

MIRAI MR04-05 Marine Meteorology

Last Modified: 2019-02-28

ReadMe Observation Data Data Format

Cruise ID: **MR04-05**

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/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.

Period (UTC)

2004-09-01 18:00 – 2004-10-12 18:30

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 | HMP45A | Vaisala, Finland with 43408 Gill aspired radiation shield R.M. Young, USA | Starboard and port side at compass deck (21m) |
| Thermometer (SST) | SBE 3S | Sea-Bird Electronics, USA | Bow thruster room (-4.5m) |
| Barometer | F451 | Yokogawa, Japan | Weather observation room at captain deck (14m) |
| Rain guage | 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 : 2004/04/12

Port side : 2004/04/12

Rain guage calibration (Using the revision of rain data)

Minimum value (0.0 cc) : 0.61 mm

Maximum value (511.0 cc) : 51.01 mm

Date : 2004/08/30

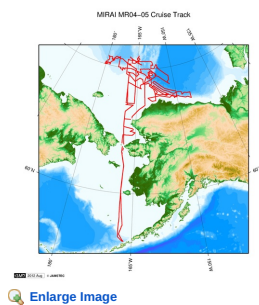
Need raw data?

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

Note

Temperature correction of SOAR PRP long wave radiometer is ineffective in low temperature environment (about -6 deg-C or less). Therefore, long wave radiation amount (PIR) data is invalid in these periods.

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]

Update History

| | |
|------------|-------------------------------------|
| 2019-02-28 | An observation data was registered. |
| 2014-07-24 | An observation data was registered. |
| 2012-11-25 | An observation data was registered. |

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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 |

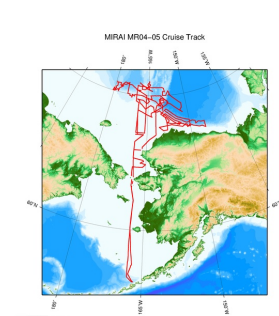
Data Example

```

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



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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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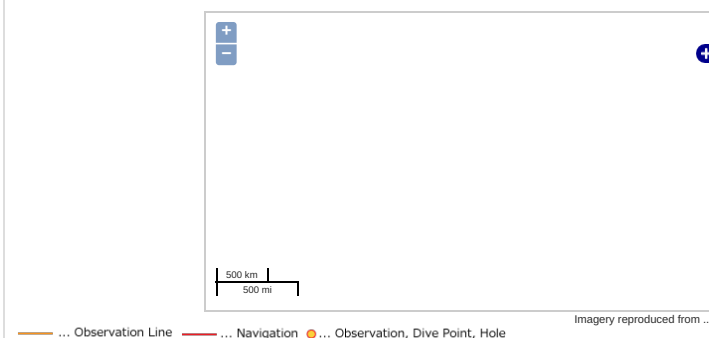
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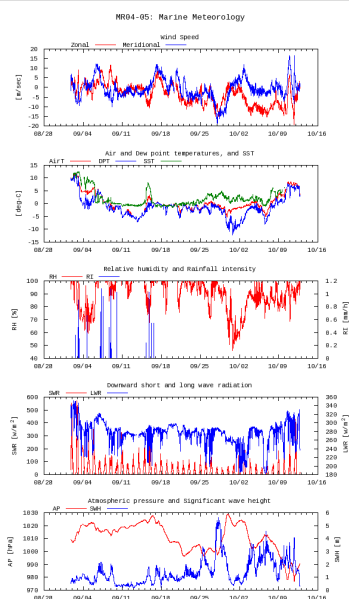
Science Keywords:

| | | |
|------------|---------------------------|---------------------------|
| ATMOSPHERE | > ATMOSPHERIC PRESSURE | > SEA LEVEL PRESSURE |
| ATMOSPHERE | > ATMOSPHERIC RADIATION | > LONGWAVE RADIATION |
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Observation Map



Figures



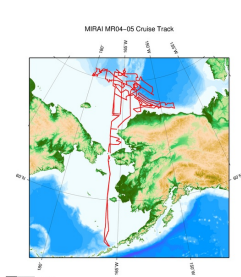
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File names

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