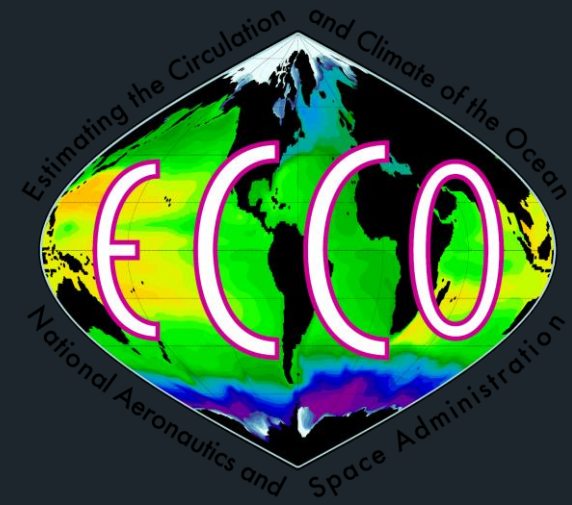




**ODEN INSTITUTE**

FOR COMPUTATIONAL ENGINEERING & SCIENCES



**WELCOME TO THE 2024 ECCO MEETING**

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**<https://crios-ut.github.io>**

**<https://ecco-group.org>**

# Housekeeping

- Restrooms
- Breaks
- Welcome remarks from Karen Willcox on Thursday
- Time for discussion at end of most sessions
  
- Dinner
  - Wed
  - Thu
  
- Saturday
  - Hike (weather forecast looks good!)

# Agenda

## WED

- Opening – notes from NASA HQ
- Science applications: ocean dynamics & variability

## THU

- High-res Applications – a focus on SWOT
- Biogeochemical science applications
- Further science applications
- “Frontiers”...

## FRI

- Algorithm & tool development
- Moderated Discussion

## Discussion topics – keep these in mind throughout the meeting!

- Uncertainty quantification
- quality of current ECCO estimates and how to improve future estimates
- regional modeling;
- machine learning;
- coupled modeling
- planning for the next steps
- How ECCO is helping to address societally relevant issues
- Engaging the broader research community and students
- ECCO as a source for relatively high frequency background gravity field prognostics

## Discussion topics – keep these in mind throughout the meeting!

- ocean physics with ECCO, new modeling and data assimilation approaches, ECCO predictive skills, ECCO within global modeling/reanalysis community (WCRP, IPCC)
- ocean heat uptake, sea level, large-scale transports, assimilation of satellite obs
- Leveraging ECCO to advance Earth system prediction and projection

# ECCO

Understand the physics of the  
Earth's ocean as it transitions  
to a new climate



Click if you want to switch to a  
different microphone or speaker

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## 1. Production

- Scheduled production & delivery
- More discipline on milestones (latency, resolution, coupling)
- Increased robustness of central estimate
- New data? SWOT?
- Impact and success metrics?

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## 3. NASA missions

- Involvement in future mission planning
- Become instrumental in OSSEs for NASA PO-related cal/val campaigns

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## 2. R&D

- Interpret ongoing changes
- Get ready to resolve future ocean
- Ocean's integrated role?
- Modeling and adjoint capabilities for DT and/or prediction?

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## 4. Engagement

- Continue providing open-source tools and training
- Userbase expansion
- Annual state of the ocean update and analysis
- Serve as the science and informational foundation for Federal climate activities