

## MIRAI MR99-K01 Cloud Ceiling

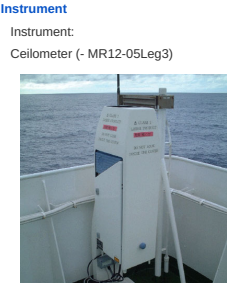
Last Modified: 2014-07-12

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

Cruise ID: [MR99-K01](#)  
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/MR99-K01\\_all.pdf](http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR99-K01_all.pdf)

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See [Terms and Conditions](#) about constrain of use.  
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