

MIRAI MR10-07 Radiosonde

Last Modified: 2017-08-23

ReadMe Observation Data Data Format

Cruise ID: **MR10-07**

Radiosonde: Processed (DMO)-Corrected

Data Policy: **JAMSTEC**

Observation Items: Atmospheric pressure, Air temperature, Dew point temperature, Relative humidity, Wind speed (zonal, meridional), Height

Science Keywords:

ATMOSPHERE > ATMOSPHERIC WATER VAPOR > DEW POINT TEMPERATURE
ATMOSPHERE > ATMOSPHERIC WATER VAPOR > HUMIDITY
ATMOSPHERE > ATMOSPHERIC TEMPERATURE > TEMPERATURE PROFILES
ATMOSPHERE > ATMOSPHERIC WINDS > UPPER LEVEL WINDS
ATMOSPHERE > ATMOSPHERIC WINDS > WIND PROFILES

Cruise Report

http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR10-07_all.pdf

For Using Data

Principal Investigator

Data Management Office

Use Constraints

See [Terms and Conditions](#) about constrain of use.

Data Citation

See [Terms and Conditions](#) about data citation.

Instrument

Instrument:

Radiosonde (MR11-03 - MR15-E01
Leg3)



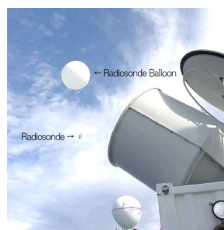
Instrument:

Radiosonde (MR04-03 Leg1 - MR11-02)



Instrument:

Radiosonde (- MR04-02)



Overview

Correction method

- Data observed by RS80 sensors

- Correction of ship body warming

Temperature and dew point temperature data near the surface (4.5 hPa from ship deck) were corrected by linear extrapolation using upper layer data, since these data were affected by ship body warming (cooling) at daytime (nighttime). Details for data processing and correction can be found in [Yoneyama et al. \(2002\)](#).

- Data observed by RS92 sensors

- Correction of ship body warming

Same as above

- Correction of Dry Bias

Humidity data observed by RS92 sensors contain dry bias mainly due to solar radiation error in daytime. We have corrected the humidity data observed by RS92 sensors using [Yoneyama et al.\(2008\)](#). method. RS92 sensors have been used since MR04-03 cruise.

Note

Information about each radiosonde data are listed in the following table. It contains corrected sounding data, launch time, position, sensor information and calibration results for atmospheric pressure, air temperature and relative humidity. Calibration is conducted for every sensor prior to launch. Therefore, even raw data take in this calibration result. If the calibration result shows the positive value, it means that the calibrator showed the higher value than that of the sonde sensor. Filename of corrected data shows a sounding time (YYMMDDHH.***, where YY=year, MM=month, DD=day, and HH=hour) in UTC.

Data file	Launch time (UTC)		Launch station		Sensor information		Calibration result				Note
	Date	Time	Latitude	Longitude	Serial No.	Age	Atmospheric pressure[hPa]	Air temperature[deg-C]	Relative humidity1[%]	Relative humidity2[%]	
10112603.dat	2010/11/26	02:30	38.06N	146.47E	F0220147	324	0.18	-0.31	-0.01	-0.04	Rain
10112605.dat	2010/11/26	04:30	37.80N	146.36E	F0220170	324	0.31	-0.18	-0.13	-0.15	Rain
10112607.dat	2010/11/26	06:30	37.50N	146.25E	F0220153	324	-0.13	-0.26	-0.02	-0.02	Rain
10112608.dat	2010/11/26	07:30	37.30N	146.19E	F0220155	324	0.14	-0.16	-0.02	-0.03	
10112610.dat	2010/11/26	09:30	37.04N	146.09E	F0220177	324	0.13	-0.23	0.00	-0.06	
10112611.dat	2010/11/26	10:30	36.78N	146.01E	F0220149	324	0.28	-0.25	-0.21	-0.07	
10112613.dat	2010/11/26	12:30	36.55N	145.94E	F0220146	325	0.32	-0.26	-0.07	-0.12	Rain
10112614.dat	2010/11/26	13:30	36.30N	145.86E	F0350073	315	0.23	-0.25	-0.06	-0.03	Rain
10112616.dat	2010/11/26	15:30	36.05N	145.76E	F0440294	309	0.18	-0.21	-0.09	-0.09	
10112617.dat	2010/11/26	16:30	35.79N	145.67E	F0350082	315	-0.01	-0.18	-0.05	-0.05	
10112619.dat	2010/11/26	18:30	35.55N	145.60E	F0440489	309	0.81	-0.11	-0.23	-0.21	
10112620.dat	2010/11/26	19:30	35.31N	145.52E	F0350127	315	0.29	-0.25	-0.21	-0.18	

