

SOOS

SOUTHERN OCEAN OBSERVING SYSTEM

INTERNATIONAL WORKSHOP:

ASSESSING THE STATE OF THE CLIMATE OF THE SOUTHERN OCEAN

10 June 2015, 13:00 - 17:00

Institute for Marine and Antarctic Studies,
University of Tasmania Waterfront Building
20 Castray Esplanade
Hobart, Tasmania, Australia

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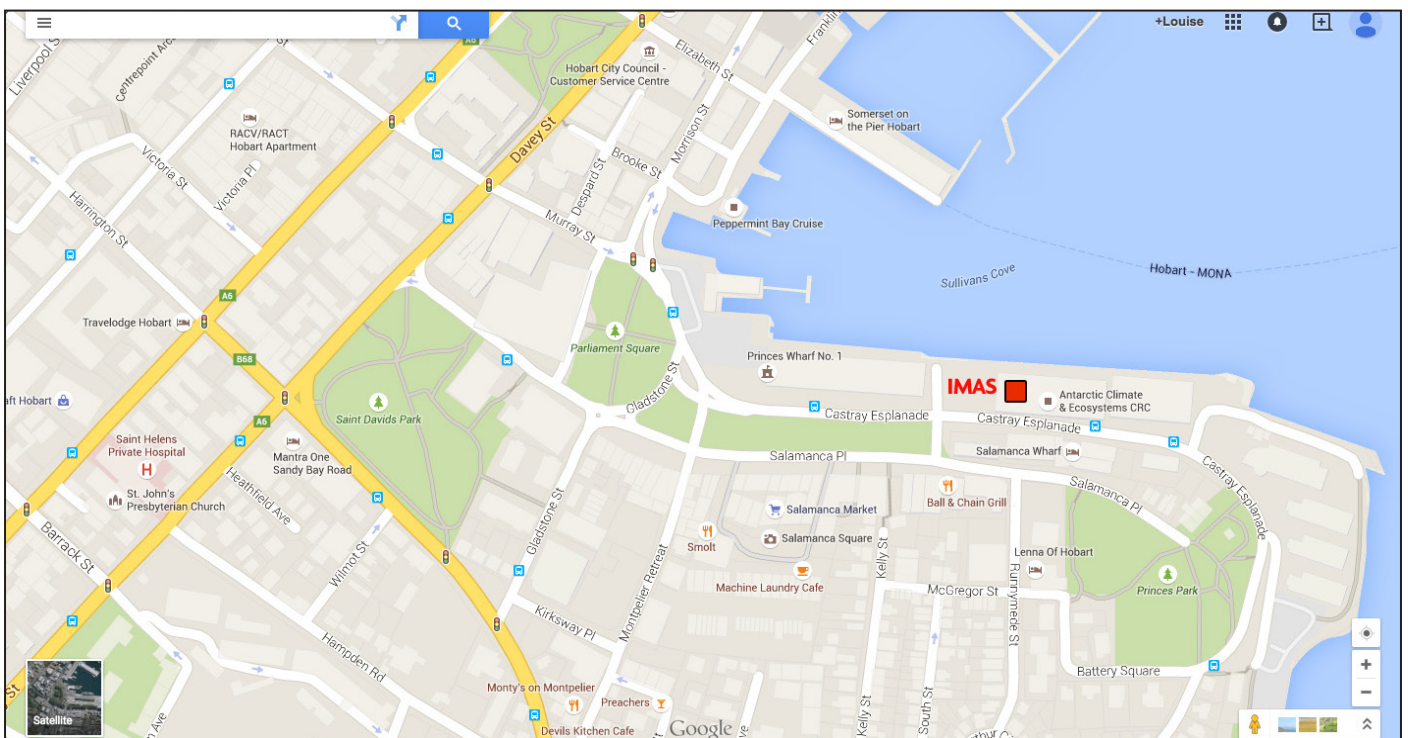
Information for Arrival in Hobart Airport

Hobart airport is about 15km from the city centre and is serviced by taxi, shuttle bus (www.airporter-hobart.com.au/), bus (www.tasredline.com.au/index.php/airport-shuttles/), or you can hire (<http://hobartairport.com.au/to-from/car-rentals/>) a vehicle from there. The taxi fare to the city is approximately Au\$55. Shuttle buses provide door-to-door service (Hobart city) for a fare of AU\$ 17(ow)/30(rt), and are timed to connect with all incoming and outgoing flights. Pre-bookings are not required for taxis or buses.

If driving in Hobart, please remember to drive on left hand side of the road, and to drive in a clockwise direction around roundabouts.

Venue

The workshop is being hosted by the Institute for Marine and Antarctic Studies at the University of Tasmania's Waterfront Building (20 Castray Esplanade, Battery Point). The Workshop will take place on the ground floor in the Aurora Lecture Theatre. Afternoon tea is provided.



