

# Mars Exploration Science Monthly Newsletter

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

February 2019

## Mars Science News

### **MEPAG Virtual Meeting #4: February 25, 11:00AM – 2:00PM PST**

The 4<sup>th</sup> Virtual MEPAG meeting will occur on Monday, February 25 from 11:00AM to 1:00PM PST. Preliminary agenda items include a progress report from the Ice and Climate Evolution Science Analysis Group (ICE-SAG), initial discussions on Decadal Survey white paper preparations, and if available, any budget news from NASA. The first circular, including the agenda and connectivity instructions, will be posted on <https://mepag.jpl.nasa.gov/meetings.cfm>. To attend this meeting, go to <https://jpl.webex.com/jpl/j.php?MTID=m6ed60d2a4fcca4bad345794d63499472>. Meeting Number (access code): 906 628 020.

All members of the Mars exploration community are invited.

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### **LPSC 2019: MEPAG Discussion of Decadal Survey Preparation March 18, 12:00PM – 1:00PM Room: Waterway Ballroom 6-8**

All members of the Mars Community are invited to meet with representatives from the Mars Exploration Program Analysis Group (MEPAG) Executive and Goals Committees. The main purpose of this meet-and-greet is to discuss MEPAG's preparations for developing inputs to the Decadal Survey committee (in anticipation of a potential call for white papers). Note that this informal event is not a MEPAG meeting, but instead is a supplemental opportunity to interact with MEPAG leadership. Further discussion on these topics will occur at the next MEPAG face-to-face meeting.

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### **LPSC 2019: Mars Sample Return Science Planning: Updates and Community Forum March 20, 12:00PM – 1:00PM Location: Montgomery Ballroom A-C**

This Town Hall meeting will be focused on giving an update to the community on the current status of Mars Sample Return (MSR particularly) science planning, particularly as conducted through the work of the MSR Science Planning Group (MSPG). MSPG has been established by NASA and ESA to help develop a stable foundation for international scientific cooperation for the purposes of analyzing samples returned from Mars. MSPG's approach is to formulate and propose mechanisms through which the international scientific community can achieve shared scientific objectives. The agenda for this meeting will include: 1) a reprisal of MSPG's activities and the pathways available for the community to participate; 2) a review of the recent workshop "Science in Containment" and the resulting report; 3) Expectations for future science-related MSR workshops; 4) time for community feedback and input. This event is open to the public.

### Virtual SMD Town Hall – Thursday, 7 February at 2PM EST

The NASA Science Mission Directorate leadership held a virtual community town hall on February 7, 2019. Updates on activities related to the recent government shutdown and return to normal operations were provided.

A recording of the town hall will be available at <https://science.nasa.gov>.

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### New Due Dates for ROSES-2018 and Draft Discovery AO

New due dates for several Planetary Science program elements were recently updated due to the partial government shutdown. Please refer to : <http://nspires.nasaprs.com> and <https://science.nasa.gov/researchers/sara/grant-solicitations/roses-2018/> for more details.

[C.3 Solar System Workings \(SSW\)](#)

[C.8 Lunar Data Analysis Program \(LDAP\)](#)

[C.21 DRAFT Planetary Science Early Career Program \(NECF\)](#)

[C.28 Lunar Surface Instrument and Technology Payloads \(LSITP\)](#)

[C.29 Astrodynamics in Support of Icy Worlds Missions](#)

[E.4 Habitable Worlds \(HW\)](#)

The open period to provide comments on the Draft 2019 Announcement of Opportunity (AO) for Discovery Program mission investigations has also been extended to February 11. See <http://nspires.nasaprs.com> for more information.