	Launch time (UTC)	Latitude	Longitude	Sensor information	Age	Calibration	result		
10112622.dat	2010/11/26 21:30	34.00N	145.33E	F0350110	315	0.46	-0.18		
10112633.dat	2010/11/26 22:30	34.78N	145.34E	F0350065	315	0.41	-0.19	Air	-0.09
10112701.dat	2010/11/27 01:30	34.29N	145.28E	F0350073	315	0.41	-0.26	Relative humidity1[%]	-0.08
10112702.dat	2010/11/27 01:30	34.29N	145.18E	F0350081	315	0.29	-0.22	Relative humidity2[%]	-0.09
10112704.dat	2010/11/27 03:30	34.05N	145.09E	F0350067	315	0.10	-0.12		
10112706.dat	2010/11/27 05:30	33.81N	145.01E	F0450146	308	-0.26	-0.29		
10112707.dat	2010/11/27 06:30	33.53N	144.93E	F0450145	308	0.14	-0.26		
10112709.dat	2010/11/27 08:30	33.31N	144.86E	F0350066	315	0.04	-0.16		
10112711.dat	2010/11/27 10:30	33.06N	144.77E	F0350083	315	0.01	-0.23		
10112713.dat	2010/11/27 12:30	32.80N	144.69E	F0350072	316	0.05	-0.26		
10112715.dat	2010/11/27 14:30	32.47N	144.56E	F4030373	59	0.00	-0.15	0.20	0.07

Reference

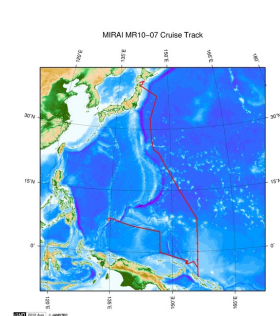
- K. Yoneyama, M.Hanyu, S.Sueyoshi, F.Yoshiura, and M.Katsumata, 2002:Radiosonde observation from the ship in the tropical region. [\[PDF:400kbyte\]](#) JAMSTECR, Vol.45, 31-39.
- K. Yoneyama, M.fujita, N.Sato, M.Fujiwara, Y.Inai, and F.Hasebe, 2008:Correction for Radiation Dry Bias Found in RS92 Radiosonde Data during the MISMO Field Experiment. [\[PDF:400kbyte\]](#) SOLA, Vol.4, 13-16.

Others

- Main processor: DigiCORAll. MW21(from 2004 Jul. to 2011 Mar.) [VAISALA, Finland]
- Radiosonde Sensor: RS92-SGP, RS80-15GH, RS80-15G [VAISALA, Finland]
 - * The observations which using the RS80 sensors were mentioned in the "Note" of data page (other observations were performed using the RS92 sensors).
- Launcher Location: 22m (from base line)

Note

Related Information



[Enlarge Image](#)

MR10-07

Ship Name: MIRAI
 Period: 2010-11-23 - 2010-12-30
 Chief Scientist: Yuji Kashino (JAMSTEC)
 Project Name: [Tropical Ocean Climate Study (TOCS),Station KEO]
 Proposal ▶ Tropical Ocean Climate Study
 Title:

Update History

2017-08-23	An observation data was registered.
2014-07-11	An observation data was registered.
2014-06-14	An observation data was registered.
2014-06-13	An observation data was registered.
2014-03-21	An observation data was registered.

