

MIRAI MR14-04 Leg1 Cloud Ceiling

Last Modified: 2015-08-26

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

Cruise ID: [MR14-04 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/MR14-04_leg1-2_all.pdf

For Using Data

Principal Investigator

Data Management Office

Use Constraints

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

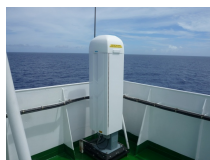
Data Citation

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

Instrument

Instrument:

Ceillometer (MR13-02B -)



Overview

Ceillometer 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)

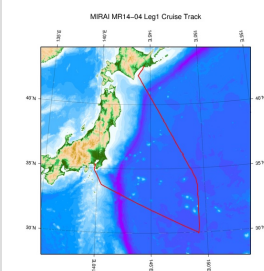
Note

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

A : Fixed as 'A'
Y : Year in 1 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



MR14-04 Leg1

Ship Name: MIRAI

Period: 2014-07-08 - 2014-07-15

Chief Scientist: Hiroshi Uchida (JAMSTEC)

Project Name: [POST-WOCE Hydrography]

Proposal ▶ Collaborative study on the zonal distribution of dissolved organic carbon in the far North Pacific

Title:

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Update History

2015-08-26 An observation data was registered.

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SHINKAI 2000
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KM-ROV
POWER GRAB
SAMPLER (SHELL)
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ReadMe Observation Data **Data Format**

Cruise ID: [MR14-04 Leg1](#)

Cloud Ceiling: Raw

Data Policy: [JAMSTEC](#)

Ceiling Raw

The record length of the data file is 56 bytes.

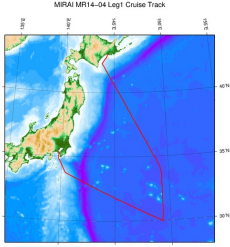
| No. | Column | Content | Format | Remarks |
|-----|---------|--|----------|---|
| 1 | 1 - 8 | Date | i4,i2,i2 | YYYYMMDD (UTC) |
| 2 | 10 - 15 | Time | i2,i2,i2 | hhmmss (UTC) |
| 3 | 17 - 19 | Operating software | a3 | 'CT0' : CT-VIEW 'CL0' : CL-VIEW |
| 4 | 20 - 21 | Software version | i2 | Version 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 | 0 | Laser temperature shut-off(A) |
| | - | - | - | 0 | 0 | 0 | 0 | - | - | - | 0 | 0 | 0 | 0 | 0 | 0 | Laser failure(A) |
| | - | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 0 | 0 | Receiver failure(A) |
| | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | 0 | Voltage failure(A) |
| 2 | - | - | - | - | - | - | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Spare(A) |
| | - | - | - | 0 | 0 | 0 | 0 | - | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Spare(A) |
| | - | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 0 | 0 | Spare(A) |
| | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | 0 | Spare(A) |
| 3 | - | - | - | - | - | - | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Windows contaminated(W) |
| | - | - | - | 0 | 0 | 0 | 0 | - | - | - | 0 | 0 | 0 | 0 | 0 | 0 | Battery low(W) |
| | - | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 0 | 0 | Laser power low(W) |
| | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | 0 | Laser temperature high or low(W) |
| 4 | - | - | - | - | - | - | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Internal temperature high or low(W) |
| | - | - | - | 0 | 0 | 0 | 0 | - | - | - | 0 | 0 | 0 | 0 | 0 | 0 | Voltage high or low(W) |
| | - | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 0 | 0 | Relative Humidity is > 85%(W) |
| | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | 0 | Receiver cross-talk compensation poor(W) |
| 5 | - | - | - | - | - | - | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Blower suspect(W) |
| | - | - | - | 0 | 0 | 0 | 0 | - | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Spare(W) |
| | - | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 0 | 0 | Spare(W) |
| | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | 0 | Spare(W) |
| 6 | - | - | - | - | - | - | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Blower is ON |
| | - | - | - | 0 | 0 | 0 | 0 | - | - | - | 0 | 0 | 0 | 0 | 0 | 0 | Blower heater is ON |
| | - | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 0 | 0 | Internal heater is ON |
| | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | 0 | Units are METERS if ON , else FEET |
| 7 | - | - | - | - | - | - | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Polling mode is ON |
| | - | - | - | 0 | 0 | 0 | 0 | - | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Working from battery |
| | - | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 0 | 0 | Single sequence mode is ON |
| | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | 0 | Manual settings are effective |
| 8 | - | - | - | - | - | - | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Tilt angle is > 45 degrees |
| | - | - | - | 0 | 0 | 0 | 0 | - | - | - | 0 | 0 | 0 | 0 | 0 | 0 | High background radiance |
| | - | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 0 | 0 | Manual blower control |
| | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | - | 0 | 0 | Spare |

Related Information



MIRAI MR14-04 Leg1 Cruise Track

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MR14-04 Leg1

Ship Name: MIRAI
Period: 2014-07-08 - 2014-07-15
Chief Scientist: Hiroshi Uchida (JAMSTEC)
Project Name: [POST-WOCE Hydrography]
Proposal ▶ Collaborative study on the zonal distribution of dissolved organic carbon in the far North Pacific
Title:

| Update History | |
|----------------|-------------------------------------|
| 2015-08-26 | An observation data was registered. |

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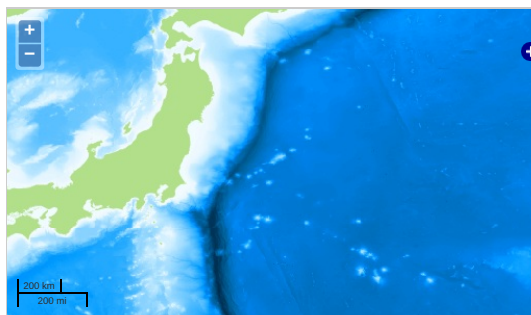
Data Policy: [JAMSTEC](#)

Observation Items: Cloud base height

Science Keywords:

ATMOSPHERE > CLOUDS > CLOUD
BASE

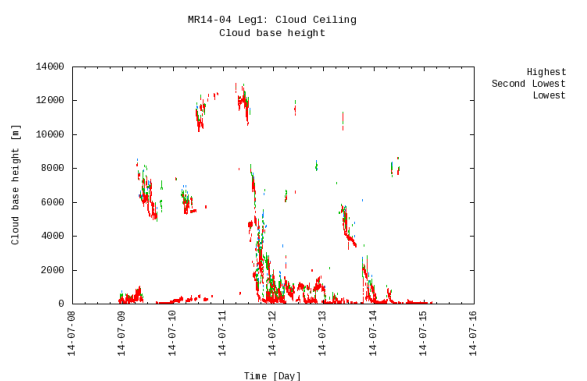
Observation Map



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

Imagery reproduced from ...

Figures



Data List

[Add to Basket](#)

☐ File names

☐ A4070800.DAT

☐ A4070900.DAT

☐ A4071000.DAT

☐ A4071100.DAT

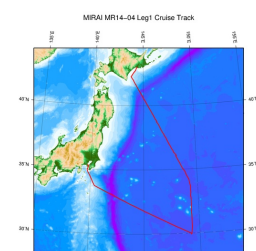
☐ A4071200.DAT

☐ A4071300.DAT

☐ A4071400.DAT

☐ A4071500.DAT

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