

Mars Exploration Science Monthly Newsletter

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

June 2018

Mars Science News

Save the date for a MEPAG Virtual Meeting (VM2) - June 25, 11-1pm PDT

Plans are in-work for a virtual MEPAG meeting on Monday, June 25, 2018, 11 am to 1 pm PDT. This would be the 2nd virtual meeting of 2018 (VM2). Agenda and connection information will be posted to the MEPAG meeting website (<https://mepag.jpl.nasa.gov/meetings.cfm>) and sent out via email in the near future.

We invite all members of the Mars exploration community to tune in.

InSight and MarCO spacecraft now heading to Mars

We congratulate the InSight (Interior Exploration using Seismic Investigations, Geodesy and Heat Transport) mission team for a successful launch from Vandenberg Air Force Base (CA, USA) during the early hours of May 5, 2018.

InSight is planned to land in Elysium Planitia, Mars late this November. This lander is designed to study in-depth the "inner space" of Mars: its crust, mantle, and core. Studying Mars' interior structure answers key questions about the early formation of rocky planets in our inner solar system - Mercury, Venus, Earth, and Mars - more than 4 billion years ago, as well as rocky exoplanets. InSight also measures tectonic activity and meteorite impacts on Mars today. For more information about the InSight mission, see <https://mars.nasa.gov/insight/mission/overview/> or a recent press release such as <https://www.nasa.gov/feature/jpl/insight-steers-toward-mars>.

Also carried in that launch were the first deep space cubesats: MarCO (Mars Cubesats One — individually nicknamed Eva and Wall-E). These interplanetary CubeSats are a technology demonstration — independently traveling to Mars, carrying their own communications and navigation experiments. During InSight's entry, descent and landing (EDL) operations, the pair will serve as an additional relay for InSight that could allow for sending more immediate information from InSight to Earth. For more information about MarCO, see <https://www.jpl.nasa.gov/cubesat/missions/marco.php>

Decision made to fly Mars Helicopter on Mars 2020 rover mission

The Mars Helicopter, a small, autonomous rotorcraft, will travel with the agency's Mars 2020 rover mission, currently scheduled to launch in July 2020, to demonstrate the viability and potential of heavier-than-air vehicles on the Red Planet. For more information, see <https://www.nasa.gov/press-release/mars-helicopter-to-fly-on-nasa-s-next-red-planet-rover-mission>.

The Mars Science Laboratory rover is drilling again!

Engineers working with NASA's Curiosity Mars rover have been hard at work testing a new way for the rover to drill rocks and extract powder from them. Mid-May, that effort produced the first drilled sample on Mars in more than a year. Curiosity tested percussive drilling, penetrating about 2 inches (50 millimeters) into a target called "Duluth." More recently, they are working to deliver drilled samples to instruments for analysis. For more information, see <https://mars.nasa.gov/msl/mission/mars-rover-curiosity-mission-updates/> or a recent press release, such as: <https://www.jpl.nasa.gov/news/news.php?feature=7137>.

SPICE Training available

June 19-22, 2018 @ Madrid, SPAIN

Application deadline: June 5, 2018

The ESA SPICE Service (ESS) and the Navigation and Ancillary Information Facility (NAIF) will conduct a SPICE observation geometry training class on June 19-22, 2018 in Madrid, SPAIN. SPICE at ESA is described at: <http://www.cosmos.esa.int/web/spice/home>.

The class is free and open to all professionals and students involved in Solar System exploration. Further information about the class and the class registration form are found at: <https://www.cosmos.esa.int/web/spice/training-class-june-2018>. Three grants are available for European students to cover Travel expenses. Registration is due by **June 5**.

Summer school/workshop “Field Training and Research Program at Meteor Crater”

October 6-14, 2018 @ Barringer Meteorite Crater, Arizona, USA

Application deadline: June 11, 2018

The Field Training and Research Program at Meteor Crater is a week-long geology field class and research project based at Barringer Meteorite Crater, Arizona, more popularly known as Meteor Crater. The goal will be to introduce students to impact cratering processes and provide an opportunity to assist with a research project at the crater. Skills developed during the field camp should better prepare the students for their own thesis studies in impact cratered terrains, whether they be on Earth, the Moon, asteroids, Mars, or some other solar system planetary surface.

The field camp is designed for graduate college students in geology and planetary science programs, although advanced undergraduate students will be considered if they have successfully completed a summer field geology program and have a demonstrated interest in impact cratering processes. U.S. and international students are eligible to apply. For more information and the application (due **June 11**), see <https://www.lpi.usra.edu/exploration/mcFieldCamp/>.

