# MIRAI MR14-06 Leg1 Doppler Radar

Last Modified: 2017-02-21

ReadMe

**Cruise ID**: MR14-06 Leg1
**Doppler Radar**: Raw
**Data Policy**: JAMSTEC
**Observation Items**: Reflectivity, Doppler velocity
**Science Keywords**:

| | | |
|---|---|---|
| ATMOSPHERE | > PRECIPITATION | |
| ATMOSPHERE | > CLOUDS | |
| ATMOSPHERE | > ATMOSPHERIC WINDS | |
| SPECTRAL/ENGINEERING | > RADAR | > DOPPLER VELOCITY |
| SPECTRAL/ENGINEERING | > RADAR | > RADAR REFLECTIVITY |

**Cruise Report**
http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR14-06_leg1_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:
Doppler radar (MR14-04 Leg1 -)

### Specifications

**Doppler radar**

| | |
|---|---|
| Manufacturer/model: | Toshiba Co., Japan/ TW4419A |
| Frequency: | 5370MHz（C-band） |
| Transmitter: | Solid-state transmitter |
| Pulse configration : | Using pulse-compression |
| Polarimetry: | Horizontal and vertical |
| Peak power: | 6kW(H) + 6kW(V) |
| Antenna diameter | 4m |
| Beam angle: | 1.0degree |
| Location (from sea surface): | 24m （center position of antenna） |

**Inertial navigation system**

| | |
|---|---|
| Manufacturer/model: | iXBlue SAS, France / PHINS |
| Location (from sea surface): | 21m |

### Parameter

**Surveillance Scan**

| | |
|---|---|
| Scan Interval [min] : | 30 |
| Elevations[deg] : | 0.5 |
| Pulse width (short/long) [μs] : | 2 / 200 |
| Scan speed [deg/sec] : | 36 |
| PRF*1 [Hz] : | 400 |
| Sweep integration (Pulse /Ray) : | 8 samples |
| Ray spacing [deg] : | 0.7 |
| Bin spacing [m] : | 150 |
| Max. range [km] : | 300 |

**Volume Scan**

| | | | | | | |
|---|---|---|---|---|---|---|
| Scan interval [min] : | 6 | | | | | |
| Elevations[deg] : | 0.5 | | 1.0, 1.7, 2.4, 3.1, 3.8, 4.6, 5.6, 6.7, 8.2, 10.3, 12.8, 15.8 | | 19.4, 23.6, 28.4, 33.7, 40.0 | |
| Pulse width (short/long) [μs] : | 1 / 64 | | 1 / 32 | | 1 / 32 | |
| Scan speed [deg/sec] : | 18 | | 24 | | 36 | |
| PRF*1[Hz] | dual PRF (ray alternative)*2 | | | | | |
| | 667 | 833 | 938 | 1250 | 1333 | 2000 |
| Sweep integration (Pulse /Ray) | 26 samples | 33 samples | 27 samples | 34 samples | 37 samples | 55 samples |
| Ray spacing [deg] : | 0.7 | | 0.7 | | 1.0 | |

| | | | |
|---|---|---|---|
| Bin spacing [m] : | 150 | | |
| Max. range [km] : | 150 | 100 | 60 |

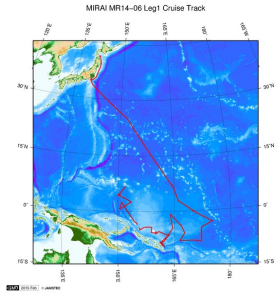
*1 Pulse Repetition Frequency

*2 During this cruise, the data were measured with the dual-PRF mode. Therefore, unfolding of Doppler velocity was applied automatically.

**Need raw data?**

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

## Related Information




Enlarge Image

**MR14-06 Leg1**
Ship Name: MIRAI
Period: 2014-11-04 - 2014-12-17
Chief Scientist: Daisuke Suetsugu (JAMSTEC)
Proposal Title: Study of structure and formation process of the Ontong Java Plateau

## Update History

2017-02-21 An observation data was registerd.

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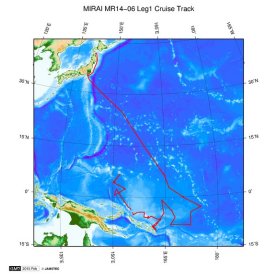


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Application for Data and Samples
Data Policy

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MIRAI
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KAIMEI
SHINSEI MARU
HAKUHO MARU

**Information of the Submersibles**
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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)
BMS

**Go to a Cruise Information**
Cruise ID: Go

**Go to a Dive Information**
Dive ID: ---- Go



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

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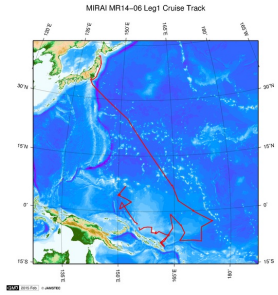


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