

## MIRAI MR10-02 Radiosonde

Last Modified: 2016-04-07

ReadMe Observation Data Data Format

Cruise ID: [MR10-02](#)

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/MR10-02\\_all.pdf](http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR10-02_all.pdf)

#### For Using Data

##### Principal Investigator

Data Management Office

JAMSTEC / BPPT joint cruise in the Indonesian waters.

##### Use Constraints

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

##### Data Citation

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

### Instrument

Instrument:

Radiosonde (MR04-03 Leg1 - MR11-02)



### 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[%]	
10040806.dat	2010/04/08	05:30	38.04N	146.51E	E2112595	324	-1.09	-0.34	-0.04	0.04	
10040811.dat	2010/04/08	10:30	37.53N	146.25E	E2112596	324	-0.47	-0.26	-0.07	-0.06	
10040813.dat	2010/04/08	12:30	37.05N	146.09E	E2112597	325	-0.53	-0.24	-0.13	-0.11	
10040815.dat	2010/04/08	14:30	36.78N	146.01E	E2112598	325	-0.20	-0.14	-0.12	-0.11	
10040816.dat	2010/04/08	15:30	36.55N	145.93E	E2112599	325	-0.80	-0.51	-0.10	-0.19	
10040818.dat	2010/04/08	17:30	36.29N	145.84E	E2411831	304	-0.37	-0.11	-0.06	-0.08	
10040819.dat	2010/04/08	18:30	36.05N	145.77E	E2112574	325	-0.63	-0.21	-0.19	-0.17	
10040821.dat	2010/04/08	20:30	35.80N	145.68E	E2112579	325	-0.11	-0.25	-0.15	-0.11	
10040822.dat	2010/04/08	21:30	35.55N	145.60E	E2112584	325	-0.18	-0.30	-0.22	-0.14	
10040823.dat	2010/04/08	22:30	35.27N	145.51E	E2112585	325	-0.61	-0.35	-0.16	-0.13	

10040900.dat	2010/04/09	01:30	35.04N	145.44E	E2112593	325	-0.15	-0.18	-0.13	-0.11	
10040902.dat	2010/04/09	01:30	34.77N	145.36E	E2112593	325	-1.06	-0.31	-0.04	-0.05	
Data file	2010/04/09	02:30	34.54N	145.27E	E2112593	325	-0.79	-0.20	-0.13	-0.10	Note
10040903.dat	2010/04/09	04:30	34.29N	145.19E	E2112592	325	-0.51	-0.15	-0.20	-0.15	
10040905.dat	2010/04/09	04:30	34.29N	145.19E	E2112592	325	-0.51	-0.15	-0.20	-0.15	
10040906.dat	2010/04/09	05:30	34.05N	145.12E	F0220183	3749	-0.18	-0.09	-0.09	-0.09	
10040908.dat	2010/04/09	07:30	33.54N	144.95E	F0220243	3749	-0.47	-0.18	-0.15	-0.13	
10040912.dat	2010/04/09	11:30	33.05N	144.79E	F0220164	3750	-0.49	-0.13	-0.11	-0.10	
10040918.dat	2010/04/09	17:30	32.40N	144.58E	F0220178	3750	-0.09	-0.14	-0.07	-0.03	
10040921.dat	2010/04/09	20:30	32.37N	144.56E	F0220154	3750	-0.21	-0.05	-0.10	-0.10	
10041000.dat	2010/04/09	23:30	32.35N	144.53E	F0220159	3750	-0.50	-0.09	-0.15	-0.14	
10041003.dat	2010/04/10	02:30	32.33N	144.52E	F0220152	3750	-0.27	-0.12	-0.11	-0.08	
10041006.dat	2010/04/10	05:30	32.18N	144.49E	F0220173	3750	-0.28	-0.05	-0.19	-0.18	

Reference

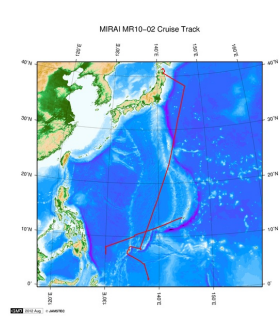
K. Yoneyama, M.Hanyu, S.Sueyoshi, F.Yoshiura, and M.Katsumata, 2002:Radiosonde observation from the ship in the tropical region.[PDF:400kbyte]  
JAMSTECR, Vol.45, 31-39.  
K. Yoneyama, M.fujita, N.Sato, M.Fujiwara, Y.Inai, and F.Hasebe, 2008:Correction for Radiation Dry Bias Found in RS92 Radiosonde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

Others

- Main processor: DigiCORAlll. 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



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MR10-02

Ship Name: MIRAI  
Period: 2010-04-06 - 2010-05-02  
Chief Scientist: Kentaro Ando (JAMSTEC)  
Project Name: [Tropical Ocean Climate Study (TOCS),Station KEO]  
Proposal ▶ Tropical Ocean Climate Study/Operation of TRITON Buoy  
Title:

Update History

2016-04-07	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.
2014-02-15	An observation data was registered.
2012-09-28	An observation data was registered.

