MIRAI MR09-04 Cloud Ceiling

Last Modified: 2014-08-06

ReadMe | Observation Data | Data Format

Cruise ID: MR09-04
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/MR09-04_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)

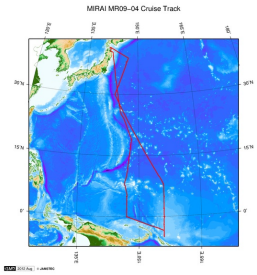
(2) Adjustment for the height : No sea surface level adjustment is applied to the raw data.
(3) Invalid data information : Ceilometer data files include the invalid data in this cruise as follows.

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

Start			Stop		
File name	Date,Time		File name	Date,Time	Remarks
A9110500.DAT	20091105,235901	-	A9110600.DAT	20091106,000100	DataLack
A9110700.DAT	20091107,235859	-	A9110800.DAT	20091108,000059	DataLack
A9110900.DAT	20091109,235901	-	A9111000.DAT	20091110,000100	DataLack
A9111300.DAT	20091113,235803	-	A9111400.DAT	20091114,000002	DataLack
A9111500.DAT	20091115,235803	-	A9111600.DAT	20091116,000003	DataLack
A9111600.DAT	20091116,235803	-	A9111700.DAT	20091117,000003	DataLack
A9111700.DAT	20091117,235803	-	A9111800.DAT	20091118,000003	DataLack
A9111800.DAT	20091118,235804	-	A9111900.DAT	20091119,000004	DataLack
A9112000.DAT	20091120,235803	-	A9112100.DAT	20091121,000002	DataLack
A9112100.DAT	20091121,235804	-	A9112200.DAT	20091122,000003	DataLack
A9112200.DAT	20091122,235804	-	A9112300.DAT	20091123,000004	DataLack
A9112300.DAT	20091123,235804	-	A9112400.DAT	20091124,000004	DataLack
A9112400.DAT	20091124,235804	-	A9112500.DAT	20091125,000004	DataLack
A9112500.DAT	20091125,235805	-	A9112600.DAT	20091126,000005	DataLack
A9112600.DAT	20091126,235804	-	A9112700.DAT	20091127,000005	DataLack
A9112700.DAT	20091127,235805	-	A9112800.DAT	20091128,000005	DataLack

Start File name	Date,Time		Stop File name	Date,Time	Remarks
A9112800.DAT	20091128,235805	-	A9112900.DAT	20091129,000006	DataLack
A9112900.DAT	20091129,235806	-	A9113000.DAT	20091130,000006	DataLack
A9113000.DAT	20091130,235806	-	A9120100.DAT	20091201,000006	DataLack
A9120100.DAT	20091201,235807	-	A9120200.DAT	20091202,000007	DataLack
A9120200.DAT	20091202,235806	-	A9120300.DAT	20091203,000007	DataLack
A9120300.DAT	20091203,235808	-	A9120400.DAT	20091204,000008	DataLack
A9120400.DAT	20091204,235809	-	A9120500.DAT	20091205,000009	DataLack
A9120500.DAT	20091205,235808	-	A9120600.DAT	20091206,000008	DataLack
A9120600.DAT	20091206,235808	-	A9120700.DAT	20091207,000008	DataLack
A9120700.DAT	20091207,235809	-	A9120800.DAT	20091208,000010	DataLack
A9120800.DAT	20091208,235809	-	A9120900.DAT	20091209,000009	DataLack
A9120900.DAT	20091209,235809	-	A9121000.DAT	20091210,000008	DataLack
A9121000.DAT	20091210,235809	-	A9121100.DAT	20091211,000010	DataLack
A9121100.DAT	20091211,235809	-	A9121200.DAT	20091212,000008	DataLack

Related Information



Enlarge Image

MR09-04
Ship Name: MIRAI
Period: 2009-11-03 - 2009-12-12
Chief Scientist: Yuji Kashino (JAMSTEC)
Project Name: [Tropical Ocean Climate Study (TOCS),Station KEO]
Proposal ▸ Tropical Ocean Climate Study
Title:

Update History

2014-08-06	An observation data was registerd.
2012-09-28	An observation data was registerd.

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Ceiling Raw

The record length of the data file is 56 bytes.

