

MIRAI MR04-05 Radiosonde

Last Modified: 2014-07-11

ReadMe Observation Data Data Format

Cruise ID: **MR04-05**

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/MR04-05_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)



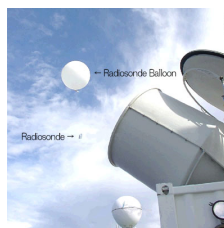
Instrument:

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[%]	
04090412.dat	2004/09/04	11:29	68.01N	168.81W	Z2547058	78	0.49	-0.16	-0.71	-0.72	
04090500.dat	2004/09/04	23:28	70.36N	167.16W	Z2547056	79	0.37	-0.34	-0.35	0.34	
04090512.dat	2004/09/05	11:33	70.63N	166.21W	Z2547055	80	0.34	-0.20	-0.23	-0.25	
04090600.dat	2004/09/05	23:28	71.49N	168.47W	Z2547057	80	0.35	-0.13	-0.32	-0.32	
04090612.dat	2004/09/06	11:29	72.93N	165.68W	Z2547062	81	0.29	-0.14	-0.36	-0.36	
04090712.dat	2004/09/07	11:59	73.96N	157.90W	Z2547061	82	0.54	-0.22	-0.34	-0.34	
04090800.dat	2004/09/07	23:39	74.49N	158.07W	Z2447109	88	0.28	-0.22	0.28	0.29	
04090812.dat	2004/09/08	11:40	73.90N	160.00W	Z2447093	89	0.26	-0.18	0.20	0.19	Snow
04090900.dat	2004/09/08	23:30	74.50N	163.16W	Z2447098	89	0.29	-0.17	0.18	0.18	Data acquisition: 130m
04090912.dat	2004/09/09	11:30	75.00N	168.70W	Z2447097	90	0.23	-0.17	0.32	0.25	