OVERVIEW

Assessing the state of any component of the global climate system is highly dependent on available observations. These observations need to be both within the desired assessment period and be comparable to a high quality time series to provide a basis for determining change. In parts of the Southern Ocean both these criteria are met, but in other regions, particularly in the deep and coastal oceans, where observations are sparser, determining the difference between change and variability becomes more challenging.

There is an ongoing desire to understand change in the Southern Ocean including Antarctica's regional and coastal seas. However, for this to be done well, a robust framework that is open to scrutiny is needed. The length of an annual Bulletin of the American Meteorological Society State of the Environment article is 1000 words, and in the first version (Meredith et al. 2015) this was prepared over a short time frame, limiting the opportunity for developing a framework that would serve into the future.

This workshop aims to provide an opportunity for discussion to build the robust framework required to determine what can be said about the State of the Southern Ocean. In particular we hope to identify where:

- Observations are adequate for a state of the climate assessment
- Observations are inadequate. This may be:
 - spatially, e.g., around Antarctica's coast, or
 - due to measurement accuracy and resolution, e.g., seal mounted CTD's
- New observations could have the highest impact, by either
 - extending data coverage, or
 - reducing uncertainty around any trends

The planned output from the workshop is a scientific paper that provides a robust framework for future state of the environment reporting in the Southern Ocean.

Discussion topics:

1. What are the available datasets for assessing the state of the Southern Ocean Climate?
 - a) Do instruments have sufficient accuracy and resolution to detect variability and change?
 - b) Are published climatologies sufficiently robust to provide a baseline for change?
2. What are the proper data analysis methods for assessment?
 - a) How spatially representative is the data?
 - b) Are the baselines long enough to determine if year to year variation is significant?
3. How do we identify and fill important gaps?

WORKSHOP PROGRAM

WEDNESDAY 10TH JUNE

13:00 - 14:45	Session 1: Setting the Scene <i>Convenor: Mike Williams</i>	IMAS Aurora Theatrette
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13:00 - 13:10	Introduction and housekeeping <i>Mike Williams (NIWA, NZ)</i>
13:10 - 13:20	Assessing the Southern Ocean climate variability <i>Matthew Mazloff (SIO, USA)</i>
13:20 - 13:30	Altimetry and gravity <i>Matthew Mazloff</i>
13:30 - 13:45	Upper ocean temperature, salinity and stratification <i>Jean-Baptiste Sallee (LOCEAN, France)</i>
13:45 - 14:00	Antarctic Margin measurements <i>Anna Wahlin (U. Gothenburg, Sweden)</i>
14:00 - 14:15	Southern Ocean and Antarctic marginal sea climatology's <i>Karen Heywood (UEA, UK)</i>
14:15 - 14:30	Repeat Hydrography <i>Yvonne Firing (SIO, USA)</i>
14:30 - 14:45	Gaps <i>Mike Williams (NIWA, NZ)</i>

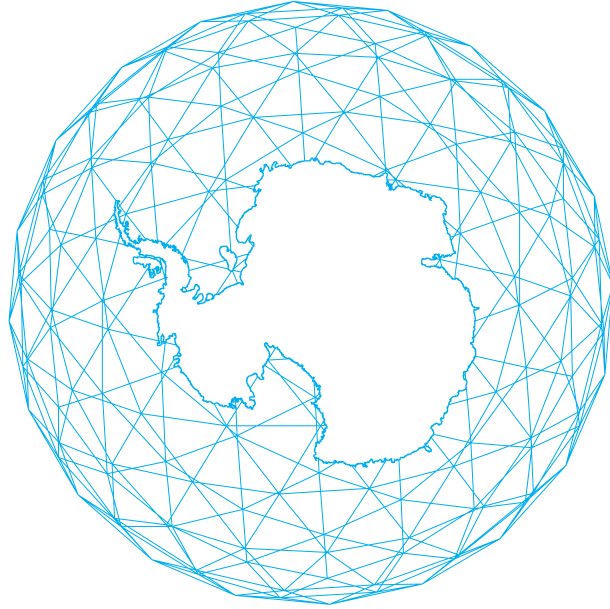
14:45 - 15:15	Afternoon Tea
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15:15 - 17:00	Session 2: Panel Discussion <i>Convenor: Matthew Mazloff</i>	IMAS Aurora Theatrette
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15:15 - 15:30	Introduction <i>Mike Williams</i>
15:30 - 16:40	Panel Discussion <i>Mike Williams, Matthew Mazloff, Jean-Baptiste Sallee, Karen Heywood, Nathan Bindoff (IMAS, Aus)</i>
16:40 - 17:00	Wrap up <i>Mike Williams</i>

PARTICIPANTS

NAME	AFFILIATION	COUNTRY
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Corney, Dr Stuart	ACE CRC	Australia
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Downes, Dr Stephanie	Antarctic CLimate & Ecosystems CRC	Australia
Firing, Dr Yvonne	National Oceanography Centre	United Kingdom
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