

MIRAI MR01-K04 Leg1 Cloud Ceiling

Last Modified: 2014-07-16

ReadMe Observation Data Data Format

Cruise ID: [MR01-K04 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/MR01-K04_leg1_all.pdf

For Using Data

Principal Investigator

Data Management Office

Use Constraints

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

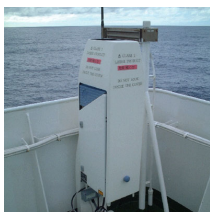
Data Citation

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

Instrument

Instrument:

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: +2% or +1/2 * 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.

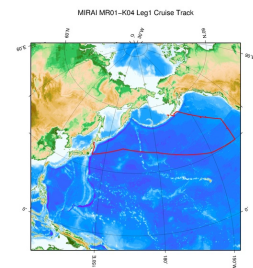
(3) Invalid data information : Ceilometer data files include the invalid data in this cruise as follows.

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

Start		Stop		Remarks
File name	Date,Time	File name	Date,Time	
C1072323.DAT	20010723,235920	C1072323.DAT	20010723,205020	Date/Time
C1072323.DAT	20010723,235821	C1072423.DAT	20010724,235921	DataLack
C1072423.DAT	20010724,235921	C1072423.DAT	20010724,000021	Date/Time
C1072423.DAT	20010724,235819	C1072523.DAT	20010725,235919	DataLack
C1072523.DAT	20010725,235919	C1072523.DAT	20010725,000019	Date/Time
C1072523.DAT	20010725,235818	C1072623.DAT	20010726,235918	DataLack
C1072623.DAT	20010726,235918	C1072623.DAT	20010726,000018	Date/Time
C1072623.DAT	20010726,235818	C1072723.DAT	20010727,235919	DataLack
C1072723.DAT	20010727,235919	C1072723.DAT	20010727,000018	Date/Time
C1072723.DAT	20010727,235817	C1072823.DAT	20010728,235916	DataLack
C1072823.DAT	20010728,235916	C1072823.DAT	20010728,000017	Date/Time
C1072823.DAT	20010728,235816	C1072923.DAT	20010729,235917	DataLack
C1072923.DAT	20010729,235917	C1072923.DAT	20010729,000016	Date/Time
C1072923.DAT	20010729,235815	C1073023.DAT	20010730,235916	DataLack
C1073023.DAT	20010730,235916	C1073023.DAT	20010730,000016	Date/Time
C1073023.DAT	20010730,235815	C1073123.DAT	20010731,235915	DataLack
C1073123.DAT	20010731,235915	C1073123.DAT	20010731,000015	Date/Time

C1073123.DAT 20010731,235814-C1080100.DAT 20010801,235915DataLack
C1080100.DAT 20010801,235915-C1080100.DAT 20010801,000015Date/Time
C1080100.DAT 20010801,201512-C10801201.DAT20010801,201743DataLack
C10801201.DAT20010801,202642-C10801202.DAT20010801,203042DataLack
C1080123.DAT 20010801,235943-C1080200.DAT 20010802,000944DataLack
C1080223.DAT 20010802,235943-C1080300.DAT 20010803,000643DataLack
C1080323.DAT 20010803,235942-C1080423.DAT 20010804,000242DataLack
C1080423.DAT 20010804,000242-C1080423.DAT 20010804,000442DataLack
C1080423.DAT 20010804,092242-C1080423.DAT 20010804,092442DataLack
C1080423.DAT 20010804,192142-C1080423.DAT 20010804,192343DataLack
C1081100.DAT 20010811,235942-C1081223.DAT 20010812,000143DataLack
C1081300.DAT 20010813,235939-C1081423.DAT 20010814,000339DataLack
C1081623.DAT 20010816,235937-C1081723.DAT 20010817,000938DataLack
C1081800.DAT 20010818,235944-C1081923.DAT 20010819,000145DataLack

Related Information



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MR01-K04 Leg1

Ship Name: MIRAI
Period: 2001-07-23 - 2001-08-27
Chief Scientist: Masao Fukasawa (JAMSTEC)
Project Name: [POST-WOCE Hydrography]

Update History

2014-07-16	An observation data was registered.
2012-12-25	An observation data was registered.

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Cruise ID: [MR01-K04 Leg1](#)

Cloud Ceiling: Raw

Data Policy: [JAMSTEC](#)

Ceiling Raw

The record length of the data file is 56 bytes.

