

National Aeronautics and
Space Administration



EXPLORE SCIENCE

**Open Source Science for Earth
System Observatory Mission
Data Processing Study
-Workshop #1-**

Tuesday, 14 October 2021

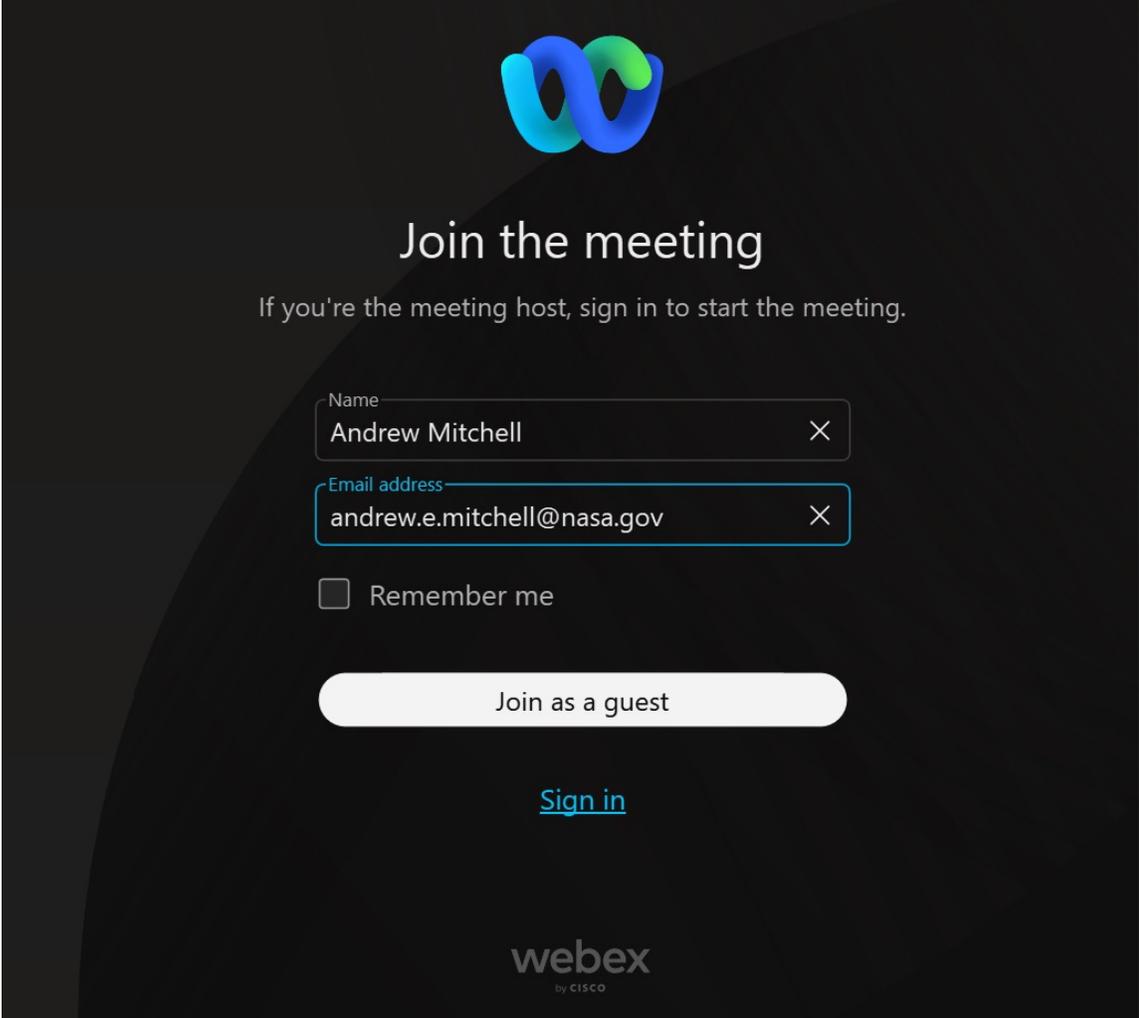
Welcome

Thank you all for joining the Open Source Science for ESO Mission
Data Processing Study Workshop #1.

Your time and commitment to the Open Science Data Initiative is greatly
appreciated!

Virtual Platform

- ❖ *WebEx Meetings virtual platform*: The workshop is being recorded and all proceedings will be available publicly on the workshop's website.
- ❖ Please enter your full first and last name as your display (screen) name. Please do not use initials or nicknames.
- ❖ If you experience technical issues during the workshop, you may send a private message directly to any one of the Technicians using the chat feature.
- ❖ All attendees are muted. Only presenters and the members of the Study Team have the ability to unmute.





