CSIRO MARINE RESEARCH

Processing Notes

SS 6/2005

10:00 am 31-May-2005 Darwin - 09:00 am 23-Jun-2005 Darwin

(Local times)
Data processing completed by
Bernadette Heaney, August 2005
Wind Speed and Direction recorrected by
Bernadette Heaney, June 2006

1. Summary

These notes relate to the production of quality controlled (QC-ed), position, depth and metero-logical and thermosalinograph data from RV Southern Surveyor voyage 6/2005.

Position data was acquired using the Seapath 200 position and motion reference unit. Depth data was acquired with the Simrad EA500. The Divisional Data Librarian can assist with infor-mation regarding all other sensors.

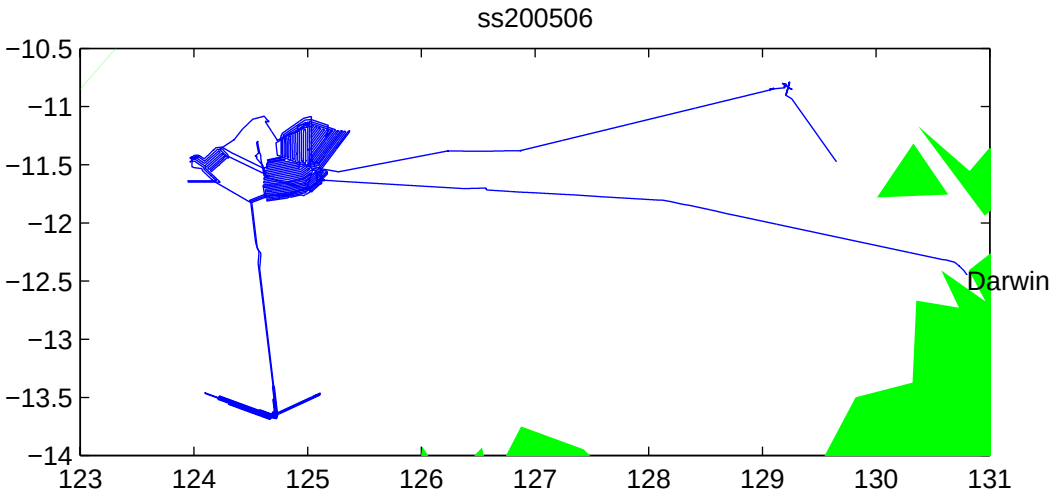
2. Voyage details

“Biogeochemical processes, effects and signatures of hydrocarbon and ground-water seepage within a tropical, carbonate rich system: Australia’s Timor Sea”

2.1 Principal Investigators

Drs Gregg Brunskill and Kathryn Burns, Australian Institute of Marine Science, Townsville

Dr Bradley Opdyke, Australian National University, Canberra



3. Processing Notes

3.1 Background Information

A combined underway file for the entire voyage, consisting of 10 second values of position, depth, meterological and thermosalinograph variables was remade on 1 August 2005 - by reading data from hourly files returned from the voyage and modified. (Time range 01:36:40 31-May-2005 - 11:29:40 22-Jun-2005).

The water depth was “repicked” using echoview software. The depth data was interpolated to 10 second values. The new depths were read back into the netcdf file.

The meteorological data consists of air temperature, humidity, light, atmospheric pressure, wind speed and direction and maximum wind gust.

It was noticed in January 2006 that the uwyLogger progam had not been correcting the wind speed and wind direction data for ships motion. The wind speed and wind direction data were recorrected in June 2006; the data was flagged good, manually adjusted (48). MaxWindGust was set to NaN, and flagged as bad data.

The thermosalinograph (TSG) data consists of water temperature and water salinity. The thermosalinograph salinity data is calibrated against CTD data (Sea Bird conductivity, temperature and depth sensor) by running the water from the thermosalinograph through the CTD in the wetlab. Data from the CTD is recorded for about 30 minutes; data from the TSG is continuously logged while at sea. The TSG conductivity data and CTD conductivity data for the period is compared.

An offset (0.000017469) and scale (0.9992) were applied to the TSG conductivity data and the salinity data was re-computed.

The gps data from the Seapath MRU unit gave no problems.

4. Other

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

5. References

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

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