

MIRAI MR04-05 Cloud Ceiling

Last Modified: 2014-07-24

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

Cruise ID: [MR04-05](#)

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/MR04-05_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:

Ceilometer (- MR12-05Leg3)



Overview

Ceilometer 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: CT25K Ver2.01
Serial number: T18102
Measurement range: up to 7500m
Resolution: 15m
Sampling rate: 15-120 seconds available (60sec as default)
Accuracy: $\pm 2\%$ or $\pm 1/2 \times \text{Resolution}$
Location: Compass deck bow side (18 meters high from sea surface)
Recording software: CT-VIEW Ver1.05 (before MR01-K04)
CT-VIEW Ver2.10 (MR01-K05 or later)

Note

(1) File naming rule for CYMMDDHH.DAT(Ver1.05) and AYMMDDHH.DAT(Ver2.10).

C or A : Fixed as 'C' or 'A'
Y : Year in 1 digit
MM : Recording start month (UTC)
DD : Recording start day (UTC)
HH : Recording start time (UTC)

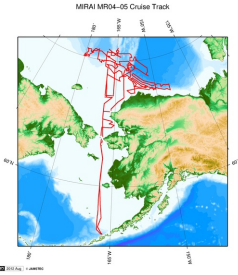
(2) Adjustment for the height : No sea surface level adjustment is applied to the raw data.

(3) Invalid data information : Ceilometer data files include the invalid data in this cruise as follows.

Date/Time : Date,Time data is invalid
Format : Format error data
DataLack : Lack of data


| Start | Stop | | | |
|---|-----------|-----------|-----------|---------|
| File name | Date,Time | File name | Date,Time | Remarks |
| A4090300.DAT20040903,155240-A4090300.DAT20040903,170540 | DataLack | | | |
| A4090300.DAT20040903,180541-A4090400.DAT20040904,024641 | DataLack | | | |
| A4100800.DAT20041008,002522-A4100800.DAT20041008,024121 | DataLack | | | |
| A4100900.DAT20041009,162622-A4100900.DAT20041009,231122 | DataLack | | | |

Related Information



MIRAI MR04-05 Cruise Track

MR04-05
Ship Name: MIRAI
Period: 2004-09-01 - 2004-10-13
Chief Scientist: Koji Shimada (JAMSTEC)
Project Name: [Arctic Ocean Climate System Reaserch]

 [Enlarge Image](#)

| Update History | |
|----------------|------------------------------------|
| 2014-07-24 | An observation data was registerd. |
| 2012-11-25 | An observation data was registerd. |

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:



JAMSTEC
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

国立研究開発法人
海洋研究開発機構

Copyright 2011 Japan Agency for Marine-Earth Science and Technology

MIRAI MR04-05 Cloud Ceiling

Last Modified: 2014-07-24

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

Cruise ID: [MR04-05](#)

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 | 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 | 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 MR04-05 Cruise Track

MR04-05
Ship Name: MIRAI
Period: 2004-09-01 - 2004-10-13
Chief Scientist: Koji Shimada (JAMSTEC)
Project Name: [Arctic Ocean Climate System Reaserch]

 [Enlarge Image](#)

| Update History | |
|----------------|------------------------------------|
| 2014-07-24 | An observation data was registerd. |
| 2012-11-25 | An observation data was registerd. |

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:



JAMSTEC
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

国立研究開発法人
海洋研究開発機構

Copyright 2011 Japan Agency for Marine-Earth Science and Technology

MIRAI MR04-05 Cloud Ceiling

Last Modified: 2014-07-24

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

Cruise ID: [MR04-05](#)

Cloud Ceiling: Raw

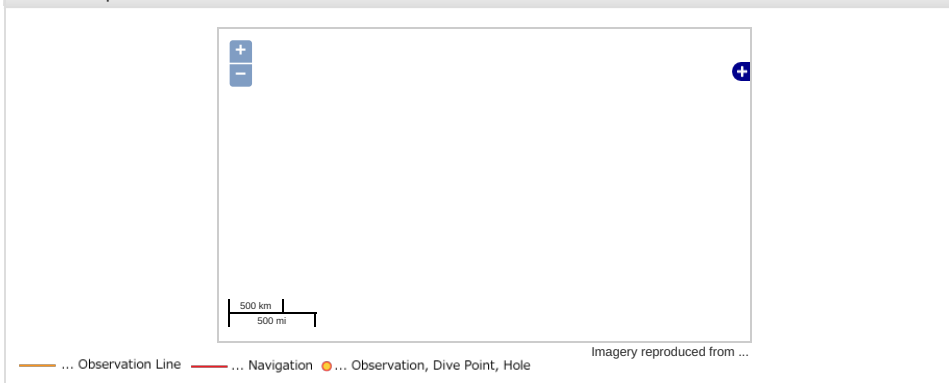
Data Policy: [JAMSTEC](#)