Join the meeting

If you're the meeting host, sign in to start the meeting.

Name

Email address

Remember me

[Join as a guest](#)

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webex
by CISCO

Meeting Logistics

- ❖ Workshop Emcees: Sara Lubkin and Karen Yuen
- ❖ Speakers will receive a warning when you near the end of your allotted time.
- ❖ Designated Question & Answer sessions after each session. Please direct any questions through the chat function. We are prioritizing questions of members of the Study Architecture Working Group. However, everyone is allowed to ask questions in the chat. If time does not permit them to be addressed during the session, responses will be provided in the meeting notes.
- ❖ Breaks are scheduled throughout
- ❖ Workshop proceedings (including notes) will be made public on the study website.

Check Out Our New Website

The screenshot shows the NASA EarthData website. At the top left is the NASA logo and the text "EARTHDATA OPEN ACCESS FOR OPEN SCIENCE". To the right are navigation links: "ABOUT", "DATA", "COLLABORATE", "LEARN", and a "Feedback" button. A search bar is located in the top right. The main content area features a sidebar on the left with a menu for the "ESDS Program" and a main article titled "Open Source Science for the Earth System Observatory Mission Data Processing Study Workshops". The article text describes NASA's formulation of the Earth System Observatory (ESO) and the challenges it poses for mission data processing. A diagram titled "EARTH SYSTEM OBSERVATORY" illustrates various Earth system components like Greenhouse Gases, Clouds and Trace Gases, Atmospheric Winds, Ice Elevation, Ocean Surface Winds and Currents, 3D Ecosystem Structure, and Snow Depth and Water Content. The article concludes with a quote about identifying architectures that meet ESO mission objectives and a partial sentence: "A mission data processing system is the set of algorithms, software, compute infrastructure, operational".

NASA EARTHDATA
OPEN ACCESS FOR OPEN SCIENCE

ABOUT DATA COLLABORATE LEARN Feedback

Search datasets, news, articles, and information

Earth Science Data Systems (ESDS) Program • Open Science • Open Source Science for the Earth System Observatory Mission Data Processing Study Workshops

ESDS Program

- Earth Science Data Systems Program
- Program Components
- IMPACT
- Competitive Programs
- Commercial Smallsat Data Acquisition Program
- Harmonized Landsat Sentinel-2 (HLS)
- Multi-Mission Algorithm and Analysis Platform (MAAP)
- ESDS Geographic Information Systems Team (EGIST)
- Enabling Earth Science in the Cloud
- Open Science
- Artificial Intelligence/Machine

Open Source Science for the Earth System Observatory Mission Data Processing Study Workshops

NASA is formulating the Earth System Observatory (ESO), a set of Earth-focused missions to provide key information to guide efforts related to monitoring climate change, mitigating disasters, fighting forest fires, and improving real-time agricultural processes. With this integrated approach, Kevin Murphy (Chief Science Data Officer, Science Mission Directorate and Program Manager, Earth Science Data Systems Program) has set forth a challenge to the mission processing community to:

Identify and assess potential architectures that can meet the ESO mission science processing objectives, enable data system efficiencies, promote open science principles, and seek opportunities that support Earth system science.

A mission data processing system is the set of algorithms, software, compute infrastructure, operational

EARTH SYSTEM OBSERVATORY
INTEGRATION & COOPERATION
EARTH EXPLORER MISSIONS

- Greenhouse Gases
- Clouds and Trace Gases
- Atmospheric Winds
- Ice Elevation
- Ocean Surface Winds and Currents
- 3D Ecosystem Structure
- Snow Depth and Water Content