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### Upcoming Mars Special Issues Welcoming Paper Submissions

1. Planetary and Space Science has approved a special issue on “Amazonian Mars: Climate & Processes,” with submissions accepted November 1, 2018 to February 28, 2019. Papers that describe the climate history as well as geological and environmental processes that pertain to the Amazonian period of Mars’ history, which includes the present-day, are solicited. The Amazonian period encompasses the most recent 3 billion years of Mars history, which has strongly shaped the evolution of the surface that we now observe. This special issue was prompted by the recent Mars Workshop on Amazonian and Present-day Climate (<https://www.hou.usra.edu/meetings/amazonian2018/>). Submissions are welcome from the community. The lead guest editor is John Moores (York University). More information is available at: [https:// www.journals.elsevier.com/planetary-and-space-science/call-for-papers/special-issue-on-amazonian-mars-climate-processes](https://www.journals.elsevier.com/planetary-and-space-science/call-for-papers/special-issue-on-amazonian-mars-climate-processes).

**Upcoming Mars Special Issues Welcoming Paper Submissions – cont.**

2. The joint JGR special issue, “Studies of the 2018/Mars Year 34 Planet-Encircling Dust Storm”, is accepting submissions until June 1, 2019. Papers pertaining to observations and atmospheric modelling of this particular storm, its influence on the atmosphere and surface of Mars and the physics of Martian dust storms are encouraged. Submissions are sought from mission and instrument teams and the broader scientific community. The editor is Scott Guzewich. Papers can be submitted through the GRL, JGR-Planets or JGR-Space Physics submission websites shown below:

[https://grl-submit.agu.org/cgi-bin/main.plex?form\\_type=home](https://grl-submit.agu.org/cgi-bin/main.plex?form_type=home)

[https://jgr-planets-submit.agu.org/cgi-bin/main.plex?form\\_type=home](https://jgr-planets-submit.agu.org/cgi-bin/main.plex?form_type=home)

[https://jgr-spacephysics-submit.agu.org/cgi-bin/main.plex?form\\_type=home](https://jgr-spacephysics-submit.agu.org/cgi-bin/main.plex?form_type=home)

3. ICARUS Special Issue on Current and Recent Landscape Evolution on Mars is accepting papers starting March 1, 2019. Articles that address the debate on plausible agents of Mars landscape change under current or relatively-recent conditions are welcome. This special issue was prompted by the recent Late Mars Workshop (<https://www.hou.usra.edu/meetings/latemars2018/>). More information on the call for papers is available at: <https://www.journals.elsevier.com/icarus/call-for-papers/current-recent-landscape-evolution-on-mars>

**Near-Term Due Dates (next three months)**

Due	Project
February 7	New Quests in Stellar Astrophysics IV: Astrochemistry, Astrobiology and the Origin of Life - Abstract Deadline
February 8	Lunar ISRU 2019 - Developing a New Space Economy Through Lunar Resources and Their Utilization - Registration Deadline
February 8	NASA Fundamental Physics Workshop - Abstract Deadline
February 8	AAS New Horizons in Planetary Systems with ALMA - Abstract Deadline
February 10	European Week of Astronomy and Space Science (EWASS 2019) - Very Early Registration Deadline
February 12	Asia Oceania Geosciences Society (AOGS) - Abstract Deadline
February 15	Ocean Worlds 4 - Abstract Deadline
February 15	New Quests in Stellar Astrophysics IV: Astrochemistry, Astrobiology and the Origin of Life - Registration Deadline
February 15	2019 IAA Planetary Defense Conference - Early Registration Deadline
February 15	Global Conference on Space for Emerging Countries (GLEC) 2018 - Early Registration Deadline
February 15	Life3E: Search for Life from Early Earth to Exoplanets - Early Registration Deadline
February 18	50th Lunar and Planetary Science Conference - Early Registration Deadline
February 19	Japan Geoscience Union (JpGU) 2019 - Final Abstract Deadline
February 25	International Venus Conference 2019 - Abstract Deadline
February 26	Applied Space Environments Conference (ASEC) 2019 - Abstract Deadline
February 27	Workshop on In-Situ Exploration of the Ice Giants - Late Registration Deadline
February 28	European Geosciences Union General Assembly 2019 - Early Registration Deadline
February 28	2nd European Physics Conference - Registration Deadline
February 28	70th International Astronautical Congress (IAC) - Abstract Deadline
February 28	Life3E: Search for Life from Early Earth to Exoplanets - Registration Deadline