Observation Items: Cloud base height

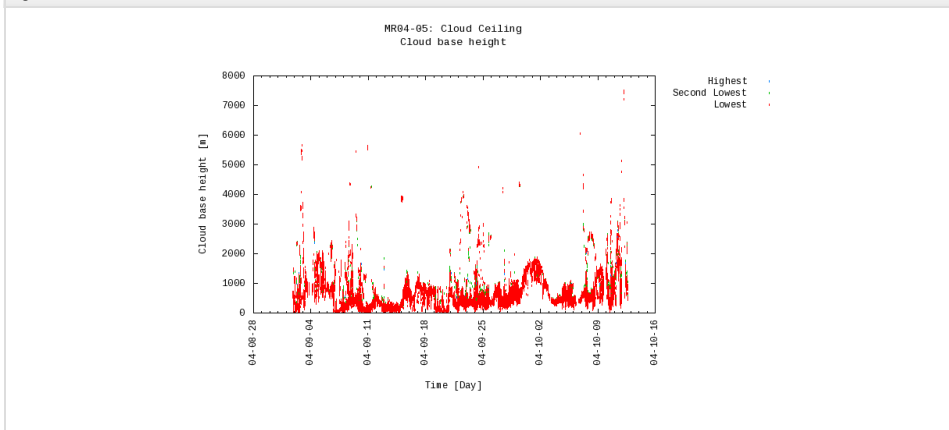
Science Keywords:

ATMOSPHERE > CLOUDS > CLOUD
BASE

Observation Map



Figures



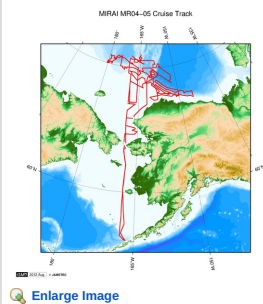
Data List

[Add to Basket](#)

| <input type="checkbox"/> File names |
|---------------------------------------|
| <input type="checkbox"/> A4090101.DAT |
| <input type="checkbox"/> A4090200.DAT |
| <input type="checkbox"/> A4090300.DAT |
| <input type="checkbox"/> A4090400.DAT |
| <input type="checkbox"/> A4090500.DAT |
| <input type="checkbox"/> A4090600.DAT |
| <input type="checkbox"/> A4090700.DAT |
| <input type="checkbox"/> A4090800.DAT |
| <input type="checkbox"/> A4090900.DAT |
| <input type="checkbox"/> A4091000.DAT |
| <input type="checkbox"/> A4091100.DAT |
| <input type="checkbox"/> A4091200.DAT |
| <input type="checkbox"/> A4091300.DAT |
| <input type="checkbox"/> A4091400.DAT |
| <input type="checkbox"/> A4091500.DAT |
| <input type="checkbox"/> A4091600.DAT |
| <input type="checkbox"/> A4091700.DAT |
| <input type="checkbox"/> A4091800.DAT |
| <input type="checkbox"/> A4091900.DAT |
| <input type="checkbox"/> A4092000.DAT |
| <input type="checkbox"/> A4092100.DAT |
| <input type="checkbox"/> A4092200.DAT |
| <input type="checkbox"/> A4092300.DAT |
| <input type="checkbox"/> A4092400.DAT |
| <input type="checkbox"/> A4092500.DAT |
| <input type="checkbox"/> A4092600.DAT |
| <input type="checkbox"/> A4092700.DAT |
| <input type="checkbox"/> A4092800.DAT |

| File names |
|--------------|
| A4092900.DAT |
| A4093000.DAT |
| A4100100.DAT |
| A4100200.DAT |
| A4100300.DAT |
| A4100400.DAT |
| A4100500.DAT |
| A4100600.DAT |
| A4100700.DAT |
| A4100800.DAT |
| A4100900.DAT |
| A4101000.DAT |
| A4101100.DAT |
| A4101200.DAT |

Related Information



MR04-05

Ship Name: MIRAI
 Period: 2004-09-01 - 2004-10-13
 Chief Scientist: Koji Shimada (JAMSTEC)
 Project Name: [Arctic Ocean Climate System Reaserch]

Update History

| | |
|------------|------------------------------------|
| 2014-07-24 | An observation data was registerd. |
| 2012-11-25 | An observation data was registerd. |

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
 KAIIMEI
 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: