

The National Academies of
SCIENCES • ENGINEERING • MEDICINE
DIVISION ON ENGINEERING AND PHYSICAL SCIENCES
SPACE STUDIES BOARD

FINAL AGENDA

COMMITTEE ON ASTROBIOLOGY AND PLANETARY SCIENCE

September 10-12, 2018

**California Institute of Technology Keck Institute for Space Studies
345 S. Michigan Avenue, Pasadena CA 91125 — KISS CONFERENCE ROOM**

PUBLIC AGENDA

Tuesday, September 10, 2019

7:15 a.m. Assemble in hotel lobby to walk/carpool to Keck Institute

OPEN SESSION

Zoom Remote Access Information – Day 1 Open

Phone: (646) 558-8656 or (669) 900-6833

Link: <https://nasem.zoom.us/j/736772479>

Meeting ID: 736-772-479

7:30 a.m. Working breakfast available at the Keck Institute

8:30 a.m. **Welcome & Introductions**

Christopher House and William McKinnon
CAPS Co-Chairs

8:45 a.m. **NASA Planetary Science Division Update**

Lori Glaze
NASA HQ

9:45 a.m. **NSF Planetary Astronomy Division Update**

Linda French, Luke Sollitt (via Zoom)
NSF

10:15 a.m. *Break*

10:30 a.m. **Decadal Survey, NASA Needs and Perspective**

Lori Glaze
NASA HQ

11:00 a.m. **International Update¹**

- Fabio Favata
- Masaki Fujimoto

ESA (via Zoom)
ISAS/JAXA

12:00 p.m. Working lunch, discussion continues

¹ Format: 20 minute talks each (slides allowed) followed by questions, answers and discussion. The intent is not to learn about current and upcoming missions but to get a better idea strategic planning processes employed by ESA and JAXA and to identify major decision points in the next couple of years in areas relevant to the decadal survey. The decadal survey does not want to do anything that will intentionally or unintentionally damage ESA's and JAXA's processes and programs.

1:00 p.m.	Input from Advisory/Analysis Groups²	
	- Bonnie Buratti, SBAG	NASA JPL
	- Brett Denevi, LEAG	JHU, APL
	- Darby Dyar, VEXAG	Mount Holyoke College
	- Jeffrey Moore, OPAG	NASA, Ames
	- Jani Radebaugh, MAPSIT	Brigham Young University
	- Aileen Yingst, MEPAG	Planetary Science Institute
2:00 p.m.	General Discussion: Decadal Survey Needs and Perspectives	Committee & Guests
3:00 p.m.	Europa Clipper Magnetometer	Robert Strangeway University of California, Los Angeles
3:30 p.m.	<i>Break</i>	
4:00 p.m.	Lessons Learned from Previous Decadal Surveys³	
	- Wendy Calvin	University of Nevada, Reno (<i>via Zoom</i>)
	- Heidi Hammel	AURA
	- Robert Pappalardo	NASA, JPL
	- Louise Prockter	Lunar and Planetary Institute
	- Steven Squyres	Blue Origins (<i>via Zoom</i>)
5:15 p.m.	General Discussion	Committee & Guests
	- Agency needs	
	- Advisory group input	
	- Forward application of lessons learned	
5:45 p.m.	<i>Meeting moves to alternate location for working dinner</i>	
6:30 p.m.	<i>Working Dinner at Malbec Restaurant, 1001 E Green St, Pasadena, CA 91106</i>	

² Format: 5 minute talks each (slides allowed)—on the status of respective goals documents, discipline-specific issues that might need to be called out in the statement of task, and other comments relevant at this preliminary stage in the development of the survey—followed by 30 minutes of discussion. We are not looking for input on what the final survey report should say, but, rather, things that should happen in the 6 months or so between the September meeting and LPSC 2020.

³ Format: 10 minute talks (slides allowed) followed by 25 minutes discussion

Wednesday, September 11, 2019

7:15 a.m. Assemble in hotel lobby to walk/carpool to Keck Institute

OPEN SESSION

Zoom Remote Access Information – Day 2 Open

Phone: (646) 558-8656 or (669) 900-6833

Link: <https://nasem.zoom.us/j/956342861>

Meeting ID: 956-342-861

7:30 a.m. Working breakfast available at the Keck Institute

8:30 a.m. **Welcome**

Christopher House & William McKinnon
CAPS Co-Chairs

8:35 a.m. **Survey Organization⁴**

- Heidi Hammel
- Jonathan Lunine
- Steven Squyres
- David Stevenson

AURA
Cornell University
Blue Origins (*via Zoom*)
California Institute of Technology

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9:35 a.m. **Community Outreach & Inclusion⁵**

- Linda Elkins-Tanton
- Sarah Horst
- Kurt Klaus
- Jonathan Lunine
- Emily Moravec

Arizona State University
Johns Hopkins University, (*via Zoom TBD*)
Lunar and Planetary Institute
Cornell University
University of Florida, (*via Zoom*)

10:50 a.m. *Break*

11:00 a.m. **General Discussion**

Committee & Guests

- Outreach
- Survey organization
- Required expertise
- New topic areas (e.g., commercial entities, public/private partnerships, philanthropic spaceflight)

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12:00 p.m. *Working Lunch*

⁴Format: 7-8 minute talks each (slides allowed) followed by 30 minute discussion and questions

⁵Format: 10 minutes allocated to each for talk (slides allowed) and 25 minutes for discussion and questions

1:00 p.m. **Network Analysis of Planetary Science Themes and Destinations** Louis Barbier
NASA HQ

2:00 p.m. **Discussion: White Papers** Committee & Guests

- Timing
- Topics (science, missions, state of the profession)
- Number of solicitations

3:00 p.m. *Break; Committee reconvenes in closed session*

CLOSED SESSION

3:30 p.m. **Discussion begins**

5:30 p.m. *Meeting adjourns for the day*

Thursday, September 12, 2019

7:15 a.m. Assemble in hotel lobby to walk/carpool to Keck Institute

COMMITTEE IS IN CLOSED SESSION ALL DAY

REMOTE CONNECTION DETAILS

Zoom Web Conference & Telecon Instructions

Day 1 Open - Link: <https://nasem.zoom.us/j/736772479> **Meeting ID: 736-772-479**

Day 2 Open - Link: <https://nasem.zoom.us/j/956342861> **Meeting ID: 956-342-861**

Join from a computer:

1. Click on the URL in the agenda. A popup will appear that says “Open URL:Zoom Launcher;” Click the “Open” button and let Zoom load (may take a minute).
2. Once loaded, Zoom will automatically display another pop-up for the audio connection. Please click the “call me” tab and enter the phone number you would like to be called at (i.e. home, office, mobile). Click “Call me” and follow the prompts.

Join from a mobile device:

1. Download the Zoom app from your phone’s app store (if you don’t have it installed already).
2. Click on the URL in the agenda, or open the Zoom app and enter the Meeting ID in the agenda and press join. Enter your name if requested.
3. The Zoom app will automatically display a pop-up window for the audio connection. Select the “Call my Phone” option from the menu, enter your phone number, press call, and follow any prompts.

Join by phone only:

1. Connection quality is much better via Zoom’s “Call me” feature from the webconference, so we strongly recommend that you connect this way.
2. If you are not able to do so, you can dial 1-877-853-5257 (Toll Free) and enter the Meeting ID. International numbers are available at:

https://nasem.zoom.us/zoomconference?m=dm0fun9LyXrhECcUWQt2Wwdh_9TUrhXG

NOTICE: The Zoom service allows audio and any materials exchanged or viewed during the session to be recorded and shared. Please be aware that by participating in this activity, you consent to your voice, likeness, and any materials you provide, being recorded for use and dissemination, without payment of any compensation for such use, in any language, format, or media now known or later devised, and you release the National Academies of Sciences, Engineering, and Medicine from any and all claims, liability, or damages arising from any such use. The Academies will proceed in reliance upon such consent and release. If you do not consent to the foregoing, please do not join the session.

GENERAL NOTES

Meeting Venue: The meeting will take place in the Keck Institute for Space Studies, 345 S. Michigan Ave., Pasadena, CA 91106.

Hotel: A block of rooms for the use of committee members and guests has been reserved at the Hotel Constance, located at 928 E Colorado Blvd, Pasadena, CA 91106 (see map below for location). The hotel telephone number is (626) 898-7900. More information can be found at: <https://hotelconstance.com/>. Please contact Andrea Rebholz at arebholz@nas.edu to reserve a room.

Working Dinner: There will be a working dinner at Malbec Argentinian Restaurant, located at 1001 E Green St, Pasadena, CA 91106 (i.e., one block from the Hotel Constance; see map below). The telephone number for the restaurant is (626) 683-0550. More information can be found at: <http://www.malbeccuisine.com/pasadena>. All meeting participants can attend if space is available. The Space Studies Board will only pay for members of the committee and guest speakers. Unfortunately, we cannot pay for federal employees and members of the public—for those attendees, the cost of the dinner is \$50.00. Checks, payable to the National Academy of Sciences, are preferred.

Notes to 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 will be posted on a publicly accessible website. Please edit your presentations accordingly.

Mac users should assume that their presentation will be displayed via one of the SSB's PCs. 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.