**Near-Term Due Dates (next three months) - continued**

<b>Due</b>	<b>Project</b>
March 1	The Space Astrophysics Landscape for the 2020s and Beyond - Early Registration Deadline
March 1	Cassini Science Symposium - Abstract Deadline
March 3	European Week of Astronomy and Space Science (EWASS 2019) - Abstract Deadline
March 6	9th International Conference on Mars - Indication of Interest Deadline
March 6	2019 Astrobiology Science Conference (AbSciCon) - Abstract Deadline
March 8	NASA Fundamental Physics Workshop - Early Registration Deadline
March 8	International Planetary Probe Workshop 2019 - Abstract Deadline
March 8	AAS New Horizons in Planetary Systems with ALMA - Registration Deadline
March 12	AAS New Horizons in Planetary Systems with ALMA - Final Registration and Poster Abstract Deadline
March 13	First International Orbital Debris Conference (IOC) - Indication of Interest Deadline
March 14	The Pluto System After New Horizons (PSANH) - Indication of Interest Deadline
March 16	50th Lunar and Planetary Science Conference - Registration Deadline
March 18	The Space Astrophysics Landscape for the 2020s and Beyond - Registration Deadline
March 19	International Meeting on Paleoclimate: Changes and Adaptation - Abstract Deadline
March 30	International Association of Sedimentologists (IAS) 2019 - Abstract Deadline
March 31	13th IAA Low-Cost Planetary Missions Conference - Abstract Deadline
April 3	2019 IAA Planetary Defense Conference - Paper Submission Deadline
April 4	4th Planetary Data Workshop - Abstract Deadline
April 7	13th IAA Low-Cost Planetary Missions Conference - Early Registration Deadline
April 8	International Venus Conference 2019 - Registration and Poster Abstract Deadline
April 12	50th Annual Meeting of the Division of Dynamical Astronomy (DDA) of the AAS - Abstract and Early Registration Deadline
April 15	Planetary Exploration Horizon 2061: Synthesis Workshop - Abstract and Early Registration Deadline
April 15	Cassini Science Symposium - Registration Deadline
April 19	Global Conference on Space for Emerging Countries (GLEC) 2018 - Registration Deadline
April 22	Ocean Worlds 4 - Early Registration Deadline
April 22	First International Orbital Debris Conference (IOC) - Abstract Deadline
April 28	European Week of Astronomy and Space Science (EWASS 2019) - Early Registration Deadline
April 29	Applied Space Environments Conference (ASEC) 2019 - Registration Deadline
April 30	The 4th COSPAR Symposium: Small Satellites for Sustainable Science and Development - Abstract Deadline
April 30	2nd European Physics Conference - Late Registration Deadline
April 30	International Meeting on Paleoclimate: Changes and Adaptation - Early Registration Deadline

## Upcoming Conferences and Workshops

Notes about NASA travel forecasting for the events in this calendar:

- Beginning January 7, 2019, only domestic NASA sponsored conferences and foreign conferences will need to be submitted into the NASA Conference Tracking System (NCTS).
- Please do not assume our noting of NCTS numbers is complete. If you are unsure about the NCTS number, a forecasting deadline or whether an event is classified as a “conference”, please consult with your NASA Center.
- Missing NCTS numbers and forecasting deadline updates can be sent to Barbara Saltzberg ([Barbara.A.Saltzberg@jpl.nasa.gov](mailto:Barbara.A.Saltzberg@jpl.nasa.gov))
- If no deadline is noted, it is usually 60 days in advance for domestic meetings. It may be further in advance for “Heavily Attended” conferences.

