



## Voyage ss2013\_v03

### Integrated Marine Observing System (IMOS) observations for climate and carbon cycle studies southwest of Tasmania (47°S, 140°E)

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#### Contribution to Australia's national benefit:

This project lies within the national priority of An Environmentally Sustainable Australia: Responding to climate change and variability. The Southern Ocean is important to global and regional climate and carbon cycling, because of its highly energetic interactions with the atmosphere, its deep mixing, and its role in connecting all the basins in the global ocean.

Direct measurements are very rare, and automated observatories are required to measure air-sea exchanges in these waters to quantify ocean control of atmospheric CO<sub>2</sub>, and physical mechanisms responsible for climate variability and change. This is because ship-based observations cannot capture the variations which occur on timescales from daily, to monthly, to annually and include strong events driven by weather.

Data from these systems are provided via the Australian Ocean Data Network and the Integrated Marine Observing System archive to Australian and international researchers. The SOTS moorings are a core component of the international OceanSITES program ([www.OceanSites.org](http://www.OceanSites.org)).

This year we highlight progress towards sustained multi-year observations.

We also showcase results from a new type of sediment trap, the Indented Rotating Sphere trap, designed to exclude zooplankton.

#### Itinerary

Departed Hobart  
0800 Sunday 28 April 2013

Arrived Hobart  
0800 Friday 10 May 2013

#### > Voyage track ss2013\_v03

