

MIRAI MR18-04 Leg2 Doppler Radar

Last Modified: 2020-10-31

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Cruise ID: [MR18-04 Leg2](#)

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_leg2_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(Mode1)

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

Volume Scan(Mode2)

Scan interval [min] :	6		
Elevations[deg] :	0.5	1.0, 1.8, 2.6, 3.4, 4.2, 5.0, 5.8, 6.8, 7.9, 9.2, 10.9, 13.1, 15.7	18.6, 21.9, 25.7, 30.0, 34.6, 40.0
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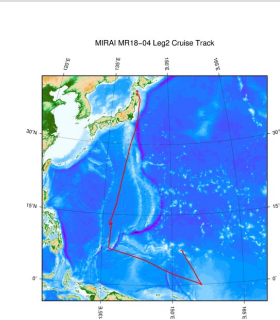
*1 Pulse Repetition Frequency

*2 本航海ではDualPRF観測をおこなっており、ドップラー速度の折り返し補正を適用している。

Need raw data?

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

Related Information



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MR18-04 Leg2

Ship Name: MIRAI

Period: 2018-08-12 - 2018-09-06

Chief Scientist: Masaki Katsumata (JAMSTEC)

Proposal The observational study to construct and extend the "western Pacific super site network"

Title:

Update History

2020-10-31	An observation data was registerd.
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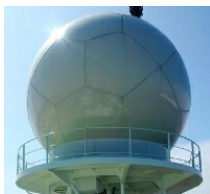
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Max. range [km] :	150		100		60	

Volume Scan(Mode2)

Scan interval [min] :	6					
Elevations[deg] :	0.5		1.0, 1.8, 2.6, 3.4, 4.2, 5.0, 5.8, 6.8, 7.9, 9.2, 10.9, 13.1, 15.7		18.6, 21.9, 25.7, 30.0, 34.6, 40.0	
Pulse width (short/long) [μs] :	1 / 64		1 / 32		1 / 32	
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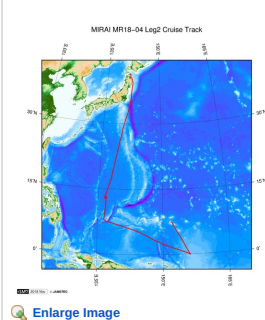
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Proposal Title: The observational study to construct and extend the "western Pacific super site network"

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Detailed Search

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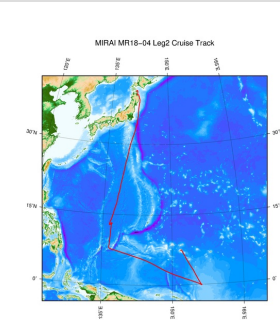
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