

## MIRAI MR15-05 Leg1 Cloud Ceiling

Last Modified: 2017-04-11

[ReadMe](#) [Observation Data](#) [Data Format](#)

Cruise ID: [MR15-05 Leg1](#)

Cloud Ceiling: Raw

Data Policy: [JAMSTEC](#)

Observation Items: Cloud base height

Science Keywords:

ATMOSPHERE > CLOUDS > CLOUD  
BASE

Cruise Report

[http://www.godac.jamstec.go.jp/catalog/data/doc\\_catalog/media/MR15-05\\_leg1\\_all.pdf](http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR15-05_leg1_all.pdf)

### For Using Data

#### Principal Investigator

Data Management Office

JAMSTEC / BPPT joint cruise in the Indonesian waters.

#### Use Constraints

See [Terms and Conditions](#) about constrain of use.

#### Data Citation

See [Terms and Conditions](#) about data citation.

### Period (UTC)

2015-12-23 18:51 – 2016-01-10 22:41

### Instrument

Instrument:

Ceiliometer (MR13-02B -)



### Overview

Ceiliometer is the system that measures cloud base height by laser pulse emitted vertically.

Up to three levels of cloud base can be detected by measuring the change of strength of backscatter signal.

And the cloud base height is calculated from the elapsed time from laser pulse emission to backscatter detection.

In case the cloud base is obscured, it measures the vertical visibility.

### System

Manufacturer: Vaisala Inc.  
Type: CL51  
Serial number: J0510004  
Measurement range: up to 15000m (Backscatter measurement)  
up to 13000m (Cloud detection)  
Resolution: 10m  
Sampling rate: 10-120 seconds available (36sec as default)  
Accuracy: greater of +-1% or +-5m  
Location: Compass deck bow side (18 meters high from sea surface)  
Recording software: CL-VIEW Ver2.00 (after MR13-02B Leg1)

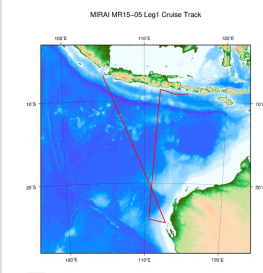
### Note

(1) File naming rule for YYMMDDHH.DAT(CL-VIEW Ver2.00).

YY : Year in 2 digit  
MM : Recording start month (UTC)  
DD : Recording start day (UTC)  
HH : Recording start time (UTC)

(2) Adjustment for the height : No sea surface level adjustment is applied to the raw data.

### Related Information



[Enlarge Image](#)

#### MR15-05 Leg1

Ship Name: MIRAI

Period: 2015-12-23 - 2016-01-11

Chief Scientist: Katsuro Katsumata (JAMSTEC)

Project Name: [POST-WOCE Hydrography]

Proposal ▶ Research cruise on ocean decadal variability -- Indian Ocean GO-SHIP (Global Ocean Ship-based Hydrographic Investigation Program)

### Update History

2017-04-11  
2016-07-21

An observation data was registered.  
An observation data was registered.

JAMSTEC  
Site Policy  
Privacy Policy  
Application for Data and Samples  
Data Policy  
  
What's New  
Update History  
Feeds

**Lists**  
Publication List  
Amount of Public Info.  
  
**Data**  
Map Search  
Data Tree  
Detailed Search

**Information of the Ships**  
NATSUSHIMA  
KAIYO  
YOKOSUKA  
MIRAI  
KAIREI  
CHIKYU  
KAIMEI  
SHINSEI MARU  
HAKUHO MARU

**Information of the Submersibles**  
KAIKO  
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 to a Dive Information

Dive ID:

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**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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ReadMe Observation Data **Data Format**

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Cloud Ceiling: Raw

Data Policy: [JAMSTEC](#)

### Ceiling Raw

The record length of the data file is 56 bytes.

No.	Column	Content	Format	Remarks
1	1 - 8	Date	i4,i2,i2	YYYYMMDD (UTC)
2	10 - 15	Time	i2,i2,i2	hhmmss (UTC)
3	17 - 19	Operating software	a3	'CT0' : CT-VIEW 'CL0' : CL-VIEW
4	20 - 21	Software version	i2	Version of operating software
5	22	Data status	i1	1: Cloud base height/vertical visibility data 2: Cloud base height/vertical visibility, backscatter signal 6: Cloud base height/vertical visibility, cloud amount/height of cloud layer 7: Cloud base height/vertical visibility, backscatter signal, cloud amount/height of cloud layer
6	23	Spare character	a1	
7	25	Detection status	i1	0: Clear 1: One cloud base detected 2: Two cloud bases detected 3: Three cloud bases detected 4: Full obscuration determined but no cloud base detected 5: Some obscuration detected but determined to transparent
8	26	Warning and alarm information	a1	0: Self-check OK W: At least one warning active, no alarms A: At least one alarm active See No.12:observation information
9	28 - 32	Lowest cloud base height or vertical visibility	i5	In the case of detection status is 1,2 or 3: Lowest cloud base height In the case of detection status is 4: Calculation of vertical visibility In the case of detection status is 0 or 5: ///// Unit: See No.12:observation information
10	34 - 38	Second lowest cloud base height or highest signal detected	i5	In the case of detection status is 2 or 3: Second lowest cloud base height In the case of detection status is 4: Maximum height that a signal was detected In the case of detection status is 0,1 or 5: ///// Unit: See No.12:observation information
11	40 - 44	Highest cloud base height	i5	In the case of detection status is 3: Highest cloud base height In the case of detection status is 0,1,2,4,5: ///// Unit: See No.12:observation information
12	46 - 53	Observation information	a8	*1
13	55 - 56	Terminator	a2	CR+LF

