

MIRAI MR16-09 Leg3 Marine Meteorology

Last Modified: 2018-01-30

[ReadMe](#)

[Observation
Data](#)

[Data Format](#)

Cruise ID: [MR16-09 Leg3](#)

Marine Meteorology: Processed (DMO)-Corrected

Data Policy: [JAMSTEC](#)

Observation Items: Atmospheric pressure, Air temperature, Dew point temperature, Relative humidity, Sea surface temperature, Zonal and meridional wind component, Precipitation, Shortwave radiation, Longwave radiation

Science Keywords:

ATMOSPHERE > ATMOSPHERIC PRESSURE > SEA LEVEL PRESSURE
ATMOSPHERE > ATMOSPHERIC RADIATION > LONGWAVE RADIATION
ATMOSPHERE > ATMOSPHERIC RADIATION > SHORTWAVE RADIATION
ATMOSPHERE > ATMOSPHERIC TEMPERATURE > AIR TEMPERATURE
ATMOSPHERE > ATMOSPHERIC WATER VAPOR > DEW POINT TEMPERATURE
ATMOSPHERE > ATMOSPHERIC WATER VAPOR > HUMIDITY
ATMOSPHERE > PRECIPITATION
OCEANS > OCEAN TEMPERATURE > SEA SURFACE TEMPERATURE
OCEANS > OCEAN WAVES > SIGNIFICANT WAVE HEIGHT
OCEANS > OCEAN WINDS > SURFACE WINDS

Cruise Report

http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR16-09_leg1-4_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.

Period (UTC)

2017-02-10 21:00 – 2017-03-03 07:00

Instrument

Instrument:

General maritime meteorological observation system

Instrument:

SOAR (Shipboard Oceanographic and Atmospheric Radiation)(- MR20-01)



Overview

"MIRAI meteorological integrated dataset" is a set of "suitably composed data" which consists of 10-minute-average corrected Atmospheric Pressure, Air Temperature, Relative Humidity, Wind Direction and Speed, Precipitation, Radiation, Sea Surface Temperature, and Wave Height observed by R/V MIRAI. The correction and processing method was produced by Dr. K. Yoneyama (IORGC/JAMSTEC) in cooperation with DMO. The actual data processing was conducted by DMO. See [here](#) for detailed correction and processing method.

Specifications

| Sensors | Type | Manufacturer | Location (from sea surface) |
|------------------------|-----------|---|--|
| Anemometer | 05106 | R.M. Young, USA | Foremast (25m) |
| Tair/RH | HMP155 | Vaisala, Finland with 43408 Gill aspired radiation shield R.M. Young, USA | Starboard and port side at compass deck (21m) |
| Thermometer (SST) | SBE-38 | Sea-Bird Electronics, USA | Bow thruster room (-4.5m) |
| Barometer | Model-370 | Setra System, USA | Weather observation room at captain deck (13m) |
| Rain gauge | 50202 | R.M. Young, USA | Foremast (24m) |
| Radiometer (shortwave) | PSP | Eppley, USA | Foremast (25m) |
| Radiometer (long-wave) | PIR | Eppley, USA | Foremast (25m) |
| Wave height meter | WM-2 | Tsurumi-Seiki, Japan | Bow (10m) |

Sensors information

Tair/RH sensor calibration date

Starboard side : 2016/05/10

Port side : 2016/07/14

Rain gauge calibration (Using the revision of rain data)

Minimum value (0.0 cc) : 0.86 mm

Maximum value (506.0 cc) : 50.21 mm

Date : 2017/02/05

Need raw data?

If you would like the raw data set, please contact us from "Contact Us" above.

Note

1) During the following period, PSP and PIR data are invalid due to the PRP system maintenance.

2017/02/27 08:00 - 2017/02/27 08:10

2017/02/27 17:40 - 2017/02/27 17:50

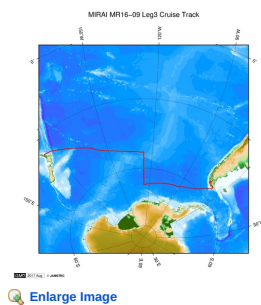
2017/02/27 23:30

2) About PSP calibration

Under the influence of SOAR PRP PSP sensor trouble that occurred during MR16-09 leg1 cruise, the PRP system configuration has been changed in comparison with the one when manufacturer calibration was done. As a result, the original shortwave radiation value that the PSP system outputs was incorrect. Shortwave radiation values available on this web site is a values corrected by using coefficients derived by self-calibration.

For details of the self-calibration result, please click [here](#).

