23, morning PST (TBD)
What are the latest techniques in biosignature detection, including new capabilities expected in the next decades? (e.g. in mass spectrometry, synchrotron-based analyses, nano-SIMS)

The URL for the telecons is <https://connect.arc.nasa.gov/rocklife2017/>. Select "Enter as a Guest", type in your name and click the "Enter Room" button. The telecon line is 844-467-6272, passcode 250961.

Student travel grants for AbSciCon

Meeting April 24-28, 2017 @ Mesa, Arizona

Abstract and Student Travel Grant Application deadline: January 18, 2017

https://www.hou.usra.edu/meetings/abscicon2017/student_travel_grant_application/

The Mars Program Office and the NASA Astrobiology Institute are sponsoring travel grants for undergraduate and graduate students who are US persons. For more information about the meeting, please see <http://www.hou.usra.edu/meetings/abscicon2017/>.

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 (abrown@seti.org) and Michael Sori (michael.sori@gmail.com).

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.

2017 NASA Planetary Science Summer Seminar* Announced

July 24-28, 2017 @ JPL/Pasadena, CA, USA, <https://psss.jpl.nasa.gov/index.cfm>

Application deadline: April 3, 2017 5pm CST

NASA is accepting applications from engineering students within 6-9 months of completion of their masters degree but not planning to pursue a PhD degree, science and engineering post-docs, recent PhDs, and doctoral students, for its 29th Annual Planetary Science Summer Seminar*, which will be held July 24-28, 2017 at the Jet Propulsion Laboratory in Pasadena, CA. During the program and pre-session webinars, student teams will carry out the equivalent of an early mission concept study, prepare a proposal authorization presentation, present it to a review board, and receive feedback. By the end of the session, students will have a clearer understanding of the life cycle of a space mission; relationships between mission design, cost, and schedule; and the tradeoffs necessary to stay within cost and schedule while preserving the quality of science. Applications are due April 3, 2017. Partial financial support may be available. Further information at <http://psss.jpl.nasa.gov>.

*Previously named Planetary Science Summer School

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.

LPSC session advertisements

March 20-24, 2017 @ The Woodlands, TX, USA, <http://www.hou.usra.edu/meetings/lpsc2017/>

Abstract deadline: January 10, 2017 5pm CST

- **(Special session) Large Igneous Provinces (LIPs) in the Solar System:** LIPs can reveal important information about a planetary body's thermal and chemical evolution, and comparisons between LIPs on distinct bodies provides a way to deepen our understanding of the processes involved.
- **(Special session) Mars volatile surface-atmosphere interactions: past and present:** The exchange of volatiles between the atmosphere and the surface is one of the modern climate drivers, and one of the most active processes on modern Mars. If one defines the polar regions as places with active exchange, then the term "polar processes" includes the mid-latitudes and the Tharsis bulge.
- **Planetary Polar Processes and/or Cryospheres**

9th International Radar/SAR Summer School

July 14-21, 2017 @ Haus Umboldtsein, GERMANY

Fraunhofer FHR, one of Europe's leading radar research institutes and has pioneered radar and SAR research and development over the decades, is pleased to announce the 9th International Summer School on Radar/SAR, which will take place from 14-21 July 2017. 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. Internationally renowned experts from across Europe, USA and Canada make up the summer school lecture team. This is a unique opportunity to gain an in-depth appreciation of modern radar and SAR systems whilst absorbing the multifarious atmosphere of the famous Upper Middle Rhine region. Participation in the programme of social activities with the international group of attendees will inspire and enrich your learning experience. See <http://www.radarsummerschool.fraunhofer.de> for further information and to download the Application form. Specific queries regarding the summer school should be addressed to: matthias.weiss@fhr.fraunhofer.de.

Near-term Due Dates (next three months)

Due	Project
January 10	Lunar and Planetary Science Conference , Abstract deadline
January 11	European Geosciences Union General Assembly , Abstract deadline,
January 13	3rd Mars 2020 Rover Landing Site Selection Workshop , Presentation Title deadline
January 15	MIC-SAG community survey close
January 18	AbSciCon , Abstract and Student Travel Award deadline
February 14	2017 GSA Cordilleran Section , Abstract deadline
February 16	New views of the Moon 2—Europe , Abstract deadline
March 7	Fifth International Planetary Dunes Workshop Abstract deadline
March 16	European Geosciences Union General Assembly , Registration deadline
March 30	Dust in the Atmosphere of Mars and Its Impact on the Human Exploration of Mars , 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).
- 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.