Notes for Attendees: This meeting is being held to gather information to help the committee address its tasks. 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 may be recorded by the committee. Please be aware that by attending the meeting, you consent to your voice being recorded for use by the committee for the purpose of note-taking. This recording will not be publicly released, shared outside of the National Academies, or used for other public purposes.

Parking: Visitors to the Keck Institute and the Caltech campus may park in any commuter (unreserved) stall on campus with a daily or weekly permit. Permits are required in all campus lots between the hours

of 7:00 a.m. and 5:00 p.m., Monday through Friday. Visitor permits are available at automated pay stations at the following locations: Structure #1 (North Wilson Structure, noted as “Primary Parking” on the Keck Institute map below), Parking Lot #6 (Tournament Lot), Structure #3 (California Structure), and Structure #4 (Holliston Structure). For details see campus parking map at https://www.parking.caltech.edu/documents/35-interactive_parking_map.pdf.

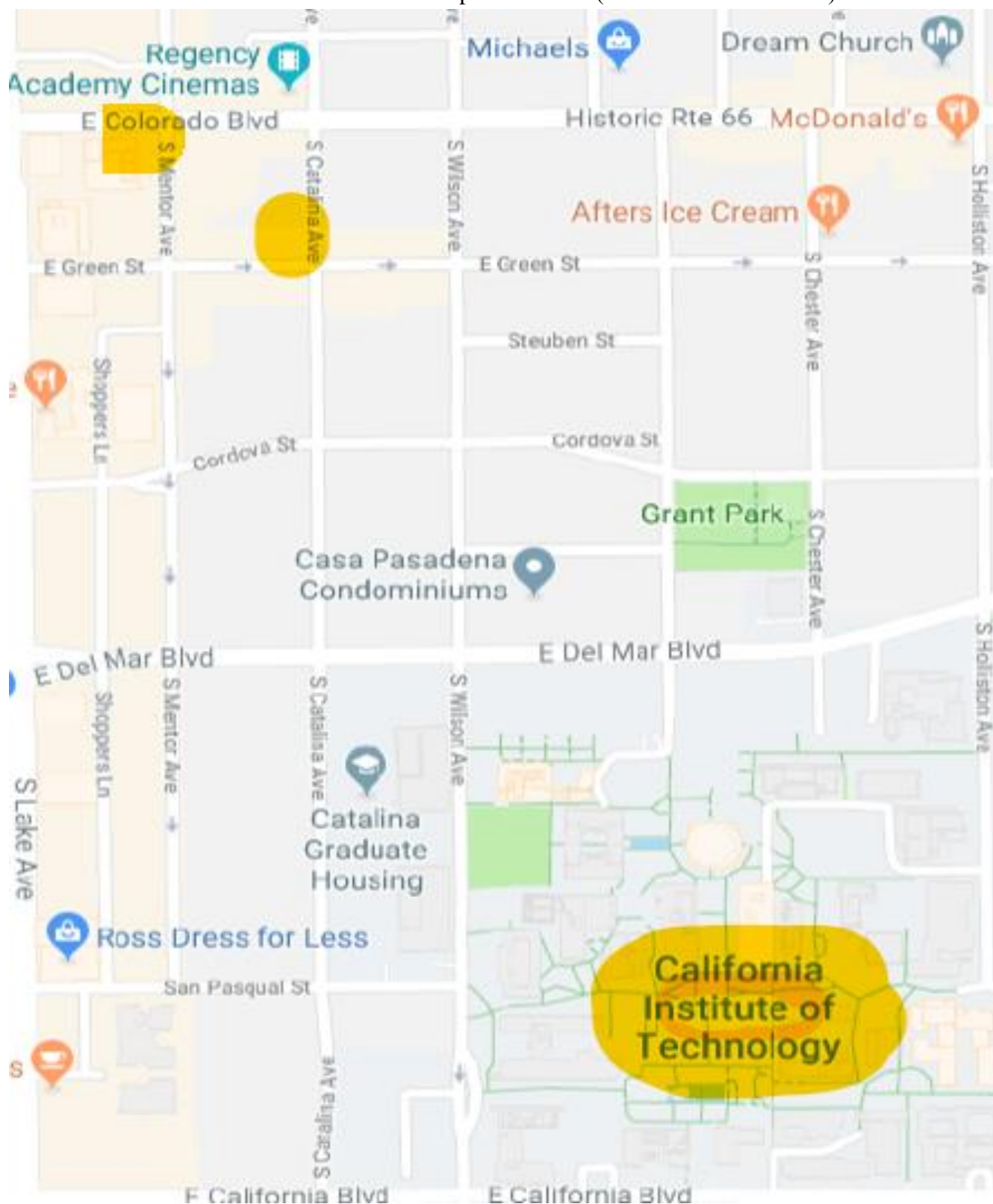
NAS Staff: Andrea Rebholz, Sarah Moran and David H. Smith will be present at the meeting.

