

## MIRAI MR17-08 Leg1 Doppler Radar

Last Modified: 2020-01-21

### ReadMe

Cruise ID: [MR17-08 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/MR17-08\\_leg1-2\\_all.pdf](http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR17-08_leg1-2_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 configuration : 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] :	18
PRF*1 [Hz] :	400
Sweep integration (Pulse /Ray) :	16 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, 1.8, 2.6, 3.4, 4.2, 5.1, 6.2, 7.6, 9.7, 12.2, 15.2	18.7, 23.0, 27.9 33.5, 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

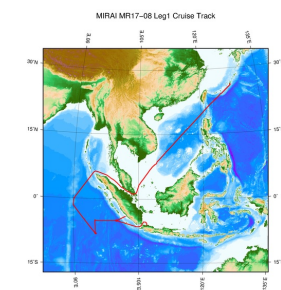
\*1 Pulse Repetition Frequency

\*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



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#### MR17-08 Leg1

Ship Name: MIRAI

Period: 2017-11-11 - 2018-01-04

Chief Scientist: Satoru Yokoi (JAMSTEC)

Project Name: [Tropical Ocean Climate Study (TOCS)]

Proposal ▶ Study on air-sea interaction over upwelling region in the eastern Indian Ocean

Title:

#### Update History

2020-01-21 An observation data was registered.

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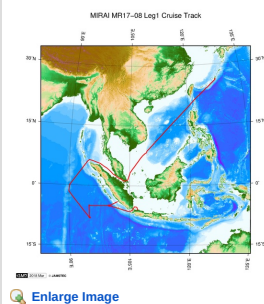
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 Chief Scientist: Satoru Yokoi (JAMSTEC)  
 Project Name: [Tropical Ocean Climate Study (TOCS)]  
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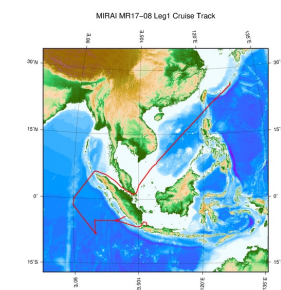
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