

MIRAI MR20-E01 Marine Meteorology

Last Modified: 2021-04-30

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Cruise ID: [MR20-E01](#)

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/MR20-E01_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)

2020-08-01 00:00 – 2020-09-13 22:50

Instrument

Instrument:

General maritime meteorological observation system

Instrument:

SOAR (Shipboard Oceanographic and Atomospheric Radiation)(MR20-03 -)



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 with 43408 Gill aspired radiation shield	Vaisala, Finland 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)	SR20 with VU01 ventilation unit*1	Hukseflux, The Netherlands	Foremast (25m)
Radiometer (long-wave)	IR20 with VU01 ventilation unit*1	Hukseflux, The Netherlands	Foremast (25m)
Wave height meter	WM-2	Tsurumi-Seiki, Japan	Bow (10m)

*1 used only in cold regions to prevent dew and frost formation on the radiometer sensors.

Sensors information

Tair/RH sensor calibration date

Starboard side : 2019/10/28

Port side : 2020/01/20

Rain gauge calibration (Using the revision of rain data)

Minimum value (0.0 cc) : -0.16 mm

Maximum value (505.0 cc) : 49.71 mm

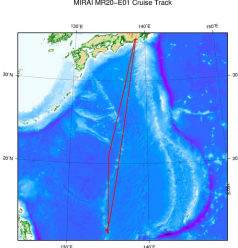
Date : 2020/07/27

Ventilation units (VU01) of short and long-wave radiometer are not used in this cruise.

Need raw data?

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

Related Information



MIRAI MP20-E01 Cruise Track

MR20-E01


Ship Name: MIRAI

Period: 2020-08-01 - 2020-09-13

Chief Scientist: Satoru Yokoi (JAMSTEC)

Proposal ▶ Study on air-sea interaction associated with the northward-propagating boreal summer intraseasonal oscillation

Title:

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Update History	
2021-04-30	An observation data was registerd.

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SHINSEI MARU

HAKUHO MARU

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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)

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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

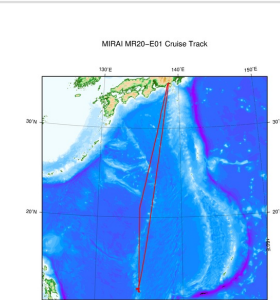
Data Example

```

YYYYMMDDhhmm DDD.DDDD Lon Lat Press AT DT RH SST WindU WindV Rain SWR LWR WH WP
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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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MR20-E01

Ship Name: MIRAI

Period: 2020-08-01 - 2020-09-13

Chief Scientist: Satoru Yokoi (JAMSTEC)

Proposal ▶ Study on air-sea interaction associated with the northward-propagating boreal summer

Title: intraseasonal oscillation

Update History

2021-04-30 An observation data was registered.

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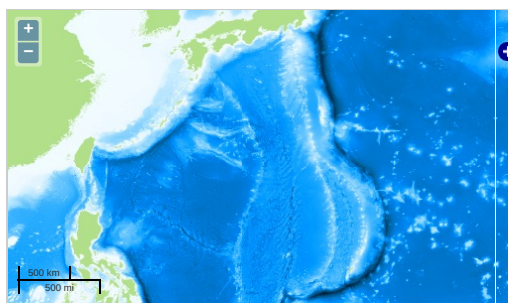
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Science Keywords:

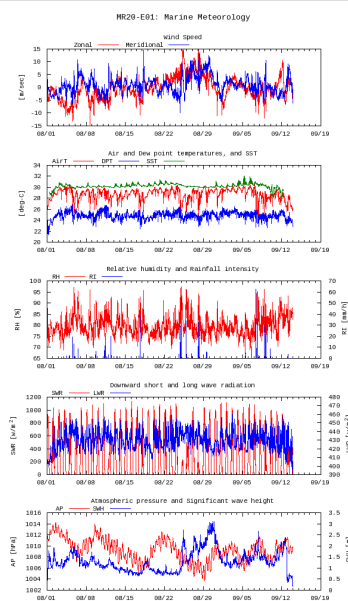
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ATMOSPHERE	> ATMOSPHERIC RADIATION	> LONGWAVE RADIATION
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OCEANS	> OCEAN WINDS	> SURFACE WINDS

Observation Map



Imagery reproduced from ...

Figures



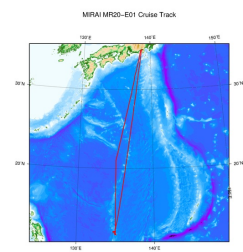
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File names

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Chief Scientist: Satoru Yokoi (JAMSTEC)

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