

# SOOS Symposium

## SOUTHERN OCEAN IN A CHANGING WORLD

14-18 AUGUST 2023

HOBART, AUSTRALIA

The Southern Ocean Observing System (SOOS) Symposium, “Southern Ocean in a Changing World”, will consist of plenary presentations, parallel sessions and workshops. These will be focused around the topics below and incorporate a wide spectrum of Southern Ocean research.

### Need for a Southern Ocean observing system

The Southern Ocean plays a critical role in the Earth System, and our understanding of the ongoing changes and our ability to project future changes are reliant on sustained observations. The SOOS has built a strong network of community-driven initiatives and tools that combine to enhance and facilitate the delivery of a sustained observing and data delivery system for the Southern Ocean.

### Circumpolar observations and programmes

Circumpolar and global observing programmes ensure a sustained delivery of observations and data across a core set of variables, using prescribed platforms, methods and standards across all steps of the observational life cycle. This topic will showcase these programmes, their observational coverage, data and data delivery, and how they feed into policy and societal challenges as well as new and upcoming plans, technology and data systems for these programmes.

### Impact of observations in policy and societal challenges

Southern Ocean data from across the five SOOS Science Themes should be readily accessible to enable the international scientific community to support evidence-based decision-making. This session will discuss developing and communicating data products and tools to support decision-making.

### New observing technology and systems in Southern Ocean observations

New methods, approaches and technology are needed to drive a step change in coordinated Southern Ocean science. This topic seeks to explore the difficult questions of how new technologies can be leveraged to improve data collection and coverage, science outcomes and coordination, and integration with emerging cyberinfrastructure.

### Southern Ocean in the global UN Ocean Decade

The Southern Ocean Action Plan provides a framework for Southern Ocean stakeholders to formulate and develop tangible actions and deliverables that support the vision of the UN Decade of Ocean Science for Sustainable Development. This session provides a forum for identifying and advancing SOOS contributions that will contribute to implementation of the Action Plan.

### Regional observations and programmes

Regionally-focused observations and programmes generate knowledge through high sampling resolution and interdisciplinarity, and provide important contributions to local, regional and circumpolar understanding. This topic invites contributions from regional observational and data programmes across all Southern Ocean sectors and disciplines in order to share science and connect regional programmes, with the specific aim of promoting discussions across regions.

### Data systems

Innovations in data systems, data integration and standardisation underline all aspects of SOOS data delivery. This topic will include presentations and workshops on data approaches and products arising from Southern Ocean observations.

### Gaps and next steps for the Southern Ocean observing system

The Southern Ocean observing system has come a long way but gaps remain in the current observing system that need to be addressed to deliver a cohesive, coordinated, circumpolar observing system. This session will consider what a Southern Ocean observing system will look like in 10 years and identify gaps and opportunities the related science questions, new technologies and capabilities, collaborations and data innovations needed to support this future system.

