Enabling Open Science in the Age of Big Data

This session will explore the perspectives of a federal agency, industry, and community consortium project and how they are enabling Open Science for interdisciplinary/transdisciplinary collaborations and scientific advances amongst a diverse community.

Purpose/Objectives
To learn about the evolving landscape of cloud computing and data services in the age of big data, and efforts being taken to:

• Increase collaboration opportunities, and accelerate scientific discoveries, for interdisciplinary/transdisciplinary science
• Expand capacity especially for non-R1, and historically underrepresented communities

Talk Titles
• Katie Baynes (NASA HQ) “Working towards Open Science in NASA’s Earth Science Division”
• Tyler Erickson (Google Earth Engine) “Scaling climate data analysis in the cloud with Google Earth Engine”
• Chelle Gentemann (Farallon Institute) “Transforming to Open Science”
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Discussion

Plenary Discussion Questions

• Do the business models of commercial providers conflict with the move toward open data and open science?
• What are the mechanisms for funding cloud compute resources? UNOLS model? Institutional HPC model? Do we need a centralized cross-agency strategy for working with cloud providers?
• What is being done to promote interoperability between cloud platforms for interdisciplinary data access and inclusive science?
• What are the biggest barriers to users on cloud platforms from your perspectives? What can be done to minimize pain points?
• What information (if any) is needed from the Earth Science community to foster and advance open science from your perspectives?
Panel Breakout Discussion Questions
- How can cloud data resources be best deployed to advance panel goals?

Expected Outcomes:
- Identify action item(s) on how each panel could leverage community/agency/commercial cloud data resources to advance panel goals.
- Provide specific recommendation(s).