Metadata information sheet for data collected on RV *Investigator* Voyages.

Please enter information to assist in the creation of metadata records for all data types collected on RV Investigator Voyages. This will enable the capture and promotion of the valuable science undertaken. Thank you for your co-operation.

Please save your file as [voyageident_metadata_datatype.docx] in the voyage archive Science directory on board. For any assistance email data-requests-hf@csiro.au

Voyage Ident:	Author: Mike Harvey, mike.harvey@niwa.co.nz

Equipment/Data Type

Name: Upper air meteorological data

Brief Description of instruments:

Combined dual sensing by Windsond and Anasphere tethersond:

1/ Sparv S1H2 Windsond radiosonde flown underneath the helikite while the ship was stationary at each station.

Feature	Range	Resolution	Accuracy	Unit
Air pressure	300-1100	0.02	1.0	hPa
Wind speed	0-150	0.1	ca 5%	m/s
Wind direction	0-360	0.1	Depends on GPS conditions	degrees
Temperature	-40~ +80 °C	0.01 °C	0.3 °C	degC
Humidity	0 ~ 100 %RH	0.05%	2.0 %	%

Tel +46 (0)707 312608 sparvembedded.com

2/ Anasphere Lite Tethersonde for PTU, windspeed and direction Hardware V1.0 sensors:

Pressure: resolution 0.1 mb, accuracy 0.5 mb, range 0-1100 mb
Temperature: resolution 0.125°C, accuracy 0.5°C, range -55 to +125°C
Relative Humidity: resolution 0.1%, accuracy 1.7%, range 0-100%
Wind Speed: resolution 0.1 m/s, accuracy 0.5%, range 0-14 m/s (at sea level),
0-22 m/s (at 5,000 ft MSL);

Wind Direction: resolution 1 degree, accuracy 2 degrees

Anasphere, Inc.+1 406-595-3286 www.anasphere.com

Deployment by Allsopp helium filled Helikyte with HCS-03M Safety Deflation System (which proved problematic with vessel drift.

Include relevant component details: make, model, serial number, firmware version, settings

Parameters measured:

Pressure, temperature, relative humidity directly, then derived values for height, dew point, vapour pressure, mixing ratio and potential temperature

Data type product(s) created:

One excel file per flight with dates and times in UTC (identified by the flight number) Data recorded at ten second intervals:

Data sheet

Plots of the data in a second sheet

Refer to the "NIWASounder_Met_Data_Summary.xlsx" for a list of which flights the instrument was flown on, as this varied depending on what aerosol equipment needed to be flown, containing: Flight number, Station No, Release date/time (UTC), Finish date/timeDate (UTC), Max Height (m), Lat (degrees), Long (degrees), Notes

Owner of instrument: NIWA Contact: tony.bromley@niwa.co.nz, sally.gray@niwa.co.nz, or mike.harvey@niwa.co.nz

Calibration Information (if applicable)

Last calibration:

Calibration performed by:

Data Acquisition information

Acquisition software used (if applicable):

Format type(s) :

Directory location in EOV archive : Under instrument data \ upper air data\windsond

Data volume and associated logs:

Data Completeness/Quality comment: 100% – all invalid data has been removed

Temporal and Geographic extent of data – Note maybe less than total voyage extents.

Begin_Data_Date: 30/09/2016 UTC

End_Data_Date: 18/10/2016 UTC

Northern_Extent:

Southern_Extent:

Western_Extent:

Eastern_Extent:

Samples Collected (if applicable) and Archived (if applicable)

Number of samples:

Number of stations:

Sample storage format:

Sample Archive Location: *Name and Contact*

Data Processing/Analyses

Briefly describe data processing or analyses: Data before release and once the helikite was on the deck again has been removed. Also any invalid data and faulty sensor readings during the flight has also been removed

Identify the responsible party for processing/analyses and location where performed: Sally Gray / Tony Bromley while on board the vessel

Include any relevant references *(If processing report not to be provided)*:

Processed/Analysed Data Format type(s) : excel file

Data Product(s)

Responsible party for data product - *Name and contact information* : Sally.Gray@niwa.co.nz

Is this data product a subset of a combined data product? : Y/N (Yes)

If Y - Please specify: Combined best sensor data

Will the data product be archived *c/o CSIRO Oceans and Atmosphere - Information and Data Centre*? : Y/N   (Yes)

If N, where will the data be archived?

Distribution of Data Product

Will the data product be distributed by *CSIRO Oceans and Atmosphere - Information and Data Centre?* : Y/N (Yes)

If N, who will the data be distributed by?

What distribution platforms will be used? :

e.g. CSIRO Oceans and Atmosphere - Information and Data Centre tools – Marlin, Trawler. AODN portal, World Data Centre for Greenhouse Gases (WDCGG) Japan, Scientific publication.

Other information:

Please provide any other useful information to enhance your data product description and data discovery.