

# SPACE SCIENCE WEEK

The National  
Academies of

SCIENCES  
ENGINEERING  
MEDICINE



## SPRING 2021 MEETING OF THE COMMITTEE ON ASTRONOMY AND ASTROPHYSICS (CAA)

March 23-25, 2021

### Public Virtual Meeting Agenda

REGISTRATION: <http://ssw2021.eventbrite.com>

**Tuesday, March 23, 2021**

### Space Science Week Plenary Session

Meeting Open to the Public

Livestreaming Link: <https://livestream.com/accounts/7036396/events/9569460>

### OPEN SESSION: Introductions and NASA Science Program Update

ALL TIMES IN US EASTERN DAYLIGHT TIME

11:00 AM	<b>Welcome</b>	<i>Dr. Margy Kivelson, SSB Chair</i>
11:05 AM	<b>NASA Science Mission Directorate Introduction</b> (40 minute presentation)	<i>Dr. Thomas Zurbuchen, Assoc. Administrator, SMD, NASA</i>
11:45 AM	<b>NASA Science Mission Directorate Division Directors</b> (5 minute presentation each and 25 minute discussion) <b>Moderator:</b> <b>Panelists:</b>	<i>Dr. Margy Kivelson, SSB Chair</i> <i>Dr. Karen St. Germain, Director, Earth Science Division, SMD, NASA</i> <i>Dr. Nicola Fox, Director, Heliophysics Division, SMD, NASA</i> <i>Dr. Lori Glaze, Director, Planetary Science Division, SMD, NASA</i> <i>Dr. Paul Hertz, Director, Astrophysics Division, SMD, NASA</i> <i>Dr. Craig Kundrot, Director, Biological and Physical Sciences Division, SMD, NASA</i>
12:45 PM	<b>Break</b> (30 minute break)	
1:15 PM	<b>Address from NASA Acting Administrator</b>	<i>Dr. Steve Jurczyk, Acting Administrator, NASA</i>
1:45 PM	<b>The Perils of Complacency: America at a Tipping Point in Science and Engineering</b> (40 minute presentation followed by a 20 minute discussion)	<i>Mr. Norm Augustine, Chairman and CEO (ret.), Lockheed Martin Corporation /</i> <i>Dr. Neal Lane, Professor Emeritus, Baker Institute for Public Policy, Rice University</i>
2:45 PM	<b>Break</b> (20 minute break)	

### Space Science from an International Perspective: Achievements during the Year of Pandemic

ALL TIMES IN US EASTERN DAYLIGHT TIME

3:05 PM	<b>ESA Science Highlights</b> (10 minute presentation)	<i>Dr. Günther Hasinger, Director of Science, ESA</i>
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Remote connection information is provided at the end of this agenda.  
This agenda was last updated on 3/23/2021 10:26 PM and is subject to change.

<b>3:15 PM</b>	<b>ESA Science Program Strategy</b> (10 minute presentation)	<b><i>Dr. Fabio Favata, Head, Strategy, Planning, and Coordination Office; Directorate of Science ESA</i></b>
<b>3:25 PM</b>	<b>ESA Earth Observation Perspective</b> (10 minute presentation)	<b><i>Dr. Maurice Borgeaud, Head, Earth Observation Department, ESA</i></b>
<b>3:35 PM</b>	<b>ESA Exploration Science</b> (10 minute presentation)	<b><i>Dr. David Parker, Director, Human and Robotic Exploration, ESA</i></b>
<b>3:45 PM</b>	<b><i>Break</i></b> (10 minute break)	
<b>3:55 PM</b>	<b>Russian Space Research Institute Perspective</b> (10 minute presentation)	<b><i>Dr. Lev Zelenyi, Scientific Advisor, Russian Space Research Institute (IKI)</i></b>
<b>4:05 PM</b>	<b>Chinese National Space Science Center (NSSC) Perspective</b> (10 minute presentation)	<b><i>Dr. Chi Wang, Director-General, NSSC, Chinese Academy of Sciences</i></b>
<b>4:15 PM</b>	<b>Japanese Aerospace Exploration Agency (JAXA) Perspective</b> (10 minute presentation)	<b><i>Dr. Masaki Fujimoto, Deputy Director General, JAXA</i></b>
<b>4:25 PM</b>	<b>Round-Table Discussion with International Space Science and Exploration Leaders</b> (35-minute discussion)	
<b>5:00 PM</b>	<b><i>Plenary Session Adjourns</i></b>	

**Public Session**  
**Keynote Space Science Week Public Lecture**  
TIME IS IN US EASTERN DAYLIGHT TIME

**Meeting Open to the Public**

**Livestreaming Link:** <https://livestream.com/accounts/7036396/events/9569460>

<b>5:30 PM</b>	<b><i>“Climate Change as seen from Space”</i></b> <b><i>Dr. Gavin Schmidt, Acting Senior Climate Advisor, NASA-HQ</i></b>
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**Public Lecture Abstract**

We have been observing the climate system from space since the 1960s, and more comprehensively since 1979. Over that time trends in many variables such as temperature, sea ice, gravity, ozone, clouds, and sea level, have been detected and through the use of sophisticated climate models, attributed fully or partially to anthropogenic influences on the climate system. More recently, we have successfully started to attribute the frequency and intensity of some classes of extreme events (such as heat waves, drought, coastal flooding and intense precipitation) to those same anthropogenic drivers. I will discuss the unique perspective on climate through all manner of space-borne observations and the emerging science of extreme event attribution, and what the next decade might hold.

