
SS 1/2003

21 February, 14:00- 13 March, 10:00 2003 (Local times)

Data processing completed by
Bernadette Heaney, November 2003

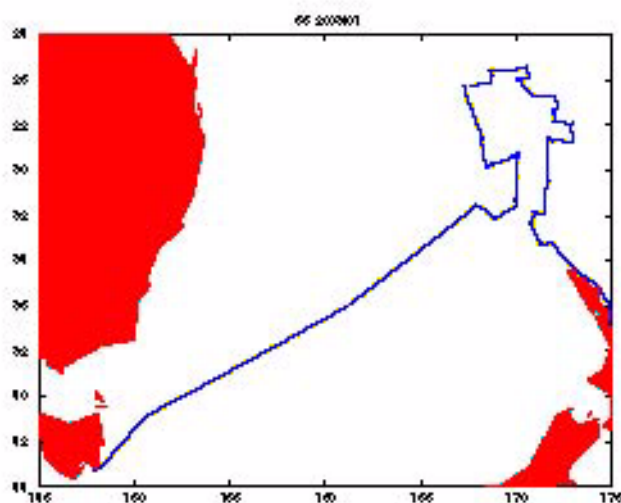
1. Summary

These notes relate to the production of quality controlled (QC-ed), position, depth and meteorological data from RV Southern Surveyor voyage 1/2003.

Position data was acquired using an Ashtech OEM 2 sensor. Depth data was acquired with the Simrad EA500. ../documents/instruments.pdf contains information on the met sensors.

2. Voyage details

“Subduction east of Australia from 120-45 Ma: search for the missing evidence in the eastern Lord Howe Rise, New Caledonia Basin, Norfolk and Three Kings Ridge Region”



Processing Notes

2.1 Principal Investigator

Prof Tony Crawford

School of Earth Sciences,

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3. Processing Notes

3.1 Background Information

Position - GPS -Ashtec OEM sensor - full resolution NMEA strings are recorded in hourly files.

Depth - Simrad EA 500 sounder - full resolution data recorded in hourly files. Echolog software produces EK files of datagrams.

A combined underway file for the entire voyage, consisting of 10 second values of position, depth, and other underway variables was remade on 11 July 2003 - by reading data from hourly files returned from the voyage.

The sounder data seemed to be affected by bubbling in rough weather, which caused bad data and lost bottom.

Echoview software was used to view the echograms, copy and repick the bottom and quality assess the data. This data was interpolated to 10 second values and read back into the netcdf underway file.

Processing Notes

The Ashtec gps “dropped” out many times during the voyage. Typical dropouts were for 22 seconds. It was observed also that the next data record after a dropout had an incorrect position and many times the HDOP value was very high. There seems to be a correlation between a high hdop value and bad positions. The uwyLogger acquisition program accepts all values. So in some instances it was noticed that one bad position after a gap could produce 3 bad 10 second values.

The navigation data was then filtered allowing a maximum speed of 14 knots and a second difference on .0001.

Raw meteorological data was not recorded. The 10 second data was derived from the 1 minute averages in the .met files returned from the ship. The metadata consists of air temperature, light, atmospheric pressure, wind speed and direction and maximum wind gust.

4. Other

The 10 second navigation, depth and meteorological data will be entered into the data warehouse. Position, depth and meteorological data extracted from the underway file is available online.

The Thermosalinograph data data will not be processed.

5. References

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

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Processing Notes

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