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Finding the data you need to support your Southern Ocean science

Jo Beja (1), Pip Bricher (2), Steve Diggs (3), Mathieu Belbeoch (4), Ken Casey (5), James Cusick (6), Bruno Danis (7), Taco de Bruin (8), Florence Fetterer (9), Alex Kozyr (5), Michael Morahan (10), Benjamin Pfeil (11), Roger Proctor (12), Scott Ritz (10), Stefanie Schumacher (13), Anton Van de Putte (14), Li Zong Wu (15), and Jie Zhang (15)

(1) Southern Ocean Observing System, University of Tasmania, Hobart, Australia (data@soos.aq), (2) Scripps Institution of Oceanography, University of California San Diego, San Diego, USA, (3) British Oceanographic Data Centre, Liverpool, UK, (4) JCOMMOPS, Brest, France, (5) National Oceanic and Atmospheric Administration, Baltimore, USA, (6) Australian Antarctic Division, Kingston, Australia, (7) Université libre de Bruxelles, Brussels, Belgium, (8) Royal Netherlands Institute for Sea Research, (9) National Snow and Ice Data Center, Boulder, USA, (10) NASA, Baltimore, USA, (11) Universitetet i Bergen, Bergen, Norway, (12) Institute of Marine and Antarctic Studies, University of Tasmania, Hobart, Australia, (13) Alfred Wegener Institute, Bremerhaven, Germany, (14) biodiversity.aq, Leuven, Belgium, (15) Polar Research Institute of China, Hangzhou, China

For researchers working in the Southern Ocean, finding relevant datasets to support their science is often more challenging than it should be. There are a number of reasons that data discovery is particularly challenging for this region - the Southern Ocean is large and sparsely sampled, multi-national collaborations are common, and researchers must often search multiple data repositories or rely on their network of contacts to alert them to useful datasets. In recent decades, Antarctic and oceanographic data managers have developed the basic infrastructure that allows them to share data and metadata across multiple data catalogues.

At the Southern Ocean Observing System (http://www.soos.aq/), we are building on that hard work to build the tools that scientists need to find data across the borders of nations and scientific disciplines. In this presentation, we will introduce SOOSmap - a map that allows users to explore and download circumpolar datasets; the SOOS metadata portal, which holds records from all the National Antarctic Data Centres and some global data repositories; and DueSouth, a newly-developed database to share upcoming field plans.

In addition to describing these tools, we will present a vision for the future. This vision brings scientists, data, and analysis tools closer together. SOOS is working with the international data community on a number of initiatives to further improve data discovery, including federated search and virtual laboratories. These will help scientists avoid the need to search for data in multiple places and will allow them to work with pre-formatted data in the cloud.