Thematic School “Fluid-rock interactions in the solar system”

November 12-16, 2018 @ Nantes, FRANCE

Application deadline: Sept 20, 2018

The Laboratoire de Planetologie et Geodynamique organises the second GeoPlaNet thematic school on Fluid-Rock Interactions in the Solar System. This school in Planetary Geosciences will present to participants various techniques for observing, analysing, experimenting and modelling the compositional and morphological aspects of fluid-rock interactions in rocky and icy bodies of all sizes of the Solar System. The school will include lectures and practicals, as well as poster presentations by attendees. It will be organised along two themes: (1) Fluid-rock interactions on planetary surfaces, and (2) Fluid-rock interactions in planetary interiors.

This high-level training program is open to 80 international Master students, PhD students and young researchers with a background in geosciences and/or in planetary science. No registration fee is required. Travel and accommodation costs have to be supported by the participants or their respective institutes. (A certain number of travel grants are available for members of the GeoPlaNet consortium.) To register, fill in the following Google form by **September 20**: <https://goo.gl/forms/uhLNPqjPbEulY3al2>.

For more information, see https://lpg-umr6112.fr/index.php?option=com_content&view=article&id=1361&Itemid=165&lang=fr,

Near-term Due Dates (next three months)

Due	Project
June 1	International Symposium on Lunar & Planetary Science , Registration Deadline
June 8	Space Resources Roundtable , Registration Deadline
June 13	Comparative Climatology of Terrestrial Planets III , Abstract Deadline
June 14	Experimental Analysis of the Outer Solar System Workshop , Abstract Deadline
June 15	COSPAR 2018 , Registration Deadline
July 1	European Astrobiology Conference (EANA 2018) , Abstract Deadline
July 5	European Planetary Science Congress (EPSC) 2018 , Presentation Registration Deadline
July 15	European Astrobiology Conference (EANA 2018) , Registration Deadline
July 17	Bombardment: Shaping Planetary Surfaces and Their Environments , Abstract Deadline
July 18	Late Mars Workshop , Abstract Deadline
July 24	Lunar Polar Volatiles , Registration Deadline
July 26	Europa Deep Dive 2: Composition , Abstract Deadline
July 30	Comparative Climatology of Terrestrial Planets III , Early Registration Deadline
July 31	European Planetary Science Congress (EPSC) 2018 , Early Registration Deadline
August 1	9th Planetary Crater Consortium , Abstract Deadline Experimental Analysis of the Outer Solar System Workshop , Registration Deadline
August 11	International Venus Conference 2018 , Registration Deadline
August 13	Comparative Climatology of Terrestrial Planets III , Registration Deadline, Student and Early Career Travel Support
August 14	2018 GSA Annual Meeting , Abstract Deadline, Abstract Deadline
August 17	European Astrobiology Conference (EANA 2018) , Early Registration 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 Barbara Saltzberg (Barbara.A.Saltzberg@jpl.nasa.gov).
- If no deadline is noted: it is usually 60 days in advance for domestic meetings — sometimes further in advance if the conference is “Heavily Attended.”
- Please do not assume our noting of NCTS# is complete. If you are unsure whether an event is a conference or not, or when the forecasting deadline may be, please consult with your NASA Center conference forecasting/travel unit.

Second Quarter, 2018

	June 3-8, 2018 Honolulu, HI, USA	Asia Oceania Geosciences Society , NCTS# 31549-18 http://www.asiaoceania.org/aogs2018/public.asp?page=home.htm Session Title: <i>New views of ancient Mars</i>
	June 4-5, 2018 Troy, NY, USA	1st Annual RPI Workshop on Image-Based Modeling and Navigation for Space Applications http://mane.rpi.edu/space-imaging-workshop
	June 5-7, 2018 Houston, TX, USA	Cryovolcanism in the Solar System https://www.hou.usra.edu/meetings/cryovolcanism2018/
New!	June 6-8, 2018 Paris, France	Meteorites -- Understanding the origin of planetodiversity https://meteorites2018.sciencesconf.org/
	June 11-15, 2018 Boulder, CO, USA	15th International Planetary Probe Workshop (IPPW-15) https://www.colorado.edu/event/ippw2018/

Second Quarter, 2018, cont.

