data
summary

Southern Surveyor Voyage 3/2007

CSIRO

MARINE
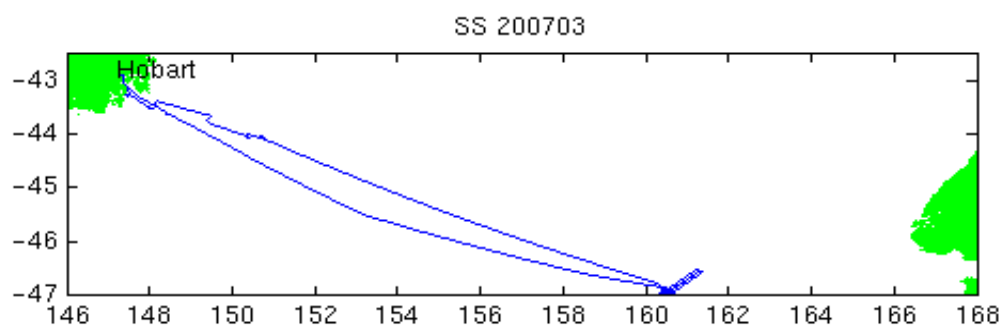NATIONAL FACILITY

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SS 2007/03

Research Charter

'Deep-ocean Tsunami Detection Buoy (DART) deployment for the Australian Tsunami Warning System (ATWS)'

Hobart—Hobart

18:30, Thursday, 12 April 2007— 9:00, Thursday, 19 April 2007
(local times)

Principal Investigator

Mr Rick Bailey,
ATWS Project Director, Bureau of Meteorology

SS 200703

Data Collected

	Processing Agency	Processing Status
Navigation	CMAR	Completed
Meteorological	CMAR	Completed
Thermosalinograph	CMAR	Completed
Depth	CMAR	Completed
EM300 Swath Data	GA	
TOPAS sub-bottom profiler	GA	

CMAR—CSIRO Marine and Atmospheric Research
GA—Geoscience Australia

Underway Data

Navigation data is acquired using the Seapath 200 position and reference unit, which is also differentially corrected by data from the FUGRO DGPS receiver.

The Meteorological data consists of 2 relative humidity and temperature sensors. A barometer, wind sensor, and licor light sensor.

Thermosalinograph data is acquired with a Seabird TSG and remote temperature SBE 3T. Data from a flow meter is also recorded.

Digital depth data is recorded from a Simrad EA500 sounder. Echograms are also recorded using SonarData's Echolog software. Digital depth data can be repacked using SonarData's Echoview software.

See Electronics report for this voyage for instruments used and serial numbers.

Navigation, Meteorological, Thermosalinograph and Depth data are quality controlled by combining all data from hourly recorded files to 10 second values in a netCDF formatted file; the combined data is referred to as "underway data".

A combined file was made on 11 May 2007 by running a Java application, written by Lindsay Pender of CMAR, uwyLogger version 5.3. The data time range is 09:45:50 12-Apr-2007—22:55:10 18-apr-2007 (GMT).

Completeness and Data Quality

Position (latitude and longitude); meteorological data (air temperature, humidity, wind speed, wind direction, maxium wind gust, light and atmospheric pressure) and thermosalinograph (salinity and water temperature) data were evaluated and quality controlled.

Processing Comments

Salinity and water temperature data was flagged as bad and set to NAN 15:39:10 12-Apr-2007—22:11:30 12-Apr-2007 as there was no water flow through the instruments. The seawater pump had not been restarted after the blackout.

The depth data was re picked using Sonar Data's echoview software. It is noted that there seems to be a time lag of 30 seconds between the digital data and the re picked depth data— the instrument's time had been checked and had agreed with "ship" time onboard. The EA500 was externally triggered by a signal from the EM300 swath mapper.

Final Underway Data

The navigation, meteorological, thermosalinograph and depth data will be entered into the CMAR Divisional data warehouse.

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References

Pender, L., 2000. Data Quality Control flags. http://www.csiro.marine.au/datacentre/ext_docs/DataQualityControlFlags. Pdf

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