MIRAI MR18-04 Leg1 Doppler Radar

Last Modified: 2020-10-31

ReadMe

Cruise ID: MR18-04 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/MR18-04_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 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

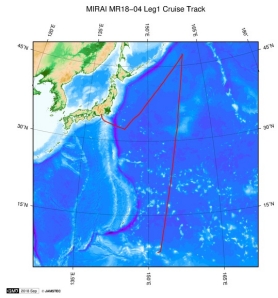
*1 Pulse Repetition Frequency

*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



Enlarge Image

MR18-04 Leg1
Ship Name: MIRAI
Period: 2018-07-19 - 2018-08-09
Chief Scientist: Tetsuichi Fujiki (JAMSTEC)
Project Name: [Station K2,Station KEO]
Proposal Title: The observational study to construct and to extend the "western Pacific super site network"

Update History

2020-10-31 An observation data was registerd.

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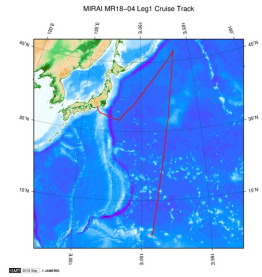

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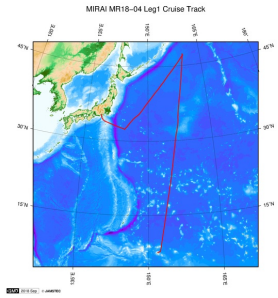

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