



Contribution ID: 54

Type: **Session**

”So much going on!” How to best coordinate international efforts for data management —a polar to global case study and discussion

Thursday, October 16, 2025 11:00 AM (1h 30m)

As data managers and practitioners, we’ve all felt it: “I want the data I handle to be broadly discoverable, interoperable, and preserved according to described best practice, but I first have to address the demands of my data providers and users who have their own special (and well-loved) way of doing things. I want to make sure I’m plugged into the leading practices of the global data management community while also making sure my domain/community is represented and heard. I need to solve my local problems in a way that fits into a global data ecosystem. I need to be in multiple places and spaces at once!”

Meanwhile, we are living in the world of big data and open science. The Fourth Paradigm is here. The possibilities for machines and algorithms to process and help interpret massive amounts of diverse data continues to accelerate while the array of scientific and operational initiatives collecting that data continues to grow. All this is testing human organizational capacity.

The polar science community has a long history of international collaboration and has been coordinating data since the first International Polar Year in 1882. Major data coordination initiatives continue today including the recently concluded MOSAiC (Multidisciplinary drifting Observatory for the Study of Arctic Climate) expedition, the Antarctica InSync (Antarctica International Science & Infrastructure for Synchronous Observation) initiative, as well as the next IPY in 2032 (IPY5). Correspondingly, the polar data community seeks to learn from the experiences of the global community as well as other regions and disciplines.

Using IPY5 as a milestone, the polar data community seeks to foster more effective and more efficient data collaboration at all levels. In this session, we will introduce current large-scale data coordination activities and challenges. We will then conduct a structured discussion around “integrated autonomy” to begin to identify “How is it that we can be more integrated and more autonomous at the same time?” The goal is to identify several focus areas for international collaborations (i.e. standardization) that also address local needs (i.e. customization).

Session Speakers and Structure:

Introduction and Context (10 min) Mark Parsons CODATA Polar Data Advocate

- Overview of major data coordination activities and challenges in the Antarctic (10 min) Michaela Miller Data Officer, Southern Ocean Observing System

- Overview of major data coordination activities and challenges in the Arctic (10 min) Chantelle Verhey Co-chair, Arctic Data Committee

- Structured Discussion (55 min)

– Introduction to the exercise “How is it that we can be more integrated and more autonomous at the same time when addressing the needs of large-scale science initiatives?” (5 min)

– Small groups work to:

– Identify tensions between a desire to standardize and the request for more customizing or autonomy?” (10 min)

– Pick an activity from the list above and ask “What is the rationale for standardizing? What is the rationale for customizing?” Then develop action steps that achieve standardization and action steps that achieve customization. (10 min)

– Identify actions that boost both standardization and customization and what modifications can be made to some actions so that they boost both standardization and customization. (10 min)

- Prioritize the most promising actions that promote both integration and autonomy. (10 min.)
- Report out (10 min)
- Closing and follow up (5 min)

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Track Classification: SciDataCon Persistent Themes: Data Stewardship