Hotel Constance: Far upper left at intersection of E. Colorado Blvd and S. Mentor Ave

Malbec Argentinean Cuisine: Upper left at intersection of E. Green St and S. Catalina Ave

Keck Institute and Caltech campus: Lower right

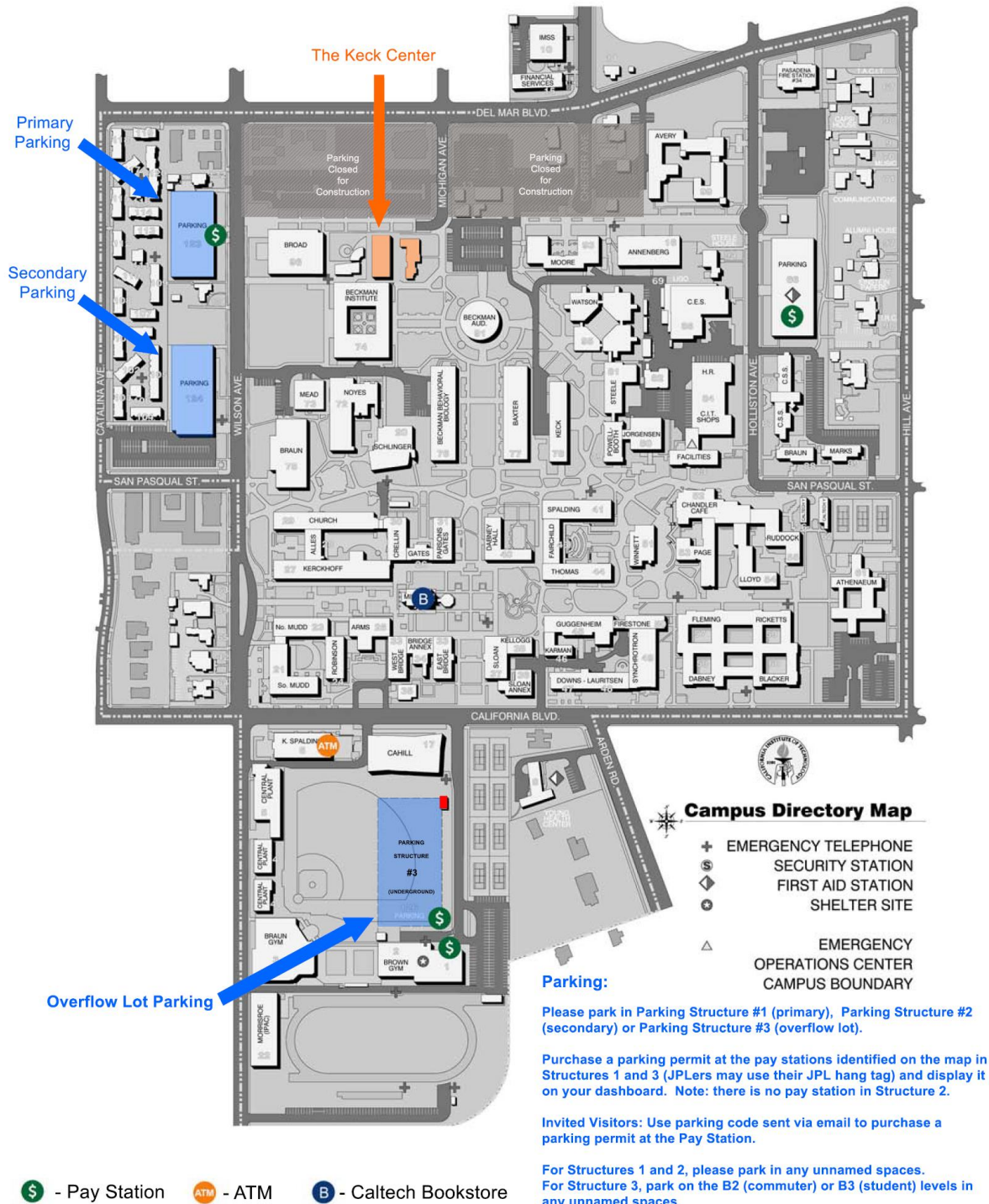
Distance from Hotel Constance to Caltech campus: 1.25 km (about 15 minutes' walk)





W. M. Keck Institute for Space Studies

345 S. Michigan Ave. Pasadena, CA 91125 | California Institute of Technology | 626.395.6630



Last updated: 6 September 2019, 11:30 a.m.