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 6K Camera DEEP TOW
 6K Sonar DEEP TOW
 KM-ROV
 POWER GRAB SAMPLER (SHELL)
 POWER GRAB SAMPLER (CLOW)
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MIRAI MR10-07 Radiosonde

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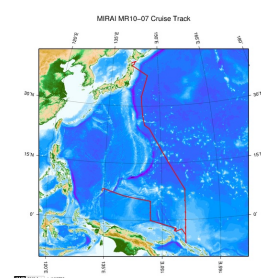
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Radiosonde Corrected

No.	Column	Description	Format	Unit	Remarks
1	3 - 8	Atmospheric pressure	f6.1	hPa	
2	10 - 15	Air temperature	f6.1	deg-C	'9999.0' is missing value.
3	17 - 22	Dew point temperature	f6.1	deg-C	'9999.0' is missing value.
4	24 - 27	Relative humidity	i4	%	'9999' is missing value.
5	29 - 34	Wind speed (zonal)	f6.1	m/sec	'9999.0' is missing value.
6	36 - 41	Wind speed (meridional)	f6.1	m/sec	'9999.0' is missing value.
7	44 - 48	Height (from sea level)	i5	m	'99999' is missing value.
8	49 - 50	Terminator	a2		CR+LF

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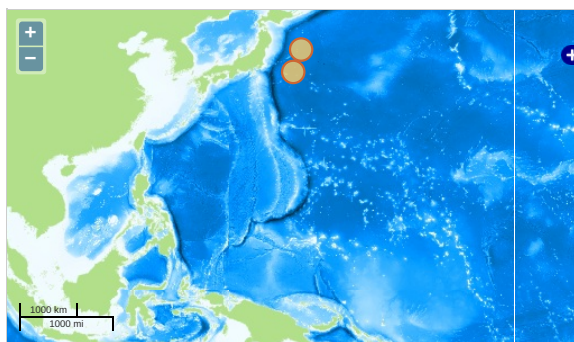
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Observation Map

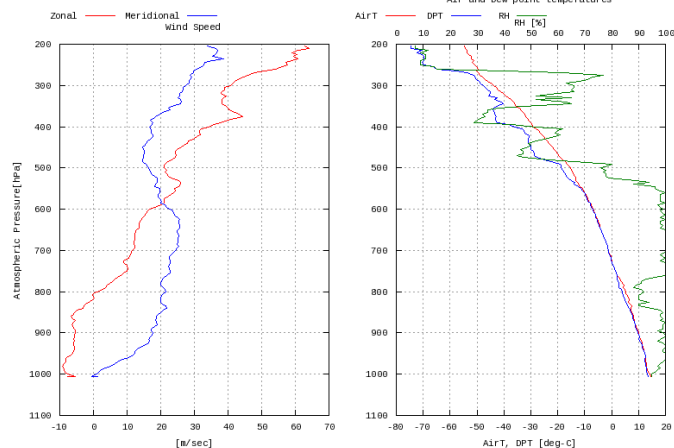
- Clicking the icon displays a balloon with observation information.
- Then click the observation name, figures will be displayed.



Figures

10112603

MR10-07:10112603
Radiosonde



Data List

☐ File names

☐ 10112603.dat

☐ 10112605.dat

☐ 10112607.dat

☐ 10112608.dat

☐ 10112610.dat

☐ 10112611.dat

☐ 10112613.dat

☐ 10112614.dat

☐ 10112616.dat

☐ 10112617.dat

☐ 10112619.dat

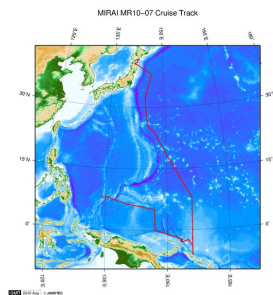
☐ 10112620.dat

☐ 10112622.dat

☐ 10112623.dat

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<input type="checkbox"/>	10112704.dat
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<input type="checkbox"/>	10112707.dat
<input type="checkbox"/>	10112709.dat
<input type="checkbox"/>	10112711.dat
<input type="checkbox"/>	10112713.dat
<input type="checkbox"/>	10112715.dat

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