



## Voyage ss2011\_c01

### Tsunami Detection Buoy Maintenance in Tasman Sea

Alan Thomas, Bureau of Meteorology (Chief Scientist)

#### Contribution to Australia's national benefit

The Australian Tsunami Warning System (ATWS) is a national effort involving the Australian Bureau of Meteorology (Bureau), Geoscience Australia (GA) and Emergency Management Australia (EMA) to provide a comprehensive tsunami warning system capable of delivering timely and effective tsunami warnings to the Australian population. The project also supports international efforts to establish an Indian Ocean tsunami warning system, and contributes to the facilitation of tsunami warnings for the South West Pacific.

The current, and proposed, network of six Tsunameters has been developed to support the enhancement of Australia's Tsunami early warning system. Deployment sites have been selected from areas around Australia that experience significant tectonic instability.

Due to the complexity and uncertainty as to whether an undersea earthquake has the potential to generate a tsunami, the observation of sea levels is a critical factor in verifying whether a tsunami has actually been generated. The use of actual sea level observations, as compared with reliance on seismic observations alone, therefore helps to significantly reduce the risk of false tsunami warnings being issued. All Australian-owned

buoys, as well as deep-ocean buoys operated by other countries in the Australian region, provide critical data to Australia's tsunami warning system.

#### As a result of this voyage:

One of the key components of the ATWS project is the deployment and the continued support of the Tsunameter Network that is under the direct management of the Australian Bureau of Meteorology, and this voyage included:

1. The successful deployment of the Easy to Deploy (ETD) tsunameter. This deployment was the result of a collaborative arrangement between NOAA/PMEL (National Oceanic and Atmospheric Administration/ Pacific Marine Environmental Laboratory) and the Australian Bureau of Meteorology to further develop Tsunami Warning Systems.
2. The deployment of the new Deep Ocean Assessment and Reporting of Tsunamis system (DART) II tsunameter comprising separate bottom pressure recorder (BPR) and moored surface buoy.
3. Recovery of the SAIC Tsunami Buoy (STB) tsunameter, which comprised a separate BPR and moored buoy.
4. Changeover of the existing ETD buoy to allow the continued operation of the station.

#### Itinerary

Departed Sydney

16:00, Tuesday 5 April 2011

Arrived Hobart

08:00, Friday 15 April 2011

#### > Voyage track ss2010\_c01

