

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

DIVISION ON ENGINEERING AND PHYSICAL SCIENCES
SPACE STUDIES BOARD

SPACE SCIENCE WEEK

SPRING 2016 MEETING OF THE COMMITTEE ON ASTROBIOLOGY AND PLANETARY SCIENCE

March 29-31, 2016

NAS Building—2101 Constitution Ave NW—Washington D.C.

FINAL AGENDA

Tuesday March 29, 2016

MORNING PARALLEL BREAK-OUT SESSION

COMMITTEE ON ASTROBIOLOGY AND PLANETARY SCIENCE—Lecture Room

7:30 AM *Registration opens and breakfast is available in the Great Hall*

OPEN SESSION

8:30 AM **Welcome and Introductions** **Philip Christensen and Chris House**

8:45 AM **Planetary Science Division Update** **James Green**
NASA/SMD/PSD

9:45 AM *Break available outside room*

10:00 AM **Mars Exploration Program Update** **James Watzin**
NASA/SMD/PSD

11:00 AM **Thinking Out of the Box on Habitability** **Penny Boston**
New Mexico Tech

12:00 PM *Lunch available in the Great Hall*

Tuesday March 29, 2016

PLENARY SESSION—Auditorium

1:00 PM **Welcome and Overview of Current SSB Activities** **David Spergel, SSB Chair**
Jim Lancaster, BPA Director
Michael Moloney, SSB Director

1:30 PM **NASA-SMD Budget, Program, and Priorities** **John Grunsfeld, NASA**
Presentation 15 mins / Q&A 15 mins

Focus Session on International Programs and Cooperation

2:00 PM **ESA Science Program** **Alvaro Gimenez, ESA**
ESA Earth Observation Program **Maurice Borgeaud, ESA**
CAS-NSSC Science Program **Chi Wang, CAS**
JAXA Science Program **Saku Tsuneta, JAXA**
DLR Science Program **Pascale Ehrenfreund, DLR**

3:15 PM	Discussion Panel on International Collaboration (Moderated by David Spergel, SSB Chair) Panel Members: Maurice Borgeaud, Pascale Ehrenfreund, Alvaro Gimenez, John Grunsfeld, Saku Tsuneta, Chi Wang	
4:00 PM	<i>Break Available in the Great Hall</i>	
4:20 PM	Briefing on SSB study on NASA Science Mission Extensions	Vicky Hamilton, Cmmtee Co-Chair
4:50 PM	Perspectives from Congressional Staff	
5:20 PM	Space Launch System for Science Presentation	Angela Jackman, NASA MSFC
5:50 PM	Closing Comments	
5:55 PM	<i>Public Meeting Adjourns</i>	
6:00 PM	<i>Reception by invitation in the West Court</i>	
7:00 PM	<i>Dinner by Invitation in the Great Hall</i>	

Wednesday March 30, 2016

COMMITTEE ON ASTROBIOLOGY AND PLANETARY SCIENCE (CAPS)—Lecture Room

7:30 AM	<i>Registration opens and breakfast is available in the Great Hall</i>	
OPEN SESSION		
8:30 AM	Welcome and Announcements	Chris House
8:45 AM	European Planetary Science Missions: Updates and New Initiatives	Athena Coustenis Paris Observatory
9:45 AM	<i>Break available outside room</i>	
10:00 AM	A Strategy for Origins of Life Research	Caleb Scharf Columbia University
11:00 AM	Europa Mission Update	Robert Pappalardo (via WebEx) and Barry Goldstein Jet Propulsion Laboratory
12:00 PM	General Discussion <i>Lunch available in the Great Hall</i>	

COMMITTEE ON ASTROBIOLOGY AND PLANETARY SCIENCE

1:00 PM	The Exploration of the Pluto System by New Horizons	Alan Stern Southwest Research Institute
2:00 PM	European AstRoMap Astrobiology Roadmap	Gerda Hornek German Aerospace Center, Retired
3:00 PM	<i>Break available outside room</i>	

EXECUTIVE SESSION

3:15 PM	General Discussion of Issues in Astrobiology and Planetary Science	Committee
5:30 PM	<i>Buffet dinner by invitation in the West Court</i>	

OPEN SESSION

6:45 PM	Plenary Public Talk—<i>Mission to Pluto: Exploring the Frontier of Our Solar System</i>	
		Alan Stern, Southwest Research Institute

Thursday March 31, 2016

COMMITTEE ON ASTROBIOLOGY AND PLANETARY SCIENCE—Lecture Room

7:30 AM	<i>Registration opens and breakfast is available in the Great Hall</i>
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OPEN SESSION

8:30 AM	The Case for Enceladus	Carolyn Porco Space Science Institute
9:30 AM	Dawn at Ceres	Christopher Russell University of California, Los Angeles
10:30 AM	<i>Break available outside room</i>	
10:45 AM	Astrobiology Program Update	Mary Voytek NASA/SMD
11:45 AM	Final words	Chris House and Philip Christensen
12:00 PM	Meeting Adjourns (lunch tickets available)	

GENERAL NOTES

Pre-registration: All participants, including committee members, invited speakers and other attendees, are strongly encouraged to preregister at <http://sgiz.mobi/s3/cbcd3c2fde7f>.

Registration will be located in the Great Hall during the event. Please check-in there to receive your badge.