<https://earthdata.nasa.gov/esds/open-science/oss-for-eso-workshops>

**Day 1:
Tuesday
October
19th, 2021
(1 - 5 PM
EST)**

Duration	EST	PST	Topic	Speaker
0:10	1:00 PM	10:00 AM	Welcome & Purpose	Andrew Mitchell
0:15	1:10 PM	10:10 AM	Earth Science Division (ESD) Opening Remarks	Kevin Murphy
0:15	1:25 PM	10:25 AM	Science Mission Directorate (SMD) Scientific Information Policy	Steven Crawford
0:15	1:40 PM	10:40 AM	ESDS Perspective of Open Science	Katie Baynes
0:15	1:55 PM	10:55 AM	Overview of the Mission Processing Study	Andrew Bingham
0:15	2:10 PM	11:10 AM	Q&A with the System Architecture Working Group	
0:10	2:25 PM	11:25 AM	Break	
0:15	2:35 PM	11:35 AM	Flight Projects Program Perspective	Charles Webb, Kathleen Boggs
0:15	2:50 PM	11:50 AM	Earth Science Technology Office (ESTO) Perspective	Pam Millar, Jacqueline Lemoigne-Stewart, Ben Smith
0:15	3:05 PM	12:05 PM	R&A Program Perspective	Jack Kaye
0:15	3:20 PM	12:20 PM	Q&A with the System Architecture Working Group	
0:10	3:35 PM	12:35 PM	Break	
0:15	3:45 PM	12:45 PM	Applied Science Program Perspective	Nancy Searby
0:15	4:00 PM	1:00 PM	High Performance Computing (HPC) Perspective	Tsengdar Lee
0:10	4:15 PM	1:15 PM	Q&A with the System Architecture Working Group	
0:30	4:25 PM	1:25 PM	Open Discussion	
	4:55 PM	1:55 PM	END	

Code of Conduct

Expected Behavior

- All participants are treated with respect and consideration, valuing a diversity of views and opinions.
- Be considerate, respectful, and collaborative.
Communicate openly with respect for others, critiquing ideas rather than individuals.
- Avoid personal attacks directed toward other participants.
Be mindful of your surroundings and of your fellow participants. Alert staff if you notice a dangerous situation or someone in distress.
- Respect the rules and policies of the meeting venue.

Unacceptable Behavior

- Harassment, intimidation, or discrimination in any form will not be tolerated.
- Physical or verbal abuse of any participant.
- Examples of unacceptable behavior include, but are not limited to, verbal comments related to gender, sexual orientation, disability, physical appearance, body size, race, religion, national origin, inappropriate use of nudity and/or sexual images in public spaces or in presentations, or threatening or stalking any participant.
- Disruption of panel discussions and lightning talks.

Code of Conduct Continued

Expected Behavior

- Anyone requested to stop unacceptable behavior is expected to comply immediately. Staff may take any action deemed necessary and appropriate, including immediate removal from the meeting without warning.

Reporting Unacceptable Behavior

- If you are the subject of unacceptable behavior or have witnessed any such behavior, please immediately notify a staff member.
- Notification should be done by contacting a staff person on site or by emailing your concern to andrew.e.mitchell@nasa.gov.
- Anyone experiencing or witnessing behavior that constitutes an immediate or serious threat to public safety is advised to contact 911.

**Day 2:
Wednesday
October
20th, 2021
(1 - 5 PM
EST)**

Duration	EST	PST	Topic	Speaker
0:10	12:20 PM	9:20 AM	Recap & Agenda	
0:15	12:30 PM	9:30 AM	NISAR Programmatic Perspective	Gerald Bawden
0:15	12:45 PM	9:45 AM	NISAR Project Science	Paul Rosen
0:15	1:00 PM	10:00 AM	NISAR Project Data Processing Systems	Hook Hua
0:10	1:15 PM	10:15 AM	Q&A with the System Architecture Working Group	
0:05	1:25 PM	10:25 AM	Break	
0:15	1:30 PM	10:30 AM	Atmosphere Observing System (AOS) Programmatic Perspective	Hal Maring
0:15	1:45 PM	10:45 AM	AOS Project Science	Scott Braun
0:15	2:00 PM	11:00 AM	AOS Project Data Processing Systems	Robert Wolfe
0:10	2:15 PM	11:15 AM	Q&A with the System Architecture Working Group	
0:05	2:25 PM	11:25 AM	Break	

**Day 2:
Wednesday
October
20th, 2021
(1 - 5 PM
EST)**

Duration	EST	PST	Topic	Speaker
0:15	2:30 PM	11:30 AM	Mass Change (MC) Programmatic Perspective	Lucia Tsaoussi
0:15	2:45 PM	11:45 AM	MC Project Science	David Wiese
0:15	3:00 PM	12:00 PM	MC Project Data Processing Systems	David Wiese
0:10	3:15 PM	12:15 PM	Q&A with the System Architecture Working Group	
0:05	3:25 PM	12:25 PM	Break	
0:20	3:30 PM	12:30 PM	Surface Biology and Geology (SBG) Overview and Project Science	Dave Schimel
0:20	3:50 PM	12:50 PM	SBG Project Data Processing Systems	Jeff Pon
0:05	4:10 PM	1:10 PM	SBG Programmatic Perspective	Ben Phillips
0:10	4:15 PM	1:15 PM	Q&A with the System Architecture Working Group	
0:30	4:25 PM	1:25 PM	Open Discussion	
	4:55 PM	1:55 PM	END	