

MIRAI MR16-09 Leg3 Doppler Radar

Last Modified: 2019-03-28

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

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/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.

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

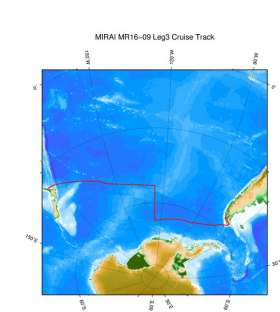
*1 Pulse Repetition Frequency

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

Need raw data?

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Related Information



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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

2019-03-28 An observation data was registerd.

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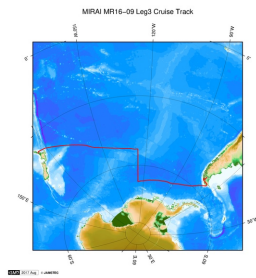
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Ship Name: MIRAI
Period: 2017-02-08 - 2017-03-04
Chief Scientist: Hiroshi Uchida (JAMSTEC)
Project Name: [POST-WOCE Hydrography]
Proposal ▶ Ship-borne measurements of aerosols in the marine atmosphere: Investigation of potential
Title: influence of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

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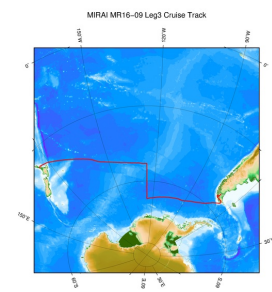
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