

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

SPACE STUDIES BOARD

Fall Meeting – 175th Meeting – November 1-3, 2017

Beckman Center of the National Academies of Sciences, Engineering and Medicine

Huntington Room, 100 Academy Way, Irvine CA

AGENDA

WEDNESDAY, NOVEMBER 1, 2017

Breakfast available from 7:00 am at the Beckman Center

Carpool leaves Marriott Irvine hotel lobby 7:00 am

EXECUTIVE CLOSED SESSION

(SSB, ESSC, & DISCIPLINE/STANDING COMMITTEE MEMBERS ONLY)

8:00 am Board Discussions

8:45 am *SHORT BREAK*

OPEN SESSION

Discipline Committee Reports and Discussion with SMD AA

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| 8:55 am | Welcome and Introduction of Members and Attendees | <i>Fiona Harrison, SSB Chair</i> |
| 9:00 am | Cttee on Astronomy & Astrophysics | <i>Steve Ritz, CAA Co-Chair
Marcia Rieke, CAA Co-Chair (webex)</i> |
| 9:10 am | Cttee on Astrobiology and Planetary Science | <i>William McKinnon, CAPS Co-Chair</i> |
| 9:20 am | Cttee on Earth Science and Applications from Space | <i>Michael King and Joyce Penner,
CESAS Co-Chairs</i> |
| 9:30 am | Cttee on Solar and Space Physics | <i>Maura Hagan, CSSP Co-Chair</i> |
| 9:40 am | Discussion of Issues Raised by the Committees | <i>All</i> |
| 10:00 am | Status Report from SMD <ul style="list-style-type: none">• Impact of Recent SSB Reports• Program and Policy Challenges• Where might the Board focus its efforts• Fall 2018 Workshop Topics• Future Study Activities | <i>Thomas Zurbuchen, NASA</i> |
| 10:45 am | <i>BREAK</i> | |
| 11:00 am | Discussion of Issues Raised by Dr. Zurbuchen | <i>All</i> |
| 12:00 pm | <i>LUNCH</i> | |
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OPEN SESSION
International Activities

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| 1:00 pm | Update on Forum for New Leaders in Space Science | <i>David Smith, SSB Staff</i> |
| 1:10 pm | Update from ESSC | <i>Athena Coustenis, ESSC Chair</i> |
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OPEN SESSION R&A Programs & Improving Peer Review

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| 2:00 pm | Intro to the Theme: Peer review and R&A programs
(30 minute presentation & 10 minute discussion) | <i>Hal Arkes, The Ohio St University</i> |
| 2:40 pm | Understanding the Process of Arriving at Group
Consensus Ratings (15 minute presentation & 5 minute
discussion) | <i>Scott Highhouse, Bowling Green
State University</i> |
| 3:00 pm | Discussion and Possible Action Items | <i>Fiona Harrison, SSB Chair
Michael H New, NASA</i> |
| 3:30 pm | <i>BREAK</i> | |

EXECUTIVE CLOSED SESSION
(SSB, ESSC, & DISCIPLINE/STANDING COMMITTEE MEMBERS ONLY)

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| 3:45 pm | Board Discussions | |
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SSB MEMBERS AND INVITED GUESTS ONLY

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| 5:30 pm | Reception – Beckman Center Patio | |
| 6:15 pm | Dinner – Beckman Center Dining Room
(Dinner for Board Members and Invited Guests – Adjourn ~8:30pm) | <i>Joseph Alexander, Author</i>
Science Advice to NASA: Conflict, Consensus,
Partnership, Leadership |
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THURSDAY, NOVEMBER 2, 2017

*Breakfast available from 7:30 am at the Beckman Center
Carpool leaves hotel lobby 7:30am*