**Speaker Bio**

Gavin Schmidt is the acting Senior Advisor on Climate at NASA and Director of the Goddard Institute for Space Studies. His research covers climate changes in past, present and future climate mostly using the GISS Earth System Model. He was the author with Josh Wolfe of “Climate Change: Picturing the Science” in 2009 and, in 2011,

was the inaugural recipient of the AGU Climate Communication Prize. His 2014 TED talk has been seen more than a million times. He is a fellow of the AGU and AAAS.

COMMITTEE ON ASTRONOMY AND ASTROPHYSICS (CAA)

Wednesday, March 24, 2021

OPEN SESSION

Meeting

Meeting Open to the Public

Livestreaming Link: <https://livestream.com/nasem/events/9556689>

Astro2020 Update:

The Astro2020 steering committee is completing their deliberative process and continuing to work towards the completion of their report. We apologize for the last minute schedule change, but there aren't further details of the steering committee's work that can be shared publicly at this time.

<div>Pacific/Eastern Time Zones</div> <div>8:30 AM/11:30 AM</div>	<div>Welcome and Introductions</div>	<div>Thomas Greene and Vicky Kalogera, Co-Chairs</div>
<div>8:35 AM/11:35 AM</div>	<div>Update from NSF AST</div> <div>Presentation 45 min, Q&amp;A 25 min</div> <div> <div>➤ Significant Program Changes and Developments</div> <div>➤ Arecibo Status and Future Plans</div> <div>➤ Satellite Constellation Interference Update</div> </div>	<div>Ralph Gaume</div>
<div>9:45 AM/12:45 PM</div>	<div>Update from DOE HEP</div> <div>Presentation 45 min, Q&amp;A 25 min</div> <div> <div>➤ Significant Program Changes and Developments</div> </div>	<div>Kathleen Turner</div>
<div>10:55 AM/1:55 PM</div>	<div>Open Session Adjourns and Break</div>	
<div>CLOSED SESSION</div>		
<div>11:45 AM/2:45 PM</div>	<div>Committee and Staff Only</div>	
<div>12:45 PM/3:45 PM</div>	<div>Adjourn for the Day</div>	

Thursday, March 25, 2021		
OPEN SESSION		
<b>Meeting Open to the Public</b> <b>Livestreaming Link:</b> <a href="https://livestream.com/nasem/events/9556689">https://livestream.com/nasem/events/9556689</a>		
<b>Pacific/Eastern Time Zones</b>		
<b>8:30 AM/11:30 AM</b>	<b>Welcome and Introductions</b>	<b>Vicky Kalogera and Thomas Greene Co-Chairs</b>
<b>8:35 AM/11:35 AM</b>	<b>Update from NASA Astrophysics</b>	<b>Paul Hertz</b>

	<i>Presentation 45 min, Q&amp;A 25 min</i> ➤ Significant Program Changes and Developments	
9:45 AM/12:45 PM	<b>Briefing on the NOIRLab's Dark and Quiet Skies for Science and Society IAU Workshop Report</b> <i>Presentation 15 min, Q&amp;A 15 min</i>	Connie Walker, NOAO
10:15 AM/1:15 PM	<b><i>Open Session Adjourns and Break</i></b>	
CLOSED SESSION		
11:00 AM/2:00 PM	Committee and Staff Only	
12:45 PM/3:45 PM	<b><i>Meeting Adjourns</i></b>	

#### REMOTE CONNECTION DETAILS

**Meeting Open to the Public**

**Livestreaming Link for 3.24 & 3.25:** <https://livestream.com/nasem/events/9556689>

#### QUESTION & ANSWER SESSIONS

**Using Slido for Q&A's (If time allows)**

1. To participate in the Session Q&A's you do not need to download the Sli.do application.
2. Use the following link <https://app.sli.do/event/ypolelrp> to take you directly to the Public Q&A (see #5 for next step).
3. Alternatively, you can access the Q&A by from Slido's site at <https://www.sli.do/> or download the app from
4. At the top of the screen, a bar with "joining as a participant? Enter the code CAA2021 in the box next to the hashtag.
5. The Q&A question box will appear. Type in your question, please indicate if it is directed to a specific presenter or all session presenters.
6. Enter your name or remain Anonymous and click the "Send" button to submit your question.
7. You will then see your question and any others being asked by members of the public.
8. If you see a question that you would like asked in the list of questions, you can click on the thumbs up icon to UpVote it. UpVotes will be very helpful to the moderator if there are a lot of questions.

#### GENERAL NOTES

**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 on Zoom by the National Academies of Sciences, Engineering, and Medicine ("The Academies"). Please be aware that by attending the meeting, you consent to your voice and likeness being for use on the Committee's website and in any media now known or hereafter devised in perpetuity, and you release The Academies from any liability due to such usage.

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**Committee on Astronomy and Astrophysics Website:** <https://www.nationalacademies.org/our-work/committee-on-astronomy-and-astrophysics>

#### **Space Science Week**

For additional information on all the Space Science Week activities, please visit: [www.nas.edu/ssw](http://www.nas.edu/ssw)