

MIRAI MR05-03 Leg3 Radiosonde

Last Modified: 2014-07-11

ReadMe Observation Data Data Format

Cruise ID: **MR05-03 Leg3**

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/MR05-03_leg1-3_all.pdf

For Using Data

Principal Investigator

Data Management Office

Use Constraints

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

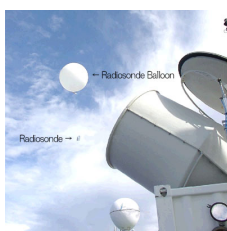
Data Citation

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

Instrument

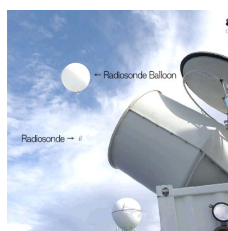
Instrument:

Radiosonde (MR11-03 - MR15-E01
Leg3)



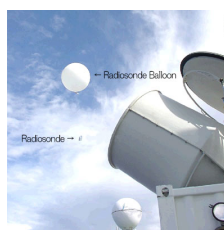
Instrument:

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[%]	
05082706.dat	2005/08/27	05:30	14.42N	136.01E	304370219	947	0.58	-0.06	-1.46	-	RS80-G
05082712.dat	2005/08/27	11:30	15.92N	136.15E	234505701	1100	4.50	0.11	3.19	-	RS80-G
05082718.dat	2005/08/27	17:30	17.39N	136.28E	234310705	1102	4.12	-0.36	3.17	-	RS80-G
05082800.dat	2005/08/27	23:30	18.85N	136.53E	234505813	1100	5.07	-0.04	2.35	-	RS80-G
05082900.dat	2005/08/28	23:30	23.50N	136.83E	234505815	1101	4.72	-0.30	2.70	-	RS80-G

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.

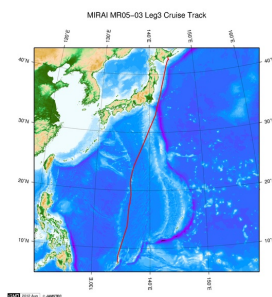
K. Yoneyama, M.fujita, N.Sato, M.Fujiwara, Y.Inai, and F.Hasebe, 2008:Correction for Radiation Dry Bias Found in RS92 Radiosonde Data during the MISMO Field Experiment.[PDF:400kbyte] SOLA, Vol.4, 13-16.

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



[Enlarge Image](#)

MR05-03 Leg3

Ship Name: MIRAI
Period: 2005-08-25 - 2005-09-05
Chief Scientist: Shuichi Mori (JAMSTEC)
Project Name: [Tropical Ocean Climate Study (TOCS)]

Update History

2014-07-11	An observation data was registerd.
2014-06-13	An observation data was registerd.
2012-11-25	An observation data was registerd.

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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

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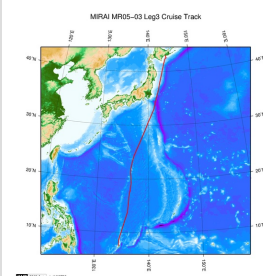
Radiosonde: Processed (DMO)-Corrected

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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

Related Information



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POWER GRAB SAMPLER (SHELL)

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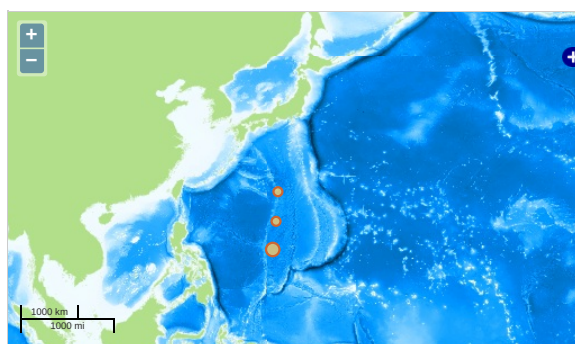
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Observation Map

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

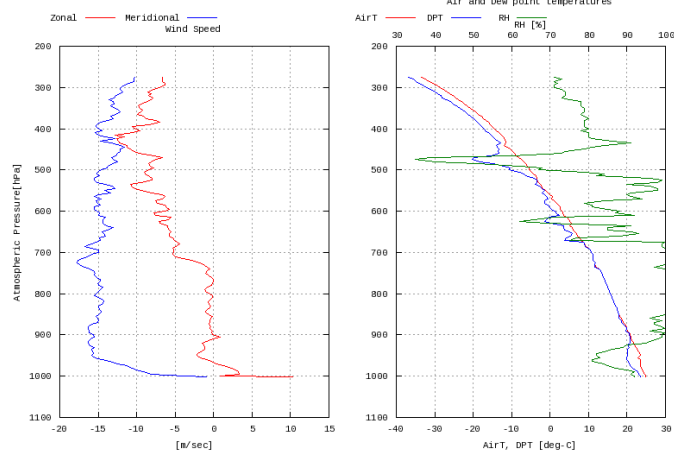


— ... Observation Line — ... Navigation ● ... Observation, Dive Point, Hole

Figures

05082706

MR05-03 Leg3: 05082706
Radiosonde



Data List

☐ File names

☐ 05082706.dat

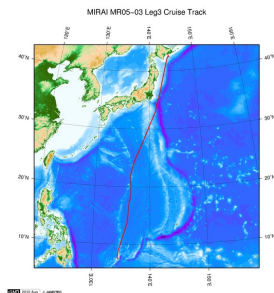
☐ 05082712.dat

☐ 05082718.dat

☐ 05082800.dat

☐ 05082900.dat

Related Information



 [Enlarge Image](#)

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