	June 12-14, 2018 Knoxville, TN, USA	Planetary Geologic Mappers Annual Meeting https://www.hou.usra.edu/meetings/pgm2018/
	June 12-15, 2018 Golden, CO, USA	Space Resources Roundtable http://www.csmospace.com/events/srr/
	June 12-15, 2018 Golden, CO, USA	Planetary & Terrestrial Mapping Sciences Symposium https://www.deltion.ca/ptmss
	June 12-15, 2018 Pasadena, CA, USA	Geobiology 2018 http://web.gps.caltech.edu/GBcourse/
	June 12-15, 2018 Macau, China	International Symposium on Lunar & Planetary Science http://www.ssi.must.edu.mo/ISLPS2018/
	June 13-14, 2018 College Park, MD	19th Meeting of the NASA Small Bodies Assessment Group, NCTS# 33683-18 https://www.lpi.usra.edu/sbag/
	June 18-22, 2018 Lakewood, CO, USA	Mars Workshop on Amazonian and Present Day Climate, NCTS# 31858-18 https://www.hou.usra.edu/meetings/amazonian2018/
	June 19-22, 2018 Kharkiv, Ukraine	Atmosphereless Solar System Bodies in the Space Exploration Era http://www.astron.kharkov.ua/conference/ssb/18/index.php
	June 23–July 1, 2018 Chamonix, France	EUCOP 2018: 5th European Conference on Permafrost, NCTS# 32179-18 https://eucop2018.sciencesconf.org/
	June 23–July 1, 2018 Petnica, Serbia	Workshop in Geology and Geophysics in the Solar System http://petnica.rs/planetary2017/
	June 25, 2018 Moffett Field, CA, USA	9th Annual Lunar and Small Bodies Graduate Conference (LunGradCon 2018) http://impact.colorado.edu/lungradcon/2018/
	June 25-29, 2018 Rotorua, New Zealand	Astrobiology Australasia Meeting, NCTS# 33508-18 Astrobiology Australasia Meeting
	June 25-29, 2018 Bordeaux, France	International Conference on Aeolian Research (ICAR), NCTS# 32552-18 https://colloque.inra.fr/icar2018/Program <i>There is a special session on Planetary Aeolian Research.</i>
	June 26-28, 2018 Moffett Field, CA, USA	NASA Exploration Science Forum 2018, NCTS# 32417-18 https://nesf2018.arc.nasa.gov/

Third Quarter, 2018

	July 1-9, 2018 Denham, Australia	Astrobiology Grand Tour Astrobiology Grand Tour
	July 14-22, 2018 Pasadena, CA, USA	42nd COSPAR Scientific Assembly NCTS# 28500-18 http://cospar2018.org/
	July 22-27, 2018 Moscow, Russia	81st Annual Meeting of The Meteoritical Society, NCTS# 32898-18 http://metsoc81-moscow.ru/
	July 29, 2018 Cambridge, MA, USA	Exoplanet Exploration Program Analysis Group (ExoPAG), NCTS# 33921-18 https://exoplanets.nasa.gov/exep/events/205/exopag-18/
	August 7-9, 2018 Laurel, MD, USA	Lunar Polar Volatiles, NCTS# 32572-18 https://www.hou.usra.edu/meetings/lunarvolatiles2018/
	August 8-10, 2018 Boulder, CO, USA	The 9th Planetary Crater Consortium http://www.planetarycraterconsortium.nau.edu/
	August 12-17, 2018 Boston, MA, USA	Goldschmidt Conference 2018, NCTS# 32184-18 https://goldschmidt.info/2018/ <i>Session: 11d: From Source to Sink - Geochemical Sulfur Cycles on Earth and Mars</i>
	August 12-17, 2018 Boulder, CO, USA	Cassini Science Symposium, NCTS# 33060-18 http://lasp.colorado.edu/home/2018-cassini-science-symposium

Third Quarter, 2018, cont.