NAS Building: Is located at 2101 Constitution Ave., NW, between the State Department and the Vietnam Veterans Memorial. Additional information about the NAS Building is available at <http://www.nationalacademies.org/about/contact/nax.html>.

Metro: The closest Metro station (0.5 miles) is Foggy Bottom (Blue and Orange lines; exit and turn right, then turn left once you have passed the State Department).

Parking: Very limited parking is available onsite at the NAS. The 22 available parking spaces are first come first served. Other available parking options are as follows:

- PMI (Columbia Plaza) –2400 Virginia Avenue, NW. Phone (202) 785-2448. The daily rate is \$24.
- Colonial Parking – 515 20th Street, NW. Phone (202) 296-5700. The daily rate is \$11.00.
- GW Elliot School Garage is located near the Department of Interior at 508 19th Street, NW. The daily rate is \$17.00.

Space Science Week Website: http://sites.nationalacademies.org/SSB/SSB_170495

The following information is provided for any members of the general public who may be in attendance:

This meeting is being held to gather information to help the committee in its charge. This committee will examine the information and material obtained during this, and other public meetings, in an effort to inform its work. Although opinions may be stated and lively discussion may ensue, no conclusions are being drawn nor will recommendations be made. Observers who draw conclusions about the committee's work based on this meeting's discussions will be doing so prematurely.

Furthermore, individual committee members often engage in discussion and questioning for the specific purpose of probing an issue and sharpening an argument. The comments of any given committee member may not necessarily reflect the position he or she may actually hold on the subject under discussion, to say nothing of that person's future position as it may evolve in the course of the project. Any inference about an individual's position are therefore also premature.

RECORDING OF THE MEETING

This meeting will be recorded. Please be aware that by attending the meeting, you consent to your voice being recorded for internal use for the purpose of note-taking. This recording will not be publicly released or used for any other public purposes.

NOTES FOR PRESENTERS

If your presentation contains unpublished data, ITAR controlled and/or other sensitive information, please be aware that the open sessions at the meeting may be recorded and/or webcast. Presentation materials given to the committee may be posted on a publicly accessible website. Please edit your presentations accordingly.

Mac users should assume that their presentation will be displayed via a PC. If your presentation is graphics heavy and best displayed via your own laptop, you should also bring a plain-vanilla pdf version of your presentation with you. The audience in the meeting room will see your presentation via your laptop and we will webcast the pdf file.

At some point a staff member will be asking you to sign a consent form allowing us to use your presentation, specifically to post it on our website.

REMOTE CONNECTION DETAILS

WebEx & Telecon Instructions:

Go to <https://nationalacademies.webex.com/>

1. Click on the meeting name (below) you want.
2. Enter your name and email address (you will not be spammed) and click “Join Meeting”
3. Let WebEx load (may take a minute); once loaded, WebEx will immediately and automatically provide you a pop-up window to enter the phone number you would like to be called at (i.e. home, office, mobile) to join the telecon. Enter your phone number and click “Call me” and follow the prompts.
4. Enter the Meeting Password (below)
5. Teleconference only: Connection quality is much better via WebEx’s “Call me” feature, so we strongly recommend that you connect this way. If you are not able to do so, you can dial 1-866-668-0721 and enter the conference code (below).

TUESDAY MARCH 29 OPEN SESSION 8:30AM to 12:00 PM

Meeting Name: SSW CAPS Day 1 Open

Meeting Password: spaceweek (case sensitive)

Conference Code: 261 122 5317

TUESDAY MARCH 29 PLENARY SESSION 1:00 PM to 6:00 PM

Meeting Name: SSW Plenary Session

Meeting Password: spaceweek (case sensitive)

Conference Code: 255 641 6641

WEDNESDAY MARCH 30 OPEN SESSION 8:30 AM to 3:00 PM

Meeting Name: SSW CAPS Day 2 Open

Meeting Password: spaceweek (case sensitive)

Conference Code: 261 122 5317

WEDNESDAY MARCH 30 PUBLIC LECUTRE 6:45 PM

<https://livestream.com/accounts/7036396/SSWLecture2016>

THURSDAY MARCH 31 OPEN SESSION 8:30 AM to 12:00 PM

Meeting Name: SSW CAPS Day 3 Open

Meeting Password: spaceweek (case sensitive)

Conference Code: 261 122 5317

Please join us for a public lecture

MISSION TO PLUTO:
EXPLORING THE FRONTIER OF OUR SOLAR SYSTEM
The 2016 Space Science Week Public Lecture

FEATURING ALAN STERN
Principal Investigator of the New Horizons Mission

MARCH 30, 2016 AT 6:45PM
NATIONAL ACADEMY OF SCIENCES
2101 CONSTITUTION AVE., N.W.
WASHINGTON, D.C. 20418

Register at: nas.edu/SSWLecture

Image Credit: ISPCS

REGISTER ONLINE

After nearly a decade of traveling to the outer reaches of the solar system, the New Horizons spacecraft provided the first glimpses of Pluto and its five moons, revealing an astonishing new world of vast, frozen planes and icy mountains. Discover Pluto for yourself along with New Horizons' Principal Investigator Alan Stern during a FREE public lecture to celebrate Space Science Week 2016.

For more information, please visit nas.edu/SpaceScienceWeek

