MIRAI MR01-K04 Leg2 Cloud Ceiling

Last Modified: 2014-07-16

Cruise ID: MR01-K04 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/MR01-K04_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).

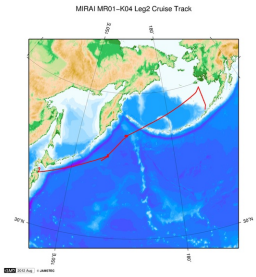
C or A :	Fixed as 'C' or 'A'
Y :	Year in 1 digit
MM :	Recording start month (UTC)
DD :	Recording start day (UTC)
HH :	Recording start time (UTC)

(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
C1082900.DAT	20010829,181544	C1082900.DAT	20010829,181744	DataLack
C1082923.DAT	20010829,235945	C1083023.DAT	20010830,000645	DataLack
C1083123.DAT	20010831,235944	C1090123.DAT	20010901,000644	DataLack
C1090123.DAT	20010901,235943	C1090223.DAT	20010902,000644	DataLack
C1090223.DAT	20010902,235941	C1090323.DAT	20010903,000642	DataLack
C1090323.DAT	20010903,084241	C1090323.DAT	20010903,164141	DataLack
C1090323.DAT	20010903,235941	C1090423.DAT	20010904,000641	DataLack
C1090523.DAT	20010905,120939	C1090523.DAT	20010905,121139	DataLack
C1090523.DAT	20010905,235938	C1090623.DAT	20010906,000639	DataLack
C1090723.DAT	20010907,235937	C1090823.DAT	20010908,000637	DataLack
C1090823.DAT	20010908,161336	C1090823.DAT	20010908,161536	DataLack
C1090823.DAT	20010908,235936	C1090923.DAT	20010909,000636	DataLack
C1091023.DAT	20010910,232733	C1091023.DAT	20010910,232933	DataLack
C1091023.DAT	20010910,235933	C1091123.DAT	20010911,000634	DataLack
C1091123.DAT	20010911,170033	C1091223.DAT	20010912,174133	DataLack
C1091323.DAT	20010913,235945	C1091423.DAT	20010914,000645	DataLack

Related Information



Enlarge Image

MR01-K04 Leg2
Ship Name: MIRAI
Period: 2001-08-28 - 2001-09-14
Chief Scientist: Susumu Honjo (JAMSTEC)
Project Name: [Station K2]

Update History

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

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Ceiling Raw

The record length of the data file is 56 bytes.

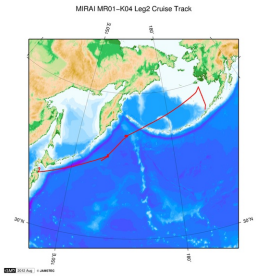
No.	Column	Content	Format	Remarks
1	1 - 8	Date	i4,i2,i2	YYYYMMDD (UTC)
2	10 - 15	Time	i2,i2,i2	hhmmss (UTC)
3	17 - 19	Operating software	a3	'CT0' : CT-VIEW 'CL0' : CL-VIEW
4	20 - 21	Software version	i2	Version of operating software
5	22	Data status	i1	1: Cloud base height/vertical visibility data 2: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

MR01-K04 Leg2
Ship Name: MIRAI
Period: 2001-08-28 - 2001-09-14
Chief Scientist: Susumu Honjo (JAMSTEC)
Project Name: [Station K2]

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ReadMe | Observation Data | Data Format

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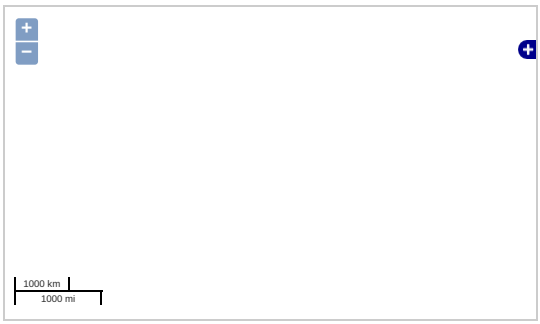
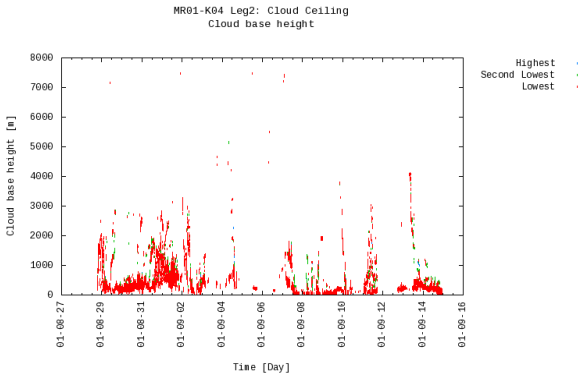
Observation Map



Imagery reproduced from ...

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

Figures



Data List

Add to Basket

File names
C1082823.DAT
C1082900.DAT
C1082923.DAT
C1083023.DAT
C1083100.DAT
C1083123.DAT
C1090123.DAT
C1090223.DAT
C1090323.DAT
C1090423.DAT
C1090523.DAT
C1090623.DAT
C1090723.DAT
C1090823.DAT
C1090923.DAT
C1091023.DAT
C1091123.DAT
C1091223.DAT
C1091300.DAT
C1091323.DAT
C1091423.DAT

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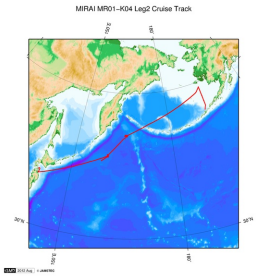

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