First Quarter, 2019		
	February 4-8, 2019 Florence, Italy	<b>XV Congresso Nazionale di Scienze Planetarie</b> <a href="http://www.iaps.inaf.it/attivita/convegni/planetologia/">http://www.iaps.inaf.it/attivita/convegni/planetologia/</a>
	February 7-8, 2019 Scottsdale, AZ, USA	<b>Women in Space</b> , NCTS 36591-19 <a href="http://www.womeninspacecon.com/">http://www.womeninspacecon.com/</a>
	February 20-22, 2019 Columbia, MD, USA	<b>Lunar ISRU 2019 - Developing a New Space Economy Through Lunar Resources and Their Utilization</b> , NCTS 37120-19 <a href="https://www.hou.usra.edu/meetings/lunarisru2019/">https://www.hou.usra.edu/meetings/lunarisru2019/</a>
	February 25-27, 2019 Provence, France	<b>Workshop on In-Situ Exploration of the Ice Giants</b> , NCTS 36673-19 <a href="https://ice-giant-workshop.lam.fr/">https://ice-giant-workshop.lam.fr/</a>
	March 2-9, 2019 Big Sky, MT, USA	<b>IEEE Aerospace Conference</b> , NCTS 35072-19 <a href="https://aeroconf.org/">https://aeroconf.org/</a>
	March 7-10, 2019 Norman, OK, USA	<b>International Continental Drilling Program Workshop - Probing Continental Climate of the Late Paleozoic Icehouse-Greenhouse Transition</b> <a href="https://www.icdp-online.org/">https://www.icdp-online.org/</a> <i>May be of interest to researchers studying continental dust and evaporite deposits.</i>
<b>New!</b>	March 16-17, 2019 The Woodlands, TX, USA	<b>Microsymposium 60: Forward to the Moon to Stay: Undertaking Transformative Lunar Science with Commercial Partners</b> <a href="http://www.planetary.brown.edu/html_pages/micro60.htm">http://www.planetary.brown.edu/html_pages/micro60.htm</a>
	March 18-22, 2019 The Woodlands, TX, USA	<b>50th Lunar and Planetary Science Conference</b> , NCTS 35124-19 <a href="https://www.hou.usra.edu/meetings/lpsc2019/">https://www.hou.usra.edu/meetings/lpsc2019/</a>
	March 25-29, 2019 Quy Nhon, Vietnam	<b>Life3E: Search for Life, from Early Earth to Exoplanets</b> , 37411-19 <a href="https://icisequynhon.com/conferences/2019/search-for-life/">https://icisequynhon.com/conferences/2019/search-for-life/</a>
	March 26-28, 2019 Washington, DC, USA	<b>NASEM'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>
	March 31-April 5, 2019 Puerto Vallarta, Mexico	<b>New Quests in Stellar Astrophysics IV: Astrochemistry, Astrobiology and the Origin of Life</b> , NCTS 36683-19 <a href="https://www.inaoep.mx/~puerto19/">https://www.inaoep.mx/~puerto19/</a>

