

data summary

Southern Surveyor Voyage SS2009_t01



Table of Contents

Table of Contents 2
SS2009_t01 3
Title 3
Principal Investigator 3
Ports 3
Date 3
Voyage Track 4
Underway Data 5
 Completeness and Data Quality 5
 Processing Comments 5
 Final Underway Data 6
References 6

SS2009_t01

Title

“Next Wave Transit voyage Sydney to Wellington“

Principal Investigator

Professor Iain Suthers (Chief Scientist)
Sydney Institute of Marine Science and UNSW

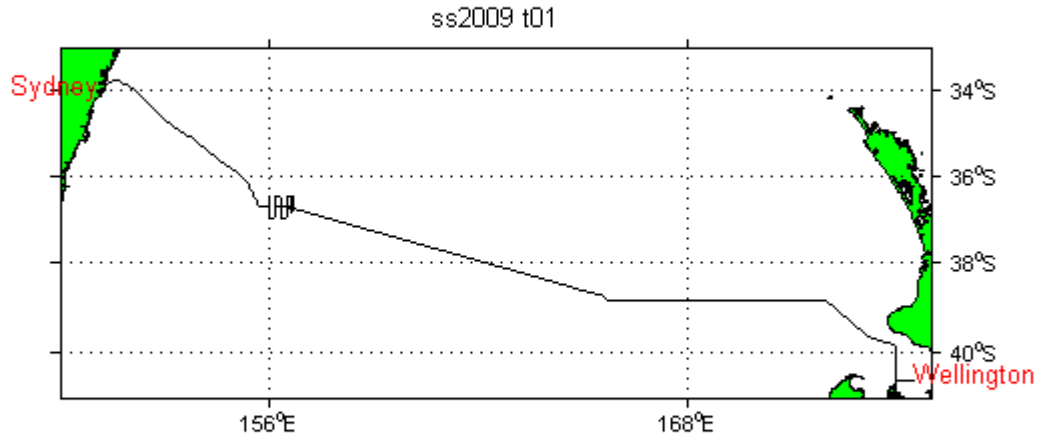
Ports

Sydney to Wellington

Date

25 Jan 2009 to 1 Feb 2009 (local time)

Voyage Track



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 repicked using SonarData's Echoview software.

Data from "IMOS" (Integrated Marine Observing System) sensors was also included. The sensors are port and starboard radiometers and pyranometers; wind speed and direction and rain and rainrate.

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

Navigation, Meteorological, Thermosalinograph, IMOS and Depth data are quality controlled by combining all data from hourly recorded files to 5 second values in a netCDF formatted file; the combined data is referred to as "underway data".

A combined file was made on 22 July 2009 by running a Java application, written by Lindsay Pender of CMAR, uwyLogger version 7.11 The data time range is 25-Jan-2009 04:36:00 to 31-Jan-2009 08:37:00 selecting this cut off time due to lack of recorded navigation data afterwards.

Completeness and Data Quality

Position (latitude and longitude); meteorological data (air temperature, humidity, wind speed, wind direction, maximum wind gust, light and atmospheric pressure) and IMOS data (port and starboard radiometers, port and starboard pyranometers, derived wind speed and direction, derived maximum wind gust and derived maximum wind gust direction), thermosalinograph (salinity and water temperature) data and depth data were evaluated and quality controlled.

Processing Comments

There were no Salinity and Water temperature data until 25-Jan-2009 22:37:05 due to the TSG pump not being started until then.

The depth data was re picked using Sonar Data's echoview software. There were a gap of depth data between 26-Jan-2009 20:22 and 23:28 and also 27-Jan-2009 18:06:50 and 21:09:50, reason is unknown however it is suspected that the recorder may not have been on.

Humidity and air temperature values between 29-Jan-2009 10:00:50 and 10:45:00 were rejected and set to NaN due to the suspected affect of the ships exhaust and prevailing wind whilst the ship was at station.

The starboard humidity sensor calibration is suspect and therefore the port humidity sensor data was used only to represent humidity. The humidity data was then flagged as 'good' 'none' 'unprocessed'.

Final Underway Data

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

Filename	Parameters	resolution
ss2009_t01_uwy10.csv	latitude, latitudeQC, longitude, longitudeQC, speedOG, speedOGQC, courseOG, courseOGQC, waterDepth, waterDepthQC, airTemp, airTempQC, humidity, humidityQC, windSpeed, windSpeedQC, maxWindGust, maxWindGustQC, windDir, windDirQC, PAR, PARQC, atmPressure, atmPressureQC, waterTemp, waterTempQC, salinity, salinityQC	10 second
ss2009_t01_uwy5min.csv	latitude, latitudeQC, longitude, longitudeQC, speedOG, speedOGQC, courseOG, courseOGQC, waterDepth, waterDepthQC, airTemp, airTempQC, humidity, humidityQC, windSpeed, windSpeedQC, maxWindGust, maxWindGustQC, windDir, windDirQC, PAR, PARQC, atmPressure, atmPressureQC, waterTemp, waterTempQC, salinity, salinityQC, IMOSStbdRadiometer, IMOSStbdRadiometerQC, IMOSStbdPyranometer, IMOSStbdPyranometerQC	5 minute
ss2009_t01_pdr10.csv	Latitude, longitude, waterDepth	10 second

References

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

Bernadette Heaney and Anoosh Sarraf

CSIRO Marine and Atmospheric Research
 Hobart, Tasmania
 Australia