First Quarter, 2017

	January 2-3, 2017 Grapevine, TX, USA	Exoplanets Exploration Program Analysis Group (ExoPAG) meeting https://exoplanets.nasa.gov/exep/events/159/
	January 11-13, 2017 Tucson, AZ, USA	16th Meeting of the NASA Small Bodies Assessment Group (SBAG) http://www.lpi.usra.edu/sbag/ NCTS# 27699-17
	January 11-13, 2017 Boulder, CO, USA	The Dust, Atmosphere and Plasma Environment of the Moon and Small Bodies Workshop http://impact.colorado.edu/dap_meeting.html , NCTS# 28398-17
	January 17-20, 2017 Granada, SPAIN	6th International Workshop on the Mars Atmosphere: Modelling and Observations http://www-mars.lmd.jussieu.fr/granada2017/ , NCTS# 26193-17
	January 31—February 1, 2017 Kiruna, SWEDEN	Mars Express Science Working Team Meeting Contact Dmitri Titov (dmitri.titov@esa.int)
	February 8-10, 2017 Pasadena, CA, USA	Mars 2020 Rover Third Landing Site Workshop http://marsnext.jpl.nasa.gov , NCTS# 26193-17 Presenters should submit the title of their talk to John Grant (grantj@si.edu) and Matt Golombek (mgolombek@jpl.nasa.gov) by January 13th, 2017
	February 22-23, 2017 Monrovia, CA, USA	Mars Exploration Program Analysis Group (MEPAG) Meeting 33 http://mepag.jpl.nasa.gov/meetings.cfm?expand=m33 , NCTS# 28234-17
	February 22-23, 2017 Atlanta, GA, USA	Outer Planets Assessment Group (OPAG) Meeting http://www.lpi.usra.edu/opag/ NCTS# 28089-17
	February 27-March 1, 2017 Washington, DC, USA	Planetary Science Vision 2050 Workshop http://www.hou.usra.edu/meetings/V2050/ NCTS# 28002-17
	March 4-11, 2017 Big Sky, MT, USA	IEEE Aerospace Conference https://www.aeroconf.org/ , NCTS# 26165-17
	March 20-24, 2017 The Woodlands, TX, USA	Lunar and Planetary Science Conference http://www.hou.usra.edu/meetings/lpsc2017/ , NCTS# 26280-17
	March 28-30, 2017 Washington, DC, USA	NRC's Committee on Astrobiology and Planetary Science (CAPS)

Second Quarter, 2017

	April 23-28, 2017 Vienna, AUSTRIA	European Geosciences Union General Assembly http://www.egu2017.eu/ NCTS# 27025-17 PS8.2: Hyperspectral Data Measurements and Analysis to Support Planetary Exploration, GMI.4/PS9.5 Planetary Geomorphology
	April 24-27, 2017 Mesa, AZ, USA	Astrobiology Science Conference http://www.hou.usra.edu/meetings/abscicon2017/ , NCTS# 27507-17
New!	May 4-5, 2017 Muenster, GERMANY	New Views of the Moon 2—Europe http://www.hou.usra.edu/meetings/newviews2017/
New!	May 9-11, 2017 Washington, DC, USA	Humans to Mars Summit (H2M) http://h2m.exploremars.org/ , NCTS# 28099-17
	May 15-19, 2017 Boulder, CO, USA	International Conference on Mars Aeronomy http://lasp.colorado.edu/meetings/marsaeronomy2017/index.php , NCTS# 26278-17
	May 16-19, 2017 St. George, UT, USA	Fifth International Planetary Dunes Workshop http://www.hou.usra.edu/meetings/dunes2017/ , NCTS# 28521-17
	May 23—25, 2017 Honolulu, HI, USA	2017 GSA Cordilleran Section https://www.geosociety.org/GSA/Sections/cd/2017mtg/home.aspx , NCTS# 28240-17 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
	May 30-31, 2017 Cambridge, UK	6th Interplanetary CubeSat Workshop https://icubesat.org NCTS# 27834-17
	June 12-16, 2017 The Hague, Netherlands	14th International Planetary Probe Workshop (IPPW-14)
	June 13-15, 2017 Greenbelt, MD, USA	17th Meeting of the NASA Small Bodies Assessment Group (S-BAG) http://www.lpi.usra.edu/sbag/
Updated!	June 13-15, 2017 (corrected) Houston, TX, USA	Dust in the Atmosphere of Mars and Its Impact on the Human Exploration of Mars http://www.hou.usra.edu/meetings/marsdust2017/ NCTS#28194-17

Third-Fourth Quarter, 2017

	July 24-27, 2017 Santa Fe, NM, USA	Meteoritical Society Meeting http://meteoriticalsociety.org/?page_id=18
New!	July 24-28, 2017 Pasadena, CA, USA	NASA Planetary Science Summer School https://psss.jpl.nasa.gov/index.cfm
	August 22 –25, 2017 Houston, TX, USA	Accretion: Building New Worlds http://www.hou.usra.edu/meetings/accretion2017/
	September 13-14, 2017 Washington, DC, USA	NRC's Committee on Astrobiology and Planetary Science (CAPS) http://sites.nationalacademies.org/SSB/SSB_067577#Meetings_and_Events
	September 25—29, 2017 Adelaide, AUSTRALIA	68th International Astronautical Congress http://www.iac2017.org/ NCTS# 27783-17
Updated!	December 11-15, 2017 New Orleans, LA, USA	American Geophysical Union Fall Meeting (AGU) http://fallmeeting.agu.org/2016/2017-fall-meeting-new-orleans/

Seasons on Mars

	MY34	MY35	MY36
Start of Northern Spring / L _s 0	5/05/2017	3/23/2019	2/07/2021
Start of Northern Summer / L _s 90	11/20/2017	10/08/2019	8/25/2021
Start of Northern Autumn / L _s 180	5/22/2018	4/08/2020	2/24/2022
Start of Northern Winter / L _s 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

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January-March 2017 —

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.

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.
- 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: <http://goo.gl/forms/WilmhPI M9V> (also linked on the MEPAG website <http://mepag.nasa.gov/>, under Updates).