Second Quarter, 2019		
	April 1-3, 2019 Potomac, MD, USA	<b>The Space Astrophysics Landscape for the 2020s and Beyond</b> , NCTS 36044-19 <a href="https://www.hou.usra.edu/meetings/landscape2019/">https://www.hou.usra.edu/meetings/landscape2019/</a>
	April 7-12, 2019 Vienna, Austria	<b>European Geosciences Union General Assembly 2019</b> , NCTS 34792-19 <a href="https://egu2019.eu/">https://egu2019.eu/</a> <i>Research Topic GM1.5/PS1.2: Planetary Geomorphology</i>
	April 8-10, 2019 Washington, DC, USA	<b>NASA Fundamental Physics Workshop</b> , NCTS 37189-19 <a href="http://www.cvent.com/events/nasa-fundamental-physics-workshop-2019/event-summary-1184d1a484b14e4ca66c889e9dfecbbd.aspx">http://www.cvent.com/events/nasa-fundamental-physics-workshop-2019/event-summary-1184d1a484b14e4ca66c889e9dfecbbd.aspx</a>
	TENTATIVE April 23-24, 2019 Washington, DC, USA	<b>POSTPONED: Tentatively Rescheduled for April 23-24 Outer Planets Assessment Group (OPAG) Meeting</b> , NCTS 37399-19 <a href="https://www.lpi.usra.edu/opag/meetings/upcoming/">https://www.lpi.usra.edu/opag/meetings/upcoming/</a>
	April 24-26, 2019 Marrakech, Morocco	<b>Global Conference on Space for Emerging Countries (GLEC) 2019</b> <a href="http://www.iafastro.org/events/global-series-conferences/glec-2019/">http://www.iafastro.org/events/global-series-conferences/glec-2019/</a>
	April 29-May 3, 2019 Washington, DC, USA	<b>2019 IAA Planetary Defense Conference</b> , NCTS 36743-19 <a href="http://pdc.iaaweb.org/">http://pdc.iaaweb.org/</a>
	May 12-17, 2019 Los Angeles, CA, USA	<b>Applied Space Environments Conference (ASEC) 2019</b> , NCTS 35845-19 <a href="https://sti.usra.edu/ASEC2019/">https://sti.usra.edu/ASEC2019/</a>
<b>New!</b>	May 13-17, 2019 Victoria, British Columbia, Canada	<b>AAS New Horizon in Planetary Systems with ALMA</b> , NCTS 36777-19 <a href="http://www.cvent.com/events/new-horizons-in-planetary-systems/event-summary-b476735da0c34d4fa62e81bf27668214.aspx">http://www.cvent.com/events/new-horizons-in-planetary-systems/event-summary-b476735da0c34d4fa62e81bf27668214.aspx</a>
	May 14-16, 2019 Washington, DC, USA	<b>The Humans to Mars Summit</b> , NCTS 37163-19 <a href="https://h2m.exploremars.org/">https://h2m.exploremars.org/</a>
<b>New!</b>	May 20-24, 2019 Laurel, MD, USA	<b>Cassini Science Symposium</b> , NCTS 37441-19 <a href="http://civspace.jhuapl.edu/News-and-Events/events/cassini/">http://civspace.jhuapl.edu/News-and-Events/events/cassini/</a>
	May 20-21, 2019 Berlin, Germany	<b>2nd European Physics Conference</b> <a href="https://www.meetingsint.com/conferences/europhysics">https://www.meetingsint.com/conferences/europhysics</a>
	May 21-23, 2019 Houston, TX, USA	<b>Ocean Worlds 4</b> , NCTS 37400-19 <a href="https://www.hou.usra.edu/meetings/oceanworlds2019/">https://www.hou.usra.edu/meetings/oceanworlds2019/</a>
	May 21-23, 2019 Manchester, United Kingdom	<b>European Lunar Symposium</b> , NCTS 37167-19 <a href="https://els2019.arc.nasa.gov">https://els2019.arc.nasa.gov</a>
<b>New!</b>	May 26-30, 2019 Makuhari Messe, Chiba, Japan	<b>Japan Geoscience Union (JpGU)</b> , NCTS 37098-19 <a href="http://www.jpgu.org/meeting_2019/">http://www.jpgu.org/meeting_2019/</a>
<b>New!</b>	May 31-June 3, 2019 Niseko, Japan	<b>International Venus Conference 2019</b> , NCTS 36941-19 <a href="https://www.cps-jp.org/~akatsuki/venus2019/">https://www.cps-jp.org/~akatsuki/venus2019/</a>
	June 3-5, 2019 Toulouse, France	<b>13th IAA Low-Cost Planetary Missions Conference</b> , NCTS 37764-19 <a href="http://lcpm.iaaweb.org/">http://lcpm.iaaweb.org/</a>
<b>New!</b>	June 5-7, 2019 Toulouse, France	<b>Planetary Exploration Horizon 2061: Synthesis Workshop</b> <a href="http://horizon2061.cnrs.fr/meetings-events/">http://horizon2061.cnrs.fr/meetings-events/</a>
	June 3-7, 2019 Heidelberg, Germany	<b>Planetary Dynamics 2019</b> <a href="http://www2.mpia-hd.mpg.de/homes/dynamics2019/">http://www2.mpia-hd.mpg.de/homes/dynamics2019/</a>
	June 9-13, 2019 St Louis, MO, USA	<b>234th Meeting of the American Astronomical Society</b> , NCTS 36771-19 <a href="https://aas.org/meetings/aas234">https://aas.org/meetings/aas234</a>
	June 10-13, 2019 Boulder, CO, USA	<b>50th Annual Meeting of the Division of Dynamical Astronomy (DDA) of the AAS</b> , NCTS 37161-19 <a href="https://dda.aas.org/meetings/2019">https://dda.aas.org/meetings/2019</a>