04091000.dat	2004/09/09	23:29	74.83N	172.03W	Z2447090	90	1.13	-0.18	0.14	0.12	Snow
04091012.dat	2004/09/10	11:29	75.25N	174.00W	Z2447091	91	0.11	-0.18	0.23	0.18	
Data file	2004/09/10	23:41	76.00N	174.01W	Z2447094	91	0.3	Air temperature[deg C]	0.2	Relative humidity1[%]	Relative humidity2[%]
04091100.dat	2004/09/10	11:29	75.73N	176.51W	Z2447095	92	0.3	Atmospheric pressure[hPa]	0.2	Relative humidity1[%]	Relative humidity2[%]
04091112.dat	2004/09/11	11:29	75.73N	176.51W	Z2447095	92	0.3	Atmospheric pressure[hPa]	0.2	Relative humidity1[%]	Relative humidity2[%]
04091200.dat	2004/09/11	23:29	75.19N	178.09W	Z2447092	92	0.10	-0.20	0.24	0.19	
04091212.dat	2004/09/12	11:30	75.22N	179.91W	Z2447089	93	0.24	-0.18	0.23	0.22	
04091300.dat	2004/09/12	23:34	76.06N	179.63W	Z2227156	109	0.05	-0.12	0.03	-0.16	
04091312.dat	2004/09/13	11:29	76.16N	175.14W	Z2227161	110	0.11	-0.12	0.00	-0.18	
04091400.dat	2004/09/13	23:29	75.68N	170.58W	Z2437319	95	-0.04	-0.14	-0.18	0.32	
04091412.dat	2004/09/14	11:29	75.45N	168.92W	Z2437318	96	-0.25	-0.16	-0.02	-0.09	
04091500.dat	2004/09/14	23:29	74.13N	165.82W	Z2227160	111	0.20	-0.07	0.15	0.08	
04091512.dat	2004/09/15	11:29	71.13N	165.84W	Z1827087	140	0.27	-0.15	-0.01	-0.03	
04091600.dat	2004/09/15	23:29	71.49N	168.84W	Z2447099	96	0.19	-0.17	0.26	0.22	Snow
04091612.dat	2004/09/16	11:29	73.75N	168.85W	Z2447100	97	0.18	-0.19	0.28	0.26	Snow
04091700.dat	2004/09/16	23:29	75.92N	169.97W	Z2447107	97	0.22	-0.26	0.25	0.21	
04091712.dat	2004/09/17	11:30	75.50N	163.34W	Z2447110	98	0.15	-0.22	0.19	0.15	Snow
04091800.dat	2004/09/17	23:50	76.39N	165.08W	Z2447101	98	0.24	-0.17	0.22	0.23	
04091812.dat	2004/09/18	11:29	75.67N	168.00W	Z2447102	99	0.17	-0.23	0.23	0.21	
04091900.dat	2004/09/18	23:29	76.37N	169.17W	Z2447087	99	0.27	-0.29	0.25	0.25	
04091912.dat	2004/09/19	11:39	75.92N	163.94W	Z2447113	100	0.15	-0.14	0.19	0.17	Snow
04092000.dat	2004/09/19	23:29	75.92N	159.54W	Z2447111	100	0.09	-0.14	0.15	0.14	
04092012.dat	2004/09/20	11:29	75.05N	159.15W	Z2227185	117	0.02	-0.11	0.07	0.11	
04092100.dat	2004/09/20	23:29	75.00N	155.99W	Z2227176	117	0.03	-0.13	-0.02	-0.03	
04092112.dat	2004/09/21	11:29	74.50N	154.00W	Z2437317	103	-0.11	-0.11	-0.14	-0.09	
04092200.dat	2004/09/21	23:29	73.61N	151.99W	Z2227167	118	-0.12	-0.13	-0.05	-0.06	Snow
04092212.dat	2004/09/22	11:31	73.26N	153.00W	Z2447114	103	0.52	-0.21	0.19	0.18	
04092300.dat	2004/09/22	23:29	74.01N	156.04W	Z2227171	119	-0.03	-0.14	0.08	-0.06	
04092312.dat	2004/09/23	11:29	74.86N	159.43W	Z2227188	120	0.11	-0.16	0.13	-0.16	Snow