OPEN SESSION Plans for 60th Anniversary

8:30 am	Welcome and Overview of Today's Agenda	<i>Fiona Harrison, SSB Chair</i>
8:35 am	Status of Planning for January 31 st Celebration of the Birth of Earth Observation and Space Science (10 minute presentation & 10 minute discussion)	<i>Abby Sheffer, SSB Staff (by WebEx)</i>
8:55 am	Plans for '18 Space Science Week (10 minute presentation & 10 minute discussion)	<i>Michael Moloney, SSB Director</i>
9:15 am	Plans for COSPAR 2018 (15 minute update & 10 minute discussion)	<i>Charlie Kennel, COSPAR US Rep Rosaly Lopes & Gregg Vane, COSPAR LOC</i>
9:40 am	Spring & Fall 2018 Meetings and 2018 Workshop (5 minute presentation & 10 minute discussion)	<i>Michael Moloney, SSB Director</i>
9:55 am	Summary of the Discussion	<i>Fiona Harrison, SSB Chair</i>
10:00 am	<i>BREAK</i>	

OPEN SESSION Joint Meeting with the Board on Physics and Astronomy Planning for Astro 2020

10:30 am	Introduction to the Discussion	<i>Fiona Harrison, SSB Chair Avi Loeb, BPA Vice Chair</i>
10:40 am	CAA perspectives: WEITR report, JWST, and planning activities of the CAA and "Consultation Group"	<i>Steve Ritz, CAA Co-Chair Marcia Rieke, CAA Co-Chair (webex)</i>
11:00 am	Preparing Crosscutting Topics: Astrobiology and Exoplanet Studies	<i>Michael Moloney, SSB Dir</i>
11:10 am	Discussion <ul style="list-style-type: none">• Timing of the Survey• Challenges facing the survey.• Engaging the community,• How is NSF and NASA and DOE preparing?• Cross cutting issues like grav waves, others?	<i>All</i>
12:10 pm	Summary and Closing Remarks	<i>Fiona Harrison, SSB Chair Avi Loeb, BPA Vice Chair</i>
12:15 pm	<i>LUNCH</i>	

OPEN SESSION
Focus Session on Big Data

1:15 pm	Intro to the Theme	<i>Sarah Gibson, SSB Member</i>
1:20 pm	Big Data and NASA Space Sciences (15 minute presentation & 5 minute discussion)	<i>Daniel Crichton, JPL</i>
1:40 pm	Big Data and NOAA Science (15 minute presentation & 5 minute discussion)	<i>Ed Kearns, NOAA</i>
2:00 pm	Big Data Analytics and Visualization to Monitor Sea-Level Rise (15 minute presentation & 5 minute discussion)	<i>Thomas Huang, JPL</i>
2:20 pm	Using Machine Learning in Astronomy (15 minute presentation & 5 minute discussion)	<i>George Djorgovski, Caltech</i>
2:40 pm	Machine Learning and Solar Physics (15 minute presentation & 5 minute discussion)	<i>Monica Bobra, Stanford</i>
3:00 pm	Commentary on CSSP Session on Data & Analytics In Solar and Space Physics (10 minute presentation & 5 minute discussion)	<i>Sarah Gibson, CSSP Co-Chair</i> <i>Maura Hagan, CSSP Co-Chair</i>
3:15 pm	Panel Discussion with the Board Members <ul style="list-style-type: none">• Potential for new discoveries• How can our science agencies and communities prepare• Is there a role for an SSB activity / study?	<i>All</i>
3:55 pm	Summary of the Discussion	<i>Fiona Harrison, SSB Chair</i>
4:00 pm	BREAK	

OPEN SESSION
Deep Dive on Gravitational Wave Astronomy - Science Talks

4:20 pm	Detecting Gravitational Waves (20 minute presentation)	<i>Dave Reitze, LIGO Director</i>
4:40 pm	E/M Follow Up of GW Detection (20 minute presentation)	<i>Mansi Kasliwal, Caltech</i>
5:00 pm	Q&A - Discussion	
5:20 pm	Open Sessions Adjourn -- Evening Free	

FRIDAY, NOVEMBER 3, 2017

The board meets on the morning of November 3rd only in closed executive session before adjourning at lunch.