### Second Quarter, 2019 - continued

	June 11-14, 2019 Golden, CO, USA	<b>10th Joint Meeting of the Space Resources Roundtable (SRR) and the Planetary and Terrestrial Mining Sciences Symposium (PTMSS)</b> , NCTS 37406-19 <a href="http://www.isruinfo.com/">http://www.isruinfo.com/</a>
	June 18-19, 2019 Coimbra, Portugal	<b>International Meeting on Paleoclimate: Changes and Adaptation</b> <a href="https://paleoclimate2019.wixsite.com/paleoclimate2019">https://paleoclimate2019.wixsite.com/paleoclimate2019</a> <i>Research Topic T1: Paleoclimates in the Solar System: external forcing and divergent evolutions</i>
	June 18-20, 2019 Flagstaff, AZ, USA	<b>4th Planetary Data Workshop</b> , NCTS 37520-19 <a href="https://www.hou.usra.edu/meetings/planetdata2019/">https://www.hou.usra.edu/meetings/planetdata2019/</a>
	June 24-28, 2019 Bellevue, WA, USA	<b>2019 Astrobiology Science Conference (AbSciCon)</b> , NCTS 36103-19 <a href="https://connect.agu.org/abscicon/home">https://connect.agu.org/abscicon/home</a>
	June 24-28, 2019 Lyon, France	<b>European Week of Astronomy and Space Science (EWASS 2019)</b> <a href="http://eas.unige.ch/EWASS2019/call.jsp">http://eas.unige.ch/EWASS2019/call.jsp</a>
<b>New!</b>	June 27-28, 2019 Greenbelt, MD, USA	<b>The Planetary CubeSats Symposium</b> <a href="https://cubesats.gsfc.nasa.gov/symposium.php">https://cubesats.gsfc.nasa.gov/symposium.php</a>
	June 30-July 4, 2019 Lancashire, England	<b>Royal Astronomical Society 2019 National Astronomy Meeting</b> <a href="https://nam2019.org/">https://nam2019.org/</a>

### Third Quarter, 2019

	July 8-12, 2019 Oxford, United Kingdom	<b>International Planetary Probe Workshop 2019</b> , NCTS 36747-19 <a href="https://ippw2019.uk/">https://ippw2019.uk/</a>
	July 14-18, 2019 Laurel, MD, USA	<b>The Pluto System After New Horizons (PSANH)</b> , NCTS 31320-19 <a href="https://www.hou.usra.edu/meetings/plutosystem2019/">https://www.hou.usra.edu/meetings/plutosystem2019/</a>
	July 22-26, 2019 Pasadena, CA, USA	<b>9th International Conference on Mars</b> , NCTS 31488-19 <a href="https://www.hou.usra.edu/meetings/ninthmars2019/">https://www.hou.usra.edu/meetings/ninthmars2019/</a>
	July 23-25, 2019 Moffett Field, CA, USA	<b>NASA Exploration Science Forum 2019</b> , NCTS 36800-19 <a href="https://nesf2019.arc.nasa.gov/">https://nesf2019.arc.nasa.gov/</a>
	July 28-August 2, 2019 Singapore	<b>Asia Oceania Geosciences Society (AOGS)</b> , NCTS 36817-19 <a href="http://www.asiaoceania.org/aogs2019/public.asp?page=home.htm">http://www.asiaoceania.org/aogs2019/public.asp?page=home.htm</a>
	September 8-12, 2019 Big Sky, MT, USA	<b>The First Billion Years: Habitability: Producing Conditions Conducive to Life</b> , NCTS 28519-20 <a href="https://www.hou.usra.edu/meetings/habitability2019/">https://www.hou.usra.edu/meetings/habitability2019/</a>
	September 10-12, 2019 Irvine, CA, USA	<b>NASEM'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>
	September 10-13, 2019 Rome, Italy	<b>International Association of Sedimentologists (IAS)</b> <a href="http://iasroma2019.org/">http://iasroma2019.org/</a> <i>Session 7.14 Planetary Sedimentary Geology: from remote sensing and in-situ</i>
	September 15-20, 2019 Geneva, Switzerland	<b>Joint Meeting: 51st Meeting of the AAS Division for Planetary Sciences (DPS), joint with the European Planetary Science Congress (EPSC)</b> , NCTS 37080-19 <a href="https://www.epsc-dps2019.eu/">https://www.epsc-dps2019.eu/</a>
	September 22-25, 2019 Phoenix, AZ, USA	<b>2019 GSA Annual Meeting</b> , NCTS 37526-19 <a href="https://www.geosociety.org/GSA/Events/Annual_Meeting/GSA/Events/gsa2019.aspx">https://www.geosociety.org/GSA/Events/Annual_Meeting/GSA/Events/gsa2019.aspx</a>
	September 30-October 3, 2019 Brasilia, Brazil	<b>Large Meteorite Impacts and Planetary Evolution VI (LMI VI)</b> <a href="https://www.hou.usra.edu/meetings/lmi2019/">https://www.hou.usra.edu/meetings/lmi2019/</a>