04092400.dat	2004/09/23	23:29	75.00N	163.76W	Z2227237	120	0.07	-0.16	-0.06	-0.05	Snow
04092412.dat	2004/09/24	11:29	74.14N	165.54W	Z2227276	121	-0.03	-0.11	0.10	0.09	
04092500.dat	2004/09/24	23:30	73.97N	167.58W	Z2227236	121	0.03	-0.15	0.14	0.10	
04092512.dat	2004/09/25	11:30	73.83N	163.42W	Z2227076	122	0.31	-0.18	-0.11	-0.11	Snow
04092600.dat	2004/09/25	23:39	73.25N	160.35W	Z2227258	122	-0.06	-0.13	-0.07	-0.09	
04092612.dat	2004/09/26	11:29	72.31N	156.68W	Z2217015	123	0.21	-0.09	-0.09	-0.11	
04092700.dat	2004/09/26	23:09	71.63N	153.83W	Z2447108	108	-0.12	-0.22	0.16	0.16	
04092712.dat	2004/09/27	11:59	72.70N	157.30W	Z2447112	108	0.29	-0.18	0.33	0.27	
04092900.dat	2004/09/28	23:29	71.69N	152.59W	Z2447105	109	-0.04	-0.23	0.20	0.18	Snow
04092912.dat	2004/09/29	11:29	71.98N	149.99W	Z2227254	126	-0.01	-0.10	-0.07	-0.07	
04093000.dat	2004/09/29	23:29	72.48N	153.82W	Z2447119	110	0.10	-0.16	0.15	0.16	
04093012.dat	2004/09/30	11:30	73.25N	157.00W	Z2447118	111	0.08	-0.13	0.16	0.15	
04093018.dat	2004/09/30	18:09	73.49N	158.18W	Z2447117	111	-0.03	-0.12	0.03	-0.01	
04100100.dat	2004/09/30	23:20	73.09N	157.66W	402714400	261	0.46	-0.10	-0.26	-	RS80-15GH
04100112.dat	2004/10/01	11:09	72.34N	154.66W	402714612	262	0.29	-0.25	0.26	-	RS80-15GH
04100200.dat	2004/10/01	23:27	71.75N	150.96W	402714404	262	0.55	-0.50	-0.44	-	RS80-15GH
04100212.dat	2004/10/02	11:29	71.46N	148.00W	402714408	263	0.45	-0.18	0.33	-	RS80-15GH
04100300.dat	2004/10/02	23:59	71.18N	145.00W	402714608	263	0.37	-0.42	-0.55	-	RS80-15GH
04100312.dat	2004/10/03	11:19	71.03N	147.00W	402714604	264	0.64	-0.25	-0.23	-	RS80-15GH
04100400.dat	2004/10/03	23:19	71.38N	151.00W	402714600	264	0.47	-0.48	-0.14	-	RS80-15GH
04100412.dat	2004/10/04	11:29	71.70N	156.32W	402714712	265	0.40	-0.11	0.04	-	RS80-15GH
04100500.dat	2004/10/04	23:30	71.16N	158.14W	402714714	265	-0.02	-0.49	-0.87	-	RS80-15GH
04100512.dat	2004/10/05	11:50	72.47N	157.93W	402714713	266	0.35	-0.30	-0.38	-	RS80-15GH
04100600.dat	2004/10/05	23:29	73.50N	159.34W	402714709	266	0.13	-0.33	-0.43	-	RS80-15GH
04100612.dat	2004/10/06	10:59	74.59N	160.51W	402714715	267	0.50	-0.39	-0.32	-	RS80-15GH
04100700.dat	2004/10/06	23:29	73.80N	161.66W	402714710	267	0.37	-0.22	-0.92	-	RS80-15GH
04100712.dat	2004/10/07	11:29	71.52N	162.02W	402714711	268	0.09	-0.20	0.45	-	RS80-15GH
04100800.dat	2004/10/07	23:29	69.35N	166.12W	402714705	268	0.40	-0.36	-1.62	-	RS80-15GH
04100812.dat	2004/10/08	11:50	68.40N	168.84W	402714706	269	0.50	-0.19	-0.08	-	RS80-15GH