\*1: Observation information

The information is presented using 8 bytes characters. Each character, indicated in hexadecimal character, shows the following meanings;

Byte	Hexadecimal character (0:on, -:off)																Message(A:alarm, W:warning)
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
1	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	Laser temperature shut-off(A)
	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0	Laser failure(A)
	-	-	0	0	-	-	0	0	-	-	0	0	-	-	0	0	Receiver failure(A)
	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	Voltage failure(A)
2	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	Spare(A)
	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0	Spare(A)
	-	-	0	0	-	-	0	0	-	-	0	0	-	-	0	0	Spare(A)
	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	Spare(A)
3	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	Windows contaminated(W)
	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0	Battery low(W)
	-	-	0	0	-	-	0	0	-	-	0	0	-	-	0	0	Laser power low(W)
	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	Laser temperature high or low(W)
4	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	Internal temperature high or low(W)
	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0	Voltage high or low(W)
	-	-	0	0	-	-	0	0	-	-	0	0	-	-	0	0	Relative Humidity is > 85%(W)
	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	Receiver cross-talk compensation poor(W)
5	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	Blower suspect(W)
	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0	Spare(W)
	-	-	0	0	-	-	0	0	-	-	0	0	-	-	0	0	Spare(W)
	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	Spare(W)
6	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	Blower is ON
	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0	Blower heater is ON
	-	-	0	0	-	-	0	0	-	-	0	0	-	-	0	0	Internal heater is ON
	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	Units are METERS if ON , else FEET
7	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	Polling mode is ON
	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0	Working from battery
	-	-	0	0	-	-	0	0	-	-	0	0	-	-	0	0	Single sequence mode is ON
	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	Manual settings are effective
8	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	Tilt angle is > 45 degrees
	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0	High background radiance
	-	-	0	0	-	-	0	0	-	-	0	0	-	-	0	0	Manual blower control
	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	Spare

### Related Information



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Proposal Title: ▶ Research cruise on ocean decadal variability -- Indian Ocean GO-SHIP (Global Ocean Ship-based Hydrographic Investigation Program)

2017-04-11	An observation data was registerd.
2016-07-21	An observation data was registerd.

Dive ID:

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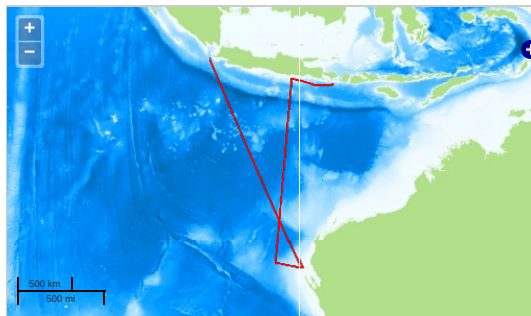
Data Policy: [JAMSTEC](#)

Observation Items: Cloud base height

Science Keywords:

ATMOSPHERE > CLOUDS > CLOUD  
BASE

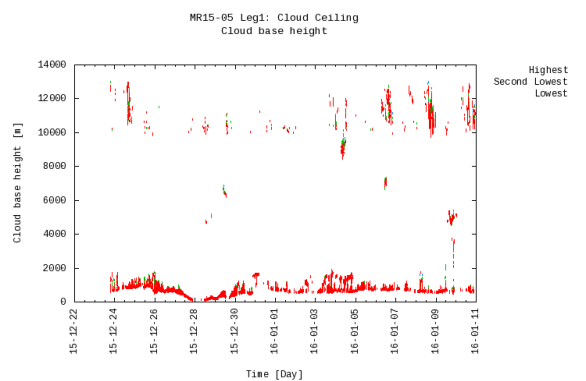
### Observation Map



— ... Observation Line — ... Navigation ● ... Observation, Dive Point, Hole

Imagery reproduced from ...

### Figures



### Data List

[Add to Basket](#)

☐ File names

☐ 15122300.DAT

☐ 15122400.DAT

☐ 15122500.DAT

☐ 15122600.DAT

☐ 15122700.DAT

☐ 15122800.DAT

☐ 15122900.DAT

☐ 15123000.DAT

☐ 15123100.DAT

☐ 16010100.DAT

☐ 16010200.DAT

☐ 16010300.DAT

☐ 16010400.DAT

☐ 16010500.DAT

☐ 16010600.DAT

☐ 16010700.DAT

☐ 16010800.DAT

☐ 16010900.DAT

☐ 16011000.DAT

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