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HAKUHO MARU

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SHINKAI 6500  
DEEP TOW  
HYPER-DOLPHIN  
URASHIMA  
YOKOSUKA DEEP TOW  
6K Camera DEEP TOW  
6K Sonar DEEP TOW  
KM-ROV  
POWER GRAB SAMPLER (SHELL)  
POWER GRAB SAMPLER (CLOW)  
BMS

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Go to a Dive Information

Dive ID:



## MIRAI MR10-02 Radiosonde

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Cruise ID: [MR10-02](#)

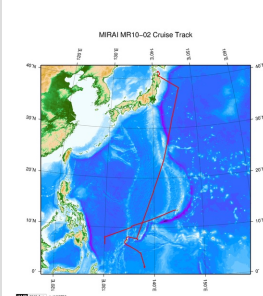
Radiosonde: Processed (DMO)-Corrected

Data Policy: [JAMSTEC](#)

### 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

### Related Information



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#### MR10-02

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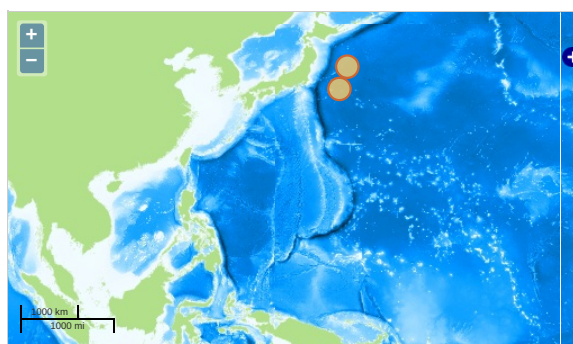
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### Observation Map

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

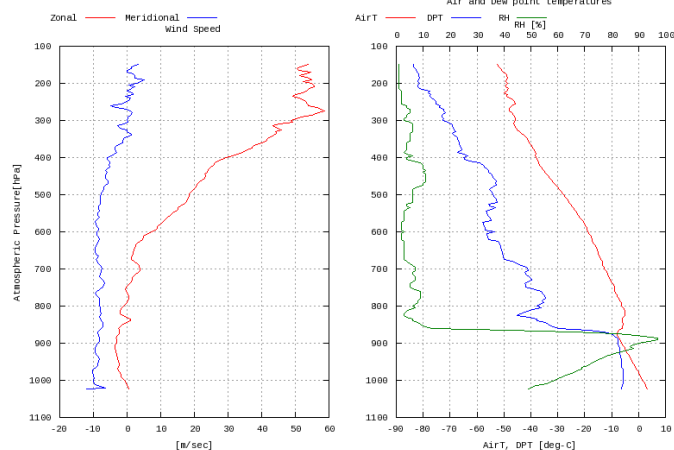


— ... Observation Line — ... Navigation ● ... Observation, Dive Point, Hole

### Figures

10040806

MR10-02: 10040806  
Radiosonde



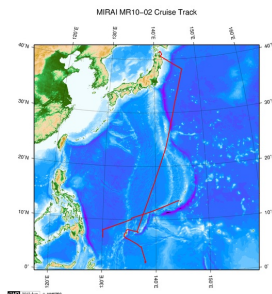
### Data List

☐ File names

- ☐ 10040806.dat
- ☐ 10040811.dat
- ☐ 10040813.dat
- ☐ 10040815.dat
- ☐ 10040816.dat
- ☐ 10040818.dat
- ☐ 10040819.dat
- ☐ 10040821.dat
- ☐ 10040822.dat
- ☐ 10040823.dat
- ☐ 10040900.dat
- ☐ 10040902.dat
- ☐ 10040903.dat
- ☐ 10040905.dat

<input type="checkbox"/>	File names
<input type="checkbox"/>	10040908.dat
<input type="checkbox"/>	10040912.dat
<input type="checkbox"/>	10040918.dat
<input type="checkbox"/>	10040921.dat
<input type="checkbox"/>	10041000.dat
<input type="checkbox"/>	10041003.dat
<input type="checkbox"/>	10041006.dat

#### Related Information



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Dive ID:

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