Reference

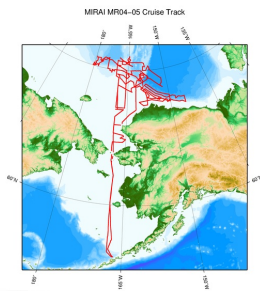
- K. Yoneyama, M.Hanyu, S.Sueyoshi, F.Yoshiura, and M.Katsumata, 2002:Radiosonde observation from the ship in the tropical region.[PDF:400kbyte] JAMSTECR, Vol.45, 31-39.
- K. Yoneyama, M.fujita, N.Sato, M.Fujiwara, Y.Inai, and F.Hasebe, 2008:Correction for Radiation Dry Bias Found in RS92 Radiosonde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

Others

- Main processor: DigiCORAIⅢ. 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](#)

MR04-05

Ship Name: MIRAI

Period: 2004-09-01 - 2004-10-13

Chief Scientist: Koji Shimada (JAMSTEC)

Project Name: [Arctic Ocean Climate System Reaserch]

Update History

2014-07-11	An observation data was registerd.
2014-06-13	An observation data was registerd.
2014-03-13	An observation data was registerd.
2012-11-25	An observation data was registerd.

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[POWER GRAB SAMPLER \(CLOW\)](#)

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Go to a Cruise Information

Cruise ID:

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Dive ID:

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MIRAI MR04-05 Radiosonde

Last Modified: 2014-07-11

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Cruise ID: [MR04-05](#)

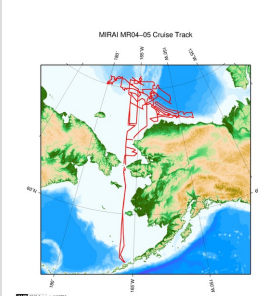
Radiosonde: Processed (DMO)-Corrected

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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



MR04-05

Ship Name: MIRAI

Period: 2004-09-01 - 2004-10-13

Chief Scientist: Koji Shimada (JAMSTEC)

Project Name: [Arctic Ocean Climate System Research]

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2014-07-11	An observation data was registerd.
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Cruise ID:

Go to a Dive Information

Dive ID:

MIRAI MR04-05 Radiosonde

Last Modified: 2014-07-11

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Cruise ID: [MR04-05](#)

Radiosonde: Processed (DMO)-Corrected

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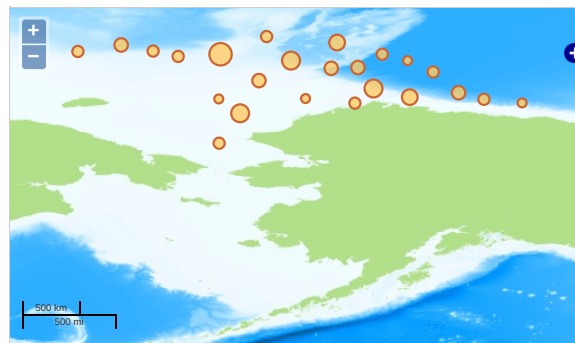
Observation Items: Atmospheric pressure, Air temperature, Dew point temperature, Relative humidity, Wind speed (zonal, meridional), Height

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

Observation Map

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

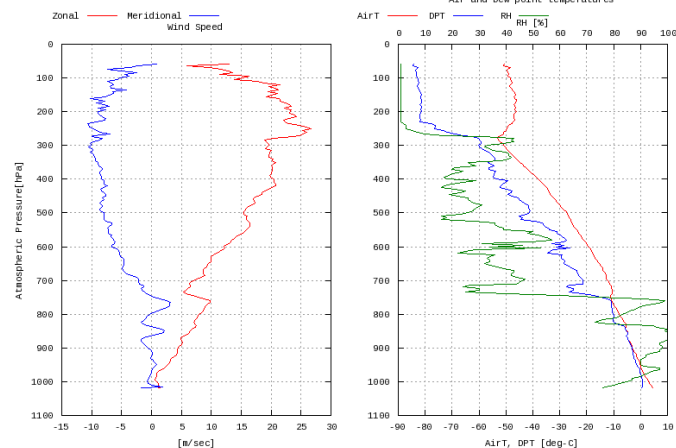


— ... Observation Line — ... Navigation ● ... Observation, Dive Point, Hole

Figures

04090412

MR04-05: 04090412
Radiosonde



Data List

☐ File names

☐ 04090412.dat

☐ 04090500.dat

☐ 04090512.dat

☐ 04090600.dat

☐ 04090612.dat

☐ 04090712.dat

☐ 04090800.dat

☐ 04090812.dat

☐ 04090900.dat

☐ 04090912.dat

☐ 04091000.dat

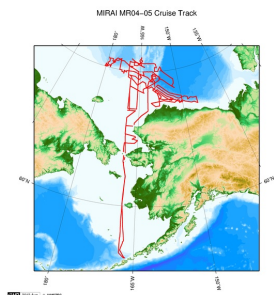
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☐ 04091100.dat

☐ 04091112.dat

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<input type="checkbox"/> 04100712.dat
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<input type="checkbox"/> 04100812.dat

Related Information



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MR04-05

Ship Name: MIRAI

Period: 2004-09-01 - 2004-10-13

Chief Scientist: Koji Shimada (JAMSTEC)

Project Name: [Arctic Ocean Climate System Reaserch]

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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 to a Dive Information

Dive ID:

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