MIRAI MR06-05 Leg2 Cloud Ceiling

Last Modified: 2014-07-30

Cruise ID: MR06-05 Leg2
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/MR06-05_leg2_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).

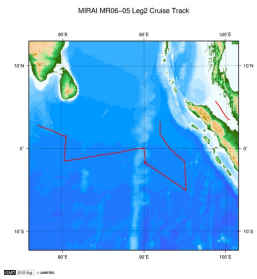
C or A :	Fixed as 'C' or 'A'
Y :	Year in 1 digit
MM :	Recording start month (UTC)
DD :	Recording start day (UTC)
HH :	Recording start time (UTC)

(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
A6112900.DAT	20061129,092910			Format
A6113000.DAT	20061130,092911			Format
A6120100.DAT	20061201,020811	A6120100.DAT	20061201,111711	DataLack
A6120200.DAT	20061202,092911			Format
A6120200.DAT	20061202,152212	A6120200.DAT	20061202,161613	DataLack
A6120300.DAT	20061203,063010	A6120300.DAT	20061203,063511	DataLack
A6120300.DAT	20061203,092911			Format
A6120400.DAT	20061204,092911			Format
A6120400.DAT	20061204,180712	A6120400.DAT	20061204,190011	DataLack
A6120500.DAT	20061205,092911			Format
A6120600.DAT	20061206,092912			Format
A6120700.DAT	20061207,092912			Format
A6120800.DAT	20061208,092914			Format
A6120900.DAT	20061209,092914			Format
A6120900.DAT	20061209,142714	A6120900.DAT	20061209,152014	DataLack
A6121000.DAT	20061210,092913			Format
A6121000.DAT	20061210,103313	A6121100.DAT	20061211,220014	DataLack
A6121100.DAT	20061211,235915	A6121200.DAT	20061212,002713	DataLack
A6121200.DAT	20061212,092913			Format

Related Information



Enlarge Image

MR06-05 Leg2
Ship Name: MIRAI
Period: 2006-11-28 - 2006-12-13
Chief Scientist: Yoshifumi Kuroda (JAMSTEC)
Project Name: [Mirai Indian ocean cruise for the Study of the MJO convection Onset,MJO Research,Tropical Ocean Climate Study (TOCS)]

Update History

2014-07-30	An observation data was registerd.
2012-11-25	An observation data was registerd.

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Ceiling Raw

The record length of the data file is 56 bytes.

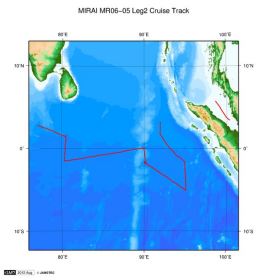
No.	Column	Content	Format	Remarks
1	1 - 8	Date	i4,i2,i2	YYYYMMDD (UTC)
2	10 - 15	Time	i2,i2,i2	hhmmss (UTC)
3	17 - 19	Operating software	a3	'CT0' : CT-VIEW 'CL0' : CL-VIEW
4	20 - 21	Software version	i2	Version of operating software
5	22	Data status	i1	1: Cloud base height/vertical visibility data 2: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



Enlarge Image

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Ship Name: MIRAI
Period: 2006-11-28 - 2006-12-13
Chief Scientist: Yoshifumi Kuroda (JAMSTEC)
Project Name: [Mirai Indian ocean cruise for the Study of the MJO convection Onset,MJO Research,Tropical Ocean Climate Study (TOCS)]

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ReadMe | Observation Data | Data Format

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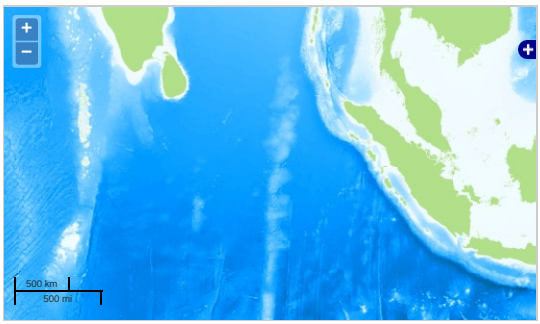
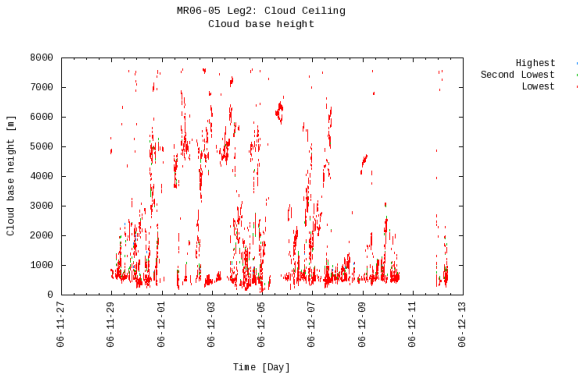
Observation Map



Imagery reproduced from ...

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

Figures



Data List

Add to Basket

File names
A6112800.DAT
A6112900.DAT
A6113000.DAT
A6120100.DAT
A6120200.DAT
A6120300.DAT
A6120400.DAT
A6120500.DAT
A6120600.DAT
A6120700.DAT
A6120800.DAT
A6120900.DAT
A6121000.DAT
A6121100.DAT
A6121200.DAT

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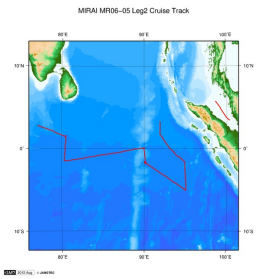

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