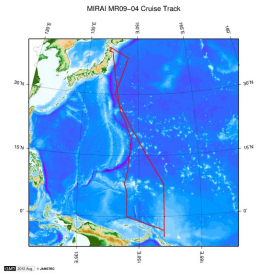
No.	Column	Content	Format	Remarks
1	1 - 8	Date	i4,i2,i2	YYYYMMDD (UTC)
2	10 - 15	Time	i2,i2,i2	hhmmss (UTC)
3	17 - 19	Operating software	a3	'CT0' : CT-VIEW 'CL0' : CL-VIEW
4	20 - 21	Software version	i2	Version of operating software
5	22	Data status	i1	1: Cloud base height/vertical visibility data 2: 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 (o:on, -:off)																Message(A:alarm, W:warning)
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
1	-	-	-	-	-	-	-	-	o	o	o	o	o	o	o	o	Laser temperature shut-off(A)
	-	-	-	-	o	o	o	o	-	-	-	-	o	o	o	o	Laser failure(A)
	-	-	o	o	-	-	o	o	-	-	o	o	-	-	o	o	Receiver failure(A)
	-	o	-	o	-	o	-	o	-	o	-	o	-	o	-	o	Voltage failure(A)
2	-	-	-	-	-	-	-	-	o	o	o	o	o	o	o	o	Spare(A)
	-	-	-	-	o	o	o	o	-	-	-	-	o	o	o	o	Spare(A)
	-	-	o	o	-	-	o	o	-	-	o	o	-	-	o	o	Spare(A)
	-	o	-	o	-	o	-	o	-	o	-	o	-	o	-	o	Spare(A)
3	-	-	-	-	-	-	-	-	o	o	o	o	o	o	o	o	Windows contaminated(W)
	-	-	-	-	o	o	o	o	-	-	-	-	o	o	o	o	Battery low(W)
	-	-	o	o	-	-	o	o	-	-	o	o	-	-	o	o	Laser power low(W)
	-	o	-	o	-	o	-	o	-	o	-	o	-	o	-	o	Laser temperature high or low(W)
4	-	-	-	-	-	-	-	-	o	o	o	o	o	o	o	o	Internal temperature high or low(W)
	-	-	-	-	o	o	o	o	-	-	-	-	o	o	o	o	Voltage high or low(W)
	-	-	o	o	-	-	o	o	-	-	o	o	-	-	o	o	Relative Humidity is > 85%(W)
	-	o	-	o	-	o	-	o	-	o	-	o	-	o	-	o	Receiver cross-talk compensation poor(W)
5	-	-	-	-	-	-	-	-	o	o	o	o	o	o	o	o	Blower suspect(W)
	-	-	-	-	o	o	o	o	-	-	-	-	o	o	o	o	Spare(W)
	-	-	o	o	-	-	o	o	-	-	o	o	-	-	o	o	Spare(W)
	-	o	-	o	-	o	-	o	-	o	-	o	-	o	-	o	Spare(W)
6	-	-	-	-	-	-	-	-	o	o	o	o	o	o	o	o	Blower is ON
	-	-	-	-	o	o	o	o	-	-	-	-	o	o	o	o	Blower heater is ON
	-	-	o	o	-	-	o	o	-	-	o	o	-	-	o	o	Internal heater is ON
	-	o	-	o	-	o	-	o	-	o	-	o	-	o	-	o	Units are METERS if ON , else FEET
7	-	-	-	-	-	-	-	-	o	o	o	o	o	o	o	o	Polling mode is ON
	-	-	-	-	o	o	o	o	-	-	-	-	o	o	o	o	Working from battery
	-	-	o	o	-	-	o	o	-	-	o	o	-	-	o	o	Single sequence mode is ON
	-	o	-	o	-	o	-	o	-	o	-	o	-	o	-	o	Manual settings are effective
8	-	-	-	-	-	-	-	-	o	o	o	o	o	o	o	o	Tilt angle is > 45 degrees
	-	-	-	-	o	o	o	o	-	-	-	-	o	o	o	o	High background radiance
	-	-	o	o	-	-	o	o	-	-	o	o	-	-	o	o	Manual blower control
	-	o	-	o	-	o	-	o	-	o	-	o	-	o	-	o	Spare

Related Information



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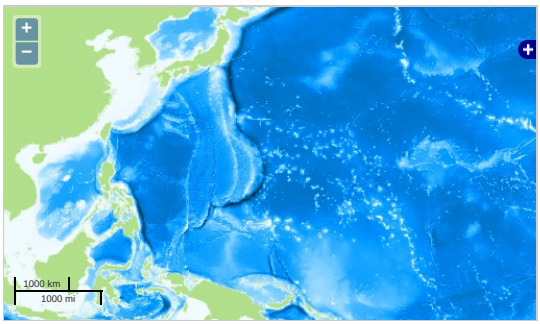
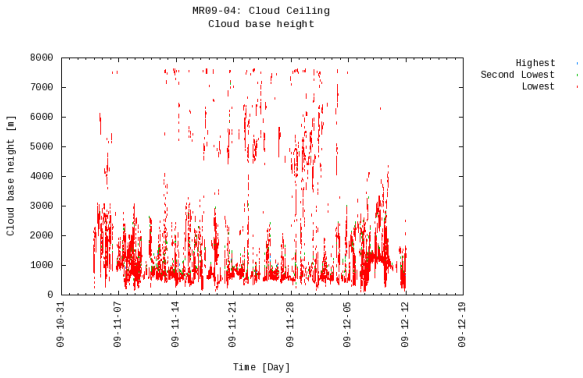
Observation Map



Imagery reproduced from ...

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

Figures



Data List

Add to Basket

File names
A9110311.DAT
A9110400.DAT
A9110500.DAT
A9110600.DAT
A9110700.DAT
A9110800.DAT
A9110900.DAT
A9111000.DAT
A9111100.DAT
A9111200.DAT
A9111300.DAT
A9111400.DAT
A9111500.DAT
A9111600.DAT
A9111700.DAT
A9111800.DAT
A9111900.DAT
A9112000.DAT
A9112100.DAT
A9112200.DAT
A9112300.DAT
A9112400.DAT
A9112500.DAT
A9112600.DAT
A9112700.DAT
A9112800.DAT
A9112900.DAT
A9113000.DAT

File names
A9120100.DAT
A9120200.DAT
A9120300.DAT
A9120400.DAT
A9120500.DAT
A9120600.DAT
A9120700.DAT
A9120800.DAT
A9120900.DAT
A9121000.DAT
A9121100.DAT
A9121200.DAT

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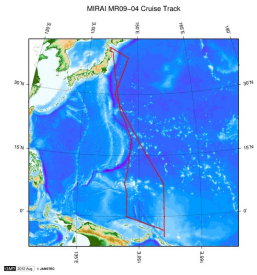

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