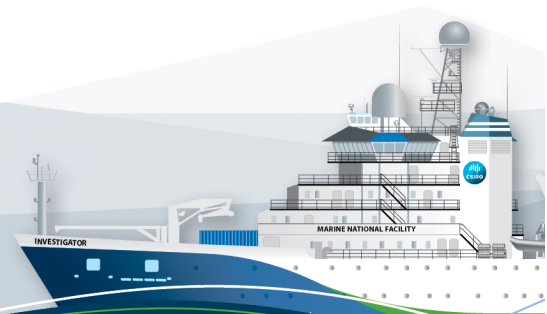


RV Investigator

ADCP Processing Report

Voyage #:	in2015_t02
Voyage title:	Transit: Sydney to Hobart
Depart:	Sydney (Garden Island), 0830 Monday, 22 June 2015
Return:	Hobart (Self's Point), 0630 Thursday, 25 June 2015
Chief Scientist:	N/A (Voyage Manager: Hugh Barker)
Affiliation:	MNF
Report compiled by:	Hugh Barker



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1 Summary

Data was collected during in2015_t02 for the duration of the voyage. Data was collected using VMDAS and post-processed using CODAS.

The OS75 unit was out of commission due to a fault, therefore only the OS150 was operational.

The drop keel was flush with the gondola (transducer 7.7m below the waterline) for the duration of the voyage.

See the voyage computing and electronics report for more details regarding data acquisition.

Overall data quality is good, with some editing required, especially in the top bins.

2 Processing Background

The University of Hawaii's CODAS software was used for data post-processing. Revision 269:5bd8c22f6560 dated Oct 19 2016 was used.

3 Processing Notes

See summary. No additional rotation of dataset required, some bad bins manually edited.

4 netCDF Data Headers

```
netcdf in2015_t02_os150nb {
dimensions:
    time = 819 ;
    depth_cell = 40 ;
variables:
    int trajectory ;
        trajectory:standard_name = "trajectory_id" ;
    double time(time) ;
        time:long_name = "Decimal day" ;
        time:units = "days since 2015-01-01 00:00:00" ;
        time:C_format = "%12.5f" ;
        time:standard_name = "time" ;
        time:data_min = 172.045833333333 ;
        time:data_max = 174.886134259259 ;
    double lon(time) ;
        lon:missing_value = 1.e+38 ;
        lon:long_name = "Longitude" ;
        lon:units = "degrees_east" ;
        lon:C_format = "%9.4f" ;
        lon:standard_name = "longitude" ;
        lon:data_min = 147.330516666667 ;
        lon:data_max = 151.497186111111 ;
    double lat(time) ;
        lat:missing_value = 1.e+38 ;
        lat:long_name = "Latitude" ;
        lat:units = "degrees_north" ;
        lat:C_format = "%9.4f" ;
        lat:standard_name = "latitude" ;
        lat:data_min = -43.278247222222 ;
        lat:data_max = -33.860025 ;
    float depth(time, depth_cell) ;
        depth:missing_value = 1.e+38f ;
        depth:long_name = "Depth" ;
        depth:units = "meter" ;
        depth:C_format = "%8.2f" ;
```

```
        depth:positive = "down" ;
        depth:data_min = 27.64f ;
        depth:data_max = 339.67f ;
float u(time, depth_cell) ;
    u:missing_value = 1.e+38f ;
    u:long_name = "Zonal velocity component" ;
    u:units = "meter second-1" ;
    u:C_format = "%7.2f" ;
    u:data_min = -1.07749f ;
    u:data_max = 0.6172986f ;
float v(time, depth_cell) ;
    v:missing_value = 1.e+38f ;
    v:long_name = "Meridional velocity component" ;
    v:units = "meter second-1" ;
    v:C_format = "%7.2f" ;
    v:data_min = -1.897854f ;
    v:data_max = 0.57604f ;
short amp(time, depth_cell) ;
    amp:missing_value = 32767s ;
    amp:long_name = "Received signal strength" ;
    amp:C_format = "%d" ;
    amp:data_min = 20s ;
    amp:data_max = 229s ;
byte pg(time, depth_cell) ;
    pg:missing_value = -1b ;
    pg:long_name = "Percent good pings" ;
    pg:C_format = "%d" ;
    pg:data_min = 0b ;
    pg:data_max = 100b ;
byte pflag(time, depth_cell) ;
    pflag:long_name = "Editing flags" ;
    pflag:C_format = "%d" ;
    pflag:data_min = 0b ;
    pflag:data_max = 7b ;
float heading(time) ;
    heading:missing_value = 1.e+38f ;
    heading:long_name = "Ship heading" ;
    heading:units = "degrees" ;
    heading:C_format = "%6.1f" ;
    heading:data_min = -179.7852f ;
    heading:data_max = 179.6217f ;
float tr_temp(time) ;
    tr_temp:missing_value = 1.e+38f ;
    tr_temp:long_name = "ADCP transducer temperature" ;
    tr_temp:units = "Celsius" ;
    tr_temp:C_format = "%4.1f" ;
    tr_temp:data_min = 11.3012f ;
    tr_temp:data_max = 21.71591f ;
float uship(time) ;
    uship:missing_value = 1.e+38f ;
    uship:long_name = "Ship zonal velocity component" ;
    uship:units = "meter second-1" ;
    uship:C_format = "%9.4f" ;
    uship:data_min = -4.319506f ;
    uship:data_max = 5.303157f ;
float vship(time) ;
    vship:missing_value = 1.e+38f ;
    vship:long_name = "Ship meridional velocity component" ;
    vship:units = "meter second-1" ;
    vship:C_format = "%9.4f" ;
    vship:data_min = -7.08646f ;
    vship:data_max = 4.058741f ;

// global attributes:
:featureType = "trajectoryProfile" ;
:history = "Created: 2018-05-02 02:47:28 UTC" ;
:conventions = "COARDS" ;
:software = "pycurrents" ;
:hg_changeset = "2320:184969c40ec8" ;
```

```
:title = "Shipboard ADCP velocity profiles" ;  
:description = "Shipboard ADCP velocity profiles from in2015_t02 using instrument  
os150nb" ;  
:cruise_id = "in2015_t02" ;  
:sonar = "os150nb" ;  
}
```