	August 15-17, 2018 Fayetteville, AR, USA	Experimental Analysis of the Outer Solar System Workshop , NCTS# 33887-18 https://www.hou.usra.edu/meetings/exoss2018/
New!	August 16-17 Green Belt, MD, USA	3rd Planetary CubeSat Science Symposium , NCTS# 34422-18 https://cubesats.gsfc.nasa.gov/symposium.html
	August 27-30, 2018 Houston, TX, USA	Comparative Climatology of Terrestrial Planets III , NCTS# 32374-18 https://www.hou.usra.edu/meetings/climatology2018/ <i>Student and Early Career travel awards — applications due June 13</i>
	September 11-14, 2018 Niseko, Japan	International Venus Conference 2018 , NCTS# 31333-18 https://www.cps-jp.org/~akatsuki/venus2018/
Updated!	September 11-12, 2018 Pasadena, CA USA	Outer Planets Assessment Group (OPAG) Meeting , NCTS# 34029-18 https://www.lpi.usra.edu/opag/
	September 12-13, 2018 Berlin, Germany	International Workshop on Instrumentation for Planetary Missions (IPM) 2018 NCTS# 34186-18 https://ipm2018.org/
	September 12-14, 2018 Irvine, CA, USA	NASEM Committee on Astrobiology and Planetary Science (CAPS) http://sites.nationalacademies.org/SSB/SSB_067577#Meetings_and_Events
	September 16-21, 2018 Berlin, Germany, USA	European Planetary Science Congress (EPSC) 2018 , NCTS# 32031-18 https://www.epsc2018.eu/
	September 24-27, 2018 Honolulu, HI, USA	Multispectral, Hyperspectral, and Ultraspectral Remote Sensing Technology, Techniques and Applications VII http://spie.org/AE/conferencedetails/multispectral-hyperspectral-and-ultraspectral-remote-sensing?SSO=1
	September 24-28, 2018 Berlin, Germany	European Astrobiology Conference (EANA 2018) http://www.eana-net.eu/index.php?page=Conferences/EANA2018
Updated!	Sept. 30-Oct. 3, 2018 Flagstaff, AZ, USA	Bombardment: Shaping Planetary Surfaces and Their Environments , NCTS# 28520-18 https://www.hou.usra.edu/meetings/bombardment2018/

Fourth Quarter, 2018

	October 1-3, 2018 Houston, TX, USA	Late Mars Workshop , NCTS# 34492-19 https://www.hou.usra.edu/meetings/latemars2018/
	October 8-12, 2018 Moscow, Russia	Ninth Moscow International Solar System Symposium (9M-S3)
New!	October 9-11, 2018 Houston, TX, USA	Europa Deep Dive 2: Composition , NCTS# 34828-19 https://www.hou.usra.edu/meetings/europadeepdive2018/
	October 16-18 Glendale, CA, USA	4th Mars 2020 Rover Landing Site Selection Workshop , NCTS# 34492-19 https://marsnext.jpl.nasa.gov/workshops/wkshp_2018_10.cfm
Updated!	October 21-26, 2018 Knoxville, TN, USA	50th Meeting of the AAS Division for Planetary Sciences , NCTS# 32241-19 https://aas.org/meetings/dps50
	November 4-7, 2018 Indianapolis, IN, USA	2018 GSA Annual Meeting https://www.geosociety.org/GSA/Events/Annual_Meeting/GSA/Events/gsa2018.aspx <i>T51: Planetary Aeolian Geology from Outcrop to Orbit: Nathan Bridges Memorial Session</i>
Updated!	November 6-8, 2018 Laurel, MD, USA	16th Venus Exploration Analysis Group meeting , NCTS# 34829-19 https://www.lpi.usra.edu/vexag/
	November 26, 2018	Insight landing
Updated!	December 10-14, 2018 Washington, DC, USA	American Geophysical Union Fall Meeting , NCTS# 31561-19 https://fallmeeting.agu.org/2017/

2019

	March 18-22, 2019 The Woodlands, TX, USA	50th Lunar and Planetary Science Conference https://www.hou.usra.edu/meetings/lpsc2019/
	March 26-28, 2019 Washington, DC, USA	NASEM's Committee on Astrobiology and Planetary Science (CAPS) http://sites.nationalacademies.org/SSB/SSB_067577#Meetings_and_Events
	July 22-26, 2019 Pasadena, CA, USA	9th International Conference on Mars https://www.hou.usra.edu/meetings/ninthmars2019/
	September 11-12, 2019 Irvine, CA, USA	NASEM's Committee on Astrobiology and Planetary Science (CAPS) http://sites.nationalacademies.org/SSB/SSB_067577#Meetings_and_Events
	September 22-25, 2019 Phoenix, AZ, USA	2019 GSA Annual Meeting https://www.geosociety.org/GSA/Events/Annual_Meeting/GSA/Events/gsa2019.aspx
	October 2019 [TBD]	Habitability in the Solar System <i>Date and location are not set yet—proposed: Yellowstone Nat'l Park, WY, USA</i>

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	3/30/2018	4/19/2019	4/10/2020	4/2/2021
Rosh Hashanah	9/10/2018	9/30/2019	9/19/2020	9/7/2021
Yom Kippur	9/19/2018	10/09/2019	9/28/2020	9/16/2021

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

Thanksgiving Day, Canada	10/08/2018	10/14/2019	10/12/2020	10/11/2021
Thanksgiving Day, U.S.	11/22/2018	11/28/2019	11/26/2020	11/25/2021
Christmas Day	12/25/2018	12/25/2019	12/25/2020	12/25/2021

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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

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