

## MIRAI MR09-02 Leg2 Radiosonde

Last Modified: 2016-10-17

[ReadMe](#) [Observation Data](#) [Data Format](#)

Cruise ID: [MR09-02 Leg2](#)

Radiosonde: Processed (DMO)-Corrected

Data Policy: [JAMSTEC](#)

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

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

### For Using Data

#### Principal Investigator

Data Management Office

#### Use Constraints

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

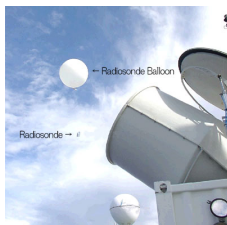
#### Data Citation

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

### Instrument

Instrument:

Radiosonde (MR04-03 Leg1 - MR11-02)



### 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 atomospheric 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	Atomospheric pressure[hPa]	Air temperature[deg-C]	Relative humidity1[%]	Relative humidity2[%]	
09081906.dat	2009/08/19	05:30	37.12N	142.98E	E1740428	117	1.45	-0.28	-0.52	-0.61	

### 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)

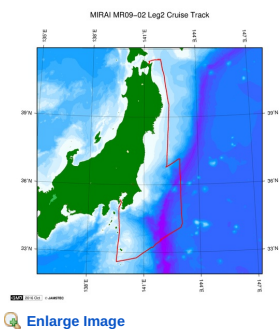
### Related Information

### MR09-02 Leg2

Ship Name: MIRAI

Period: 2009-08-17 - 2009-08-23

Chief Scientist: Yosaku Maeda (JAMSTEC)



#### Update History

2016-10-17	An observation data was registerd.
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#### Information of the Ships

NATSUSHIMA

KAIYO

YOKOSUKA

MIRAI

KAIREI

CHIKYU

KAIMEI

SHINSEI MARU

HAKUHO MARU

#### Information of the Submersibles

KAIKO

SHINKAI 2000

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

#### Go to a Cruise Information

Cruise ID:

Go

#### Go to a Dive Information

Dive ID:

Go

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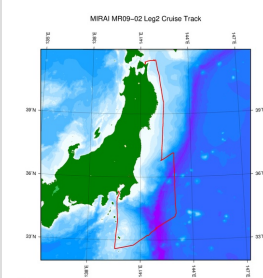
Radiosonde: Processed (DMO)-Corrected

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



[Enlarge Image](#)

#### MR09-02 Leg2

Ship Name: MIRAI  
Period: 2009-08-17 - 2009-08-23  
Chief Scientist: Yosaku Maeda (JAMSTEC)

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**Information of the Submersibles**  
[KAIKO](#)  
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[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 \(CLOW\)](#)  
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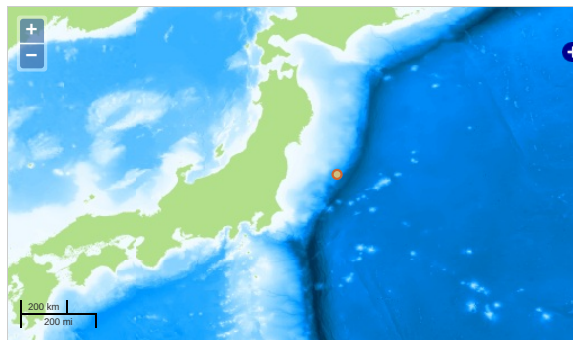
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### Observation Map

1. Clicking the icon displays a balloon with observation information.

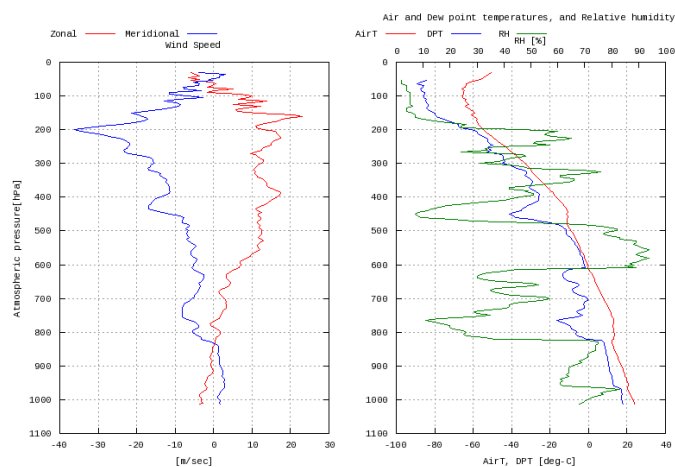


— ... Observation Line — ... Navigation ● ... Observation, Dive Point, Hole

Imagery reproduced from ...

### Figures

MR09-02 Leg2: Radiosonde



### Data List

File names

☐ 09081906.dat

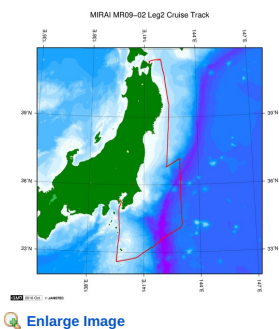
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