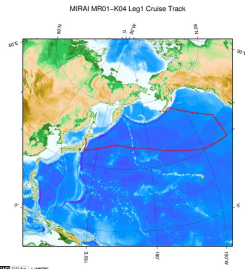
No.	Column	Content	Format	Remarks
1	1 - 8	Date	i4,i2,i2	YYYYMMDD (UTC)
2	10 - 15	Time	i2,i2,i2	hhmmss (UTC)
3	17 - 19	Operating software	a3	'CT0' : CT-VIEW 'CL0' : CL-VIEW
4	20 - 21	Software version	i2	Version of operating software
5	22	Data status	i1	1: Cloud base height/vertical visibility data 2: 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



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MR01-K04 Leg1

Ship Name: MIRAI
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Chief Scientist: Masao Fukasawa (JAMSTEC)
Project Name: [POST-WOCE Hydrography]

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Cruise ID: [MR01-K04 Leg1](#)

Cloud Ceiling: Raw

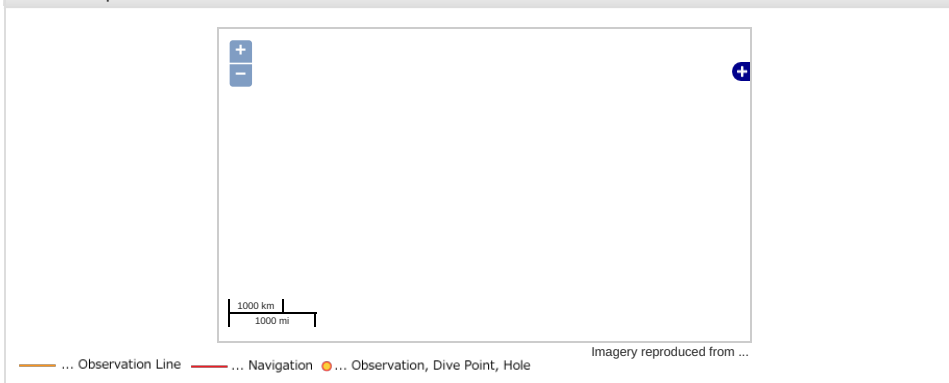
Data Policy: [JAMSTEC](#)

Observation Items: Cloud base height

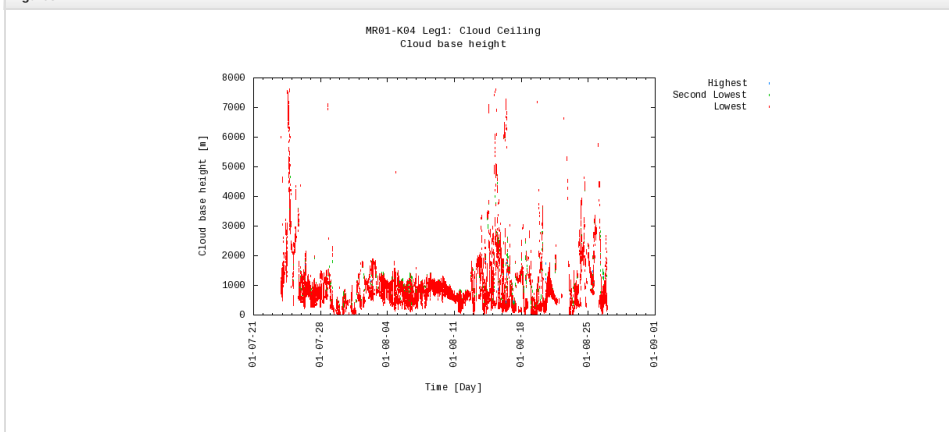
Science Keywords:

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BASE

Observation Map



Figures



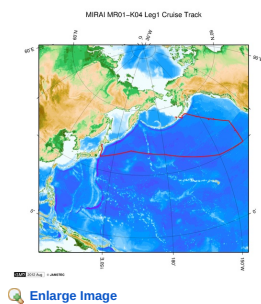
Data List

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<input type="checkbox"/> C1073123.DAT
<input type="checkbox"/> C1080100.DAT
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<input type="checkbox"/> C1082423.DAT
<input type="checkbox"/> C1082523.DAT
<input type="checkbox"/> C1082623.DAT

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