NATIONAL ACADEMIES Sciences Engineering Medicine

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AERONAUTICS AND SPACE ENGINEERING BOARD

# Committee on Astrobiology and Planetary Sciences

## 2025 Fall Meeting

**October 7-9, 2025**

**Hybrid Meeting**

**NAS Beckman Center, Balboa Room, 100 Academy Wy, Irvine, CA 92617**

**ALL TIMES IN US PACIFIC DAYLIGHT TIME (UTC-7:00)**

## TUESDAY, OCTOBER 7, 2025

**OPEN SESSION**
**Livestream: Link**

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**Updates on Latest Science from NASA's Currently Operating and Extended Missions**

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|---|---|---|
| **10:00 AM** | **Welcome** | **Dr. Martha Gilmore, CAPS Co-Chair / Dr. Karyn Rogers, CAPS Co-Chair** |
| **10:05 AM** | **Origins, Spectral Interpretation, Resource Identification and Security – Apophis Explorer (OSIRIS-ApEx) Extended Mission**<br>(25-minute presentation and 20-minute discussion) | **Dr. Daniella Della Guistina, Principal Investigator, OSIRIS-APEx** |
| **10:50 AM** | **Extended Mission of Mars Science Laboratory (MSL)**<br>(25-minute presentation and 20-minute discussion) | **Dr. Ashwin Vasavada, Project Scientist, MSL** |
| *11:35 PM* | *Working Lunch for Members, Speakers, and Invited Guests. Break to Short Closed Session* | |

**OPEN SESSION**
**Livestream: Link**

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| **2:05 PM** | **Extended Mission of New Horizons Spacecraft**<br>(25-minute presentation and 20-minute discussion) | **Dr. Kelsi Singer, Deputy Principal Investigator New Horizons Mission** |

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| **2:50 PM** | **Extended Mission of Juno Spacecraft**<br>(25-minute presentation and 20-minute discussion) | **Dr. Scott Bolton, Principal Investigator, Juno Mission** |
| *3:35 PM* | *Break* | |
| **3:50 PM** | **Promising Biosignature Detection by Perseverance at Jezero Crater***<br>(40-minute presentation and 20-minute discussion) | **Dr. Joel Hurowitz, Assoc. Professor, Dept. of Geosciences, Stony Brook U.** |
| *4:50 PM* | *Break into Closed Session* | |

**Committee on Astrobiology and Planetary Sciences**
**2025 Fall Meeting**
**October 7-9, 2025**

## WEDNESDAY, OCTOBER 8, 2025

### OPEN SESSION

**Livestream:** Link

CLICK HERE TO JOIN

**Special Session on NASA Astrobiology**

Key Focus of the Session:

*What does the astrobiology community need from NASA to continue making significant advances? What can the astrobiology community at large do to assist NASA in ensuring astrobiology research progress?*

**9:45 AM** **Welcome** — **Dr. Martha Gilmore, CAPS Co-Chair / Dr. Karyn Rogers, CAPS Co-Chair**

**9:50 AM** **Panel of Research Coordination Network (RCN) Leaders on State of Astrobiology**
(7-minute presentations and 40-minute discussion)
Panel Focus:
- *What are your RCN's current activities and member statistics?*
- *What are the RCN's challenges in terms of supporting astrobiology?*
- *What can NASA do to better support astrobiology research?*
- *What actions can the RCNs undertake to help NASA support astrobiology research?*

**Participants**
**Dr. Mary Droser, Representative, LIFE RCN**
**Dr. Heather Graham, Representative, NfoLD RCN**
**Dr. Timothy Lyons, Representative PCE3 RCN**
**Dr. Alison Murray, Representative, NOW RCN**
**Dr. Linda Sohl, Representative, NExSS RCN**

*11:05 AM* *Break*

**11:20 AM** **Planetary Protection Research and Astrobiology**
(25-minute presentation and 20-minute discussion)
**Dr. Peter Doran, Professor, Geology and Geophysics, Louisiana State U.**

*12:05 PM* *Working Lunch for Members, Speakers, and Invited Guests*

**1:05 PM** **Astrobiology in *Origins, Worlds, and* and the Decadal Process**
(20-minute discussion)
**Dr. Robin Canup / Dr. Phil Christensen, Decadal Co-Chairs**

**1:25 PM** **Panel Discussion on Astrobiology in the 2023 Decadal**
(45-minute discussion)
Panel Focus:
- How can NASA Astrobiology better align with the 2023 Decadal Survey?
- How can we improve astrobiology's integration into future planetary science and astrobiology decadal processes?

**Participants**
**Dr. Robin Canup, Decadal Co-Chair**
**Dr. Phil Christensen, Decadal Co-Chair**
**Dr. Barbara Sherwood Lollar, Professor, Earth Sciences, U. of Toronto**

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| *2:10 PM* | *Break* | |
| **2:25 PM** | **NASA Decadal Astrobiology Research and Exploration Strategy (DARES)**<br>(25-minute presentation and 20-minute discussion) | **Dr. Rachel Harris, NASA Postdoctoral Management Fellow, NASA Astrobiology** |
| **3:10 PM** | **NASA DARES Task Force 1 Group Leader Discussion**<br>(25-minute presentation and 20-minute discussion) | **Dr. Steven Vance, Group Leader, Task Force 1, NASA DARES** |
| *3:55 PM* | *Break for Brief Closed Session* | |

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**OPEN SESSION**
**Livestream:** Link

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| **5:00 PM** | **Feedback Discussion with NASA DARES Leadership**<br>(45-minute discussion) | **Dr. Rachel Harris, NASA Postdoctoral Management Fellow, NASA Astrobiology** |
| *5:45 PM* | *Meeting Adjourns for the Day* | |

**THURSDAY, OCTOBER 9, 2025**

***Committee meets entirely in closed session.***

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## IMPORTANT NOTES

**Presenters:**

- Please do not include unpublished data, ITAR-controlled or sensitive information in your presentation.
- A National Academies Board staff member will ask you to sign a form before the meeting allowing us permission to use your likeness and presentation for our livestream video, which will be posted on our Board website after the meeting. Please get in touch with us before the meeting if you have any concerns about this usage.

**Members and Presenters:**

- Remote access will be provided through Zoom. This will allow you to participate in the meeting even if you can't be physically present.
- Please note that Zoom allows audio and any materials exchanged or viewed during the session to be recorded and shared.
- By participating in this activity, you agree to let your voice, likeness, and any materials you provide be recorded for use and dissemination. This includes any language, format, or media now known or later devised.
- You release the National Academies of Sciences, Engineering, and Medicine from any and all claims, liability, or damages arising from any such use. If you disagree, please do not join the session.

**Members of the General Public:**

- Remote access will be provided through a live stream on Vimeo. This will also be publicly available and posted on the Board website. You do not need to register.

**Thank you all for your cooperation, and we look forward to a successful meeting.**

## STATEMENT OF TASK

**Date Organized: 13 March 2017**

The National Academies of Sciences, Engineering, and Medicine (NASEM) will appoint the Committee on Astrobiology and Planetary Sciences (CAPS) to support scientific progress in astrobiology and planetary science and assist the federal government in integrating and planning programs in these fields by providing advice on the implementation of decadal survey recommendations. The CAPS provides an independent, authoritative forum for identifying and discussing issues in astrobiology and planetary science between the research community, the federal government, and the interested public.

The CAPS scope spans space-based and supporting ground-based planetary research within our own planetary system, including, for example, geosciences, atmospheres, particles and fields of planets, moons, and small bodies, as well as astrobiology, planetary astronomy, and planetary protection. The CAPS's scope also includes appropriate cross-disciplinary areas and consideration of budget and programmatic aspects of the implementation of the decadal survey.

The committee shall monitor the progress of implementing the priorities in the most recent decadal survey for the most important scientific and technical activities in that report and recommendations in the subsequent mid-decadal review report.

When requested by a sponsor and as approved by NASEM in accordance with its procedures the Committee may write reports to assess progress on the implementation of the decadal survey's recommended scientific and technical activities. The reports shall be based on evidence gathered by the Committee. The reports may address key strategies being pursued by the agencies and the status of agency actions that relate to the state of implementation. The reports may also highlight scientific discoveries and engineering and technical advances relevant to progress on the science objectives identified in the most recent decadal survey and in addition will focus on one or more of the following types of issues:

- The scientific impact of a change in the technical and engineering design, cost estimate, schedule, or programmatic sequencing of one or more of the survey-recommended activities;
- The impact of a scientific advance on the technical and engineering design, schedule, or programmatic sequencing of one or more survey-recommended activities;
- The scientific impact of a course of action at a decision point described in the survey report and recommended therein as being suitable for consultation with an independent decadal survey implementation committee;
- The scientific impact of implementing recommendations from the mid-decadal review and other relevant NASEM reports.