

data summary

Southern Surveyor Voyage ss2009_v04



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ss2009_v04

Title

“Integrated Marine Observing System (IMOS) Facility 3 “

Principal Investigator

Associate Professor Tom Trull (Chief Scientist)
CMAR-UTAS-ACECRC

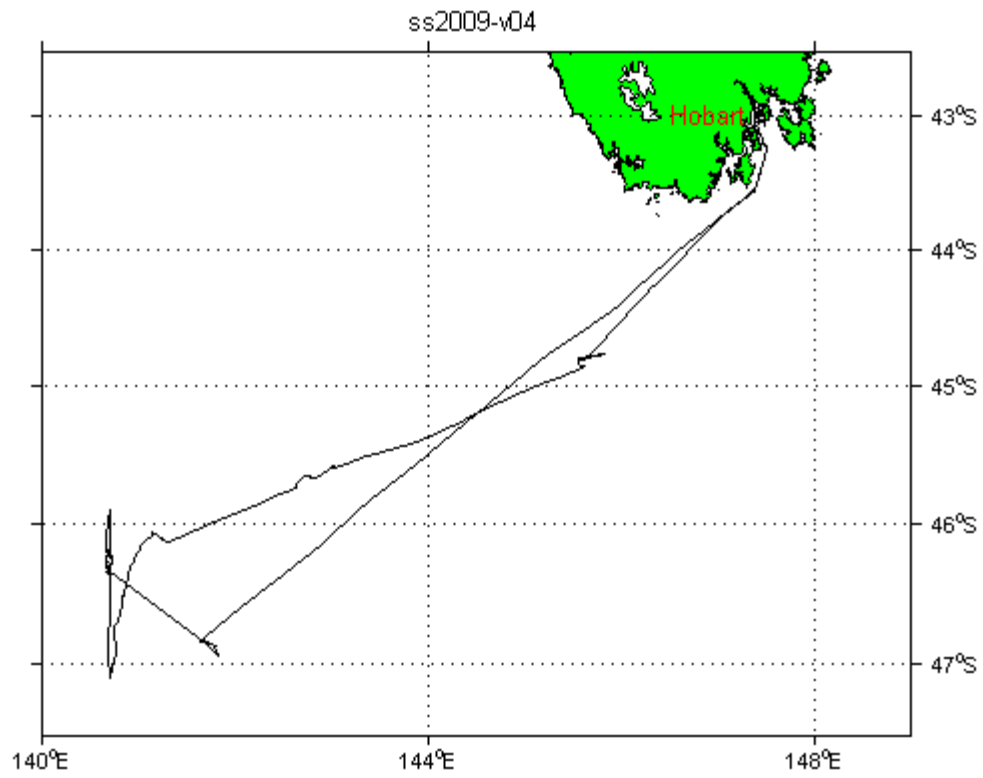
Ports

Hobart to Hobart

Date

22-Sep-2009 00:32:45 to 30-Sep-2009 05:37:00 (UTC)

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 1 December 2009 by running a Java application, written by Lindsay Pender of CMAR, uwyLogger version 7.11 The data time range is 22-Sep-2009 00:32:45 to 30-Sep-2009 05:37:00.

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

The depth data was re picked using Sonar Data's echoview software. There were several gaps of depth data which was mainly due to the echo sounders being turned off/on for mooring recovery/deployment and triangulation. The largest of these gap was approximately between 22/09/09 18:42 and 23/09/09 11:09 (UTC) and was due to a mooring recovery operation. For an unknown reason, the sounders had lost the bottom for prolonged periods hence it was necessary to perform notable line tracing and repicking.

Technical note: The high level of line tracing resulted in some straight lines from echoview and as the result it was necessary to modify the routine InterpDepth() to allow interpolation for gaps up 10 minutes (usually 3 minutes) to cater for the straight line .

The CTD calibration data for the primary sensor was averaged using figures obtained from voyage 1 (file: ss200901_ss200901128CTD.nc) and ss2009_v05 CTD processing report (first 15 deployments) by Lindsay Pender and a scaling factor of 0.99984 was calculated and

applied to the CTD data. This data was then used to calibrate the TSG against the (calibrated) CTD data where a scale factor of 1.000438 with a lag of 32 seconds was calculated and applied to the TSG data. The ThermosalinographQC was set to 'good' 'manually adjusted' 'no error'.

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' 'none'.

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

Anoosh Sarraf
CSIRO Marine and Atmospheric Research
Hobart, Tasmania
Australia