Fourth Quarter, 2019		
	October 21-25, 2019 Washington, DC, USA	<b>70th International Astronautical Congress (IAC)</b> , NCTS 36775-20 <a href="https://www.iac2019.org/">https://www.iac2019.org/</a>
	November 4-8, 2019 Herzliya, Israel	<b>The 4th COSPAR Symposium: Small Satellites for Sustainable Science and Development</b> , NCTS 37773-20 <a href="http://www.cospas2019.org/">http://www.cospas2019.org/</a>
<b>New!</b>	December 9-12, 2019 Houston, TX, USA	<b>First International Orbital Debris Conference (IOC)</b> <a href="https://www.hou.usra.edu/meetings/orbitaldebris2019/">https://www.hou.usra.edu/meetings/orbitaldebris2019/</a>
	December 9-13, 2019 San Francisco, CA, USA	<b>2019 AGU Fall Meeting</b> , NCTS 37409-20 <a href="https://fallmeeting.agu.org/2018/future-meetings/">https://fallmeeting.agu.org/2018/future-meetings/</a>

## Seasons on Mars

	MY35	MY36	MY 37
Start of Northern Spring / L <sub>s</sub> 0	03/23/2019	02/07/2021	12/26/2022
Start of Northern Summer / L <sub>s</sub> 90	10/08/2019	08/25/2021	07/13/2023
Start of Northern Autumn / L <sub>s</sub> 180	04/08/2020	02/24/2022	01/24/2024
Start of Northern Winter / L <sub>s</sub> 270	09/02/2020	07/21/2022	06/07/2024

## Special holidays to consider when scheduling conferences, workshops & meetings

Good Friday	4/19/2019	4/10/2020	4/02/2021	4/15/2022
Rosh Hashanah	9/30/2019	9/19/2020	9/07/2021	9/26/2022
Yom Kippur	10/09/2019	9/28/2020	9/16/2021	10/05/2022
Thanksgiving, Canada	10/14/2019	10/12/2020	10/11/2021	10/10/2022
Thanksgiving, US	11/28/2019	11/26/2020	11/25/2021	11/24/2022
Christmas Day	12/25/2019	12/25/2020	12/25/2021	12/25/2022

Please note that Jewish holidays start at sundown the previous evening.

## Editors

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To submit Mars Community Announcements and calendar items for next month's newsletter, please email Barbara Saltzberg at [Barbara.A.Saltzberg@jpl.nasa.gov](mailto:Barbara.A.Saltzberg@jpl.nasa.gov).

The Mars Exploration Science Monthly Newsletter is available on the MEPAG website, <https://mepag.jpl.nasa.gov/newsletters.cfm>, and via electronic mailing list.

To join the mailing list, which includes announcements as well as this newsletter, go to <https://mepag.jpl.nasa.gov/emailnewsletters.cfm>.

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