Related Information



MR16-09 Leg3

Ship Name: MIRAI
Period: 2017-02-08 - 2017-03-04
Chief Scientist: Hiroshi Uchida (JAMSTEC)
Project Name: [POST-WOCE Hydrography]
Proposal ▶ Ship-borne measurements of aerosols in the marine atmosphere: Investigation of potential influence of marine aerosol particles on the climate;
Title:

Update History

| | |
|------------|-------------------------------------|
| 2018-01-30 | An observation data was registered. |
| 2017-12-26 | An observation data was registered. |
| 2017-10-21 | An observation data was registered. |

JAMSTEC
Site Policy
Privacy Policy
Application for Data and Samples
Data Policy
What's New
Update History
Feeds

Lists
Publication List
Amount of Public Info.
Data
Map Search
Data Tree
Detailed Search

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 to a Dive Information

Dive ID:

Copyright 2011 Japan Agency for Marine-Earth Science and Technology



JAMSTEC
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

国立研究開発法人
海洋研究開発機構

MIRAI MR16-09 Leg3 Marine Meteorology

Last Modified: 2018-01-30

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

Cruise ID: [MR16-09 Leg3](#)

Marine Meteorology: Processed (DMO)-Corrected

Data Policy: [JAMSTEC](#)

Meteorology Corrected

Single space separated.

| No. | Column | Content | Unit | format (nodata or baddata) | Remarks |
|-----|---------|----------------------------------|--------|-------------------------------|---|
| 1 | 1-12 | Date and time [YYYYMMDDhhmm] | | i12 | Every 10 minutes* * Time stamp is set at the end of average |
| 2 | 14-21 | Julian day [DDD.DDDD] | | f8.4 | Every 10 minutes* |
| 3 | 23-29 | Longitude [0 to 360] | degree | f7.3 (999.999) | Location at time stamp East longitude |
| 4 | 31-37 | Latitude [-90 to 90] | degree | f7.3 (999.999) | Location at time stamp +: North latitude -: South latitude |
| 5 | 39-44 | Atmospheric pressure | hPa | f6.1 (9999.9) | 10-minute mean* |
| 6 | 46-50 | Air temperature | deg-C | f5.1 (999.9) | 10-minute mean* Data is selected on the windward side |
| 7 | 52-56 | Dewpoint temperature | deg-C | f5.1 (999.9) | 10-minute mean* Calculated from 'Air temperature' and 'Relative humidity' using WMO's Formula(**) for liquid water ** WMO-No.8 (Guide to Meteorological Instruments and Methods of Observation) |
| 8 | 58-62 | Relative humidity | % | f5.1 (999.9) | 10-minute mean* Data is selected on the windward side |
| 9 | 64-70 | Sea surface temperature (SST) | deg-C | f7.4 (99.9999) | 10-minute mean* From EPCS/TSG |
| 10 | 72-76 | Wind speed (zonal) | m/sec | f5.1 (999.9) | 10-minute mean* No anemometer height adjustment |
| 11 | 78-82 | Wind speed (meridional) | m/sec | f5.1 (999.9) | 10-minute mean* No anemometer height adjustment |
| 12 | 84-89 | Rainfall intensity | mm/hr | f6.2 (999.99) | 10-minute mean* |
| 13 | 91-96 | Short wave radiation | W/m2 | f6.1 (9999.9) | 10-minute mean* |
| 14 | 98-102 | Long wave radiation | W/m2 | f5.1 (999.9) | 10-minute mean* |
| 15 | 104-108 | Significant wave height | m | f5.2 (99.99) | Calculated every an hour Calculated every 3 hours, before March 2003 |
| 16 | 110-114 | Wave period | second | f5.2 (99.99) | Calculated every an hour Calculated every 3 hours, before March 2003 |

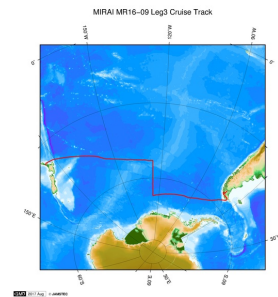
Data Example

```

YYYYMMDDhhmm DDD.DDDD Lon Lat Press AT DT RH SST WindU WindV Rain SWR LWR WH WP
200611290000 333.0000 77.314 2.715 1009.2 27.6 23.7 79.2 28.8732 -2.5 -1.6 0.00 0.0 388.1 0.94 7.69
200611290010 333.0070 77.346 2.703 1009.3 27.6 23.7 79.3 28.8931 -2.3 -1.1 0.00 0.0 388.3 0.96 7.92
200611290020 333.0139 77.378 2.692 1009.5 27.6 23.8 79.8 28.8957 -2.0 -0.5 0.00 0.0 387.7 0.96 7.92
200611290030 333.0208 77.410 2.681 1009.6 27.6 23.7 79.1 28.9206 -2.3 -1.0 0.00 0.0 388.0 0.96 7.92
200611290040 333.0278 77.442 2.670 1009.7 27.7 23.6 78.6 28.9477 -2.4 -0.7 0.00 0.0 386.7 0.96 7.92
200611290050 333.0347 77.474 2.658 1009.9 27.7 23.8 79.3 28.9166 -2.7 -1.2 0.00 2.4 390.7 0.96 7.92
200611290100 333.0417 77.506 2.647 1010.1 27.7 23.7 79.1 28.8948 -3.0 -1.5 0.00 12.6 390.8 0.96 7.92

```

Related Information



[Enlarge Image](#)

MR16-09 Leg3

Ship Name: MIRAI

Period: 2017-02-08 - 2017-03-04

Chief Scientist: Hiroshi Uchida (JAMSTEC)

Project Name: [POST-WOCE Hydrography]

Proposal [►](#) Ship-borne measurements of aerosols in the marine atmosphere: Investigation of potential influence of marine aerosol particles on the climate;

Update History

| | |
|------------|------------------------------------|
| 2018-01-30 | An observation data was registerd. |
| 2017-12-26 | An observation data was registerd. |
| 2017-10-21 | An observation data was registerd. |

JAMSTEC
Site Policy
Privacy Policy
Application for Data and Samples
Data Policy

What's New
Update History
Feeds

Lists
Publication List
Amount of Public Info.

Data
Map Search
Data Tree
Detailed Search

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 to a Dive Information

Dive ID:

Copyright 2011 Japan Agency for Marine-Earth Science and Technology



JAMSTEC
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

国立研究開発法人
海洋研究開発機構

MIRAI MR16-09 Leg3 Marine Meteorology

Last Modified: 2018-01-30

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

Cruise ID: [MR16-09 Leg3](#)

Marine Meteorology: Processed (DMO)-Corrected

Data Policy: [JAMSTEC](#)

Observation Items: Atmospheric pressure, Air temperature, Dew point temperature, Relative humidity, Sea surface temperature, Zonal and meridional wind component, Precipitation, Shortwave radiation, Longwave radiation

Science Keywords:

| | | |
|------------|---------------------------|---------------------------|
| ATMOSPHERE | > ATMOSPHERIC PRESSURE | > SEA LEVEL PRESSURE |
| ATMOSPHERE | > ATMOSPHERIC RADIATION | > LONGWAVE RADIATION |
| ATMOSPHERE | > ATMOSPHERIC RADIATION | > SHORTWAVE RADIATION |
| ATMOSPHERE | > ATMOSPHERIC TEMPERATURE | > AIR TEMPERATURE |
| ATMOSPHERE | > ATMOSPHERIC WATER VAPOR | > DEW POINT TEMPERATURE |
| ATMOSPHERE | > ATMOSPHERIC WATER VAPOR | > HUMIDITY |
| ATMOSPHERE | > PRECIPITATION | |
| OCEANS | > OCEAN TEMPERATURE | > SEA SURFACE TEMPERATURE |
| OCEANS | > OCEAN WAVES | > SIGNIFICANT WAVE HEIGHT |
| OCEANS | > OCEAN WINDS | > SURFACE WINDS |

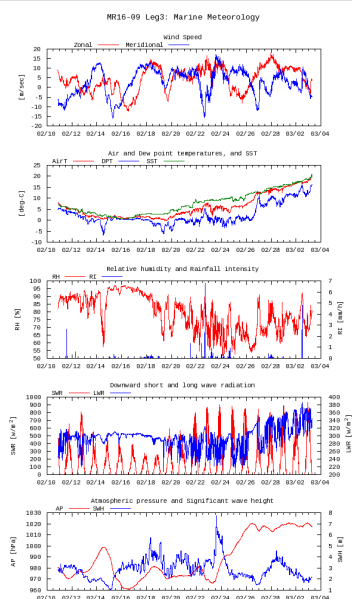
Observation Map



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

Imagery reproduced from ...

Figures



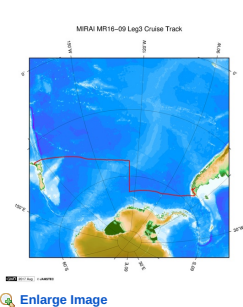
Data List

[Add to Basket](#)

File names

☐ MR16-09_leg3.dat

Related Information



[Enlarge Image](#)

MR16-09 Leg3

Ship Name: MIRAI

Period: 2017-02-08 - 2017-03-04

Chief Scientist: Hiroshi Uchida (JAMSTEC)

Project Name: [POST-WOCE Hydrography]

Proposal ▶ Ship-borne measurements of aerosols in the marine atmosphere: Investigation of potential influence of marine aerosol particles on the climate;

Title:

Update History

| | |
|------------|------------------------------------|
| 2018-01-30 | An observation data was registerd. |
| 2017-12-26 | An observation data was registerd. |
| 2017-10-21 | An observation data was registerd. |

JAMSTEC

Site Policy

Privacy Policy

Application for Data and Samples

Data Policy

What's New

Update History

Feeds

Lists

Publication List

Amount of Public Info.

Data

Map Search

Data Tree

Detailed Search

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

Copyright 2011 Japan Agency for Marine-Earth Science and Technology



JAMSTEC

国立研究開発法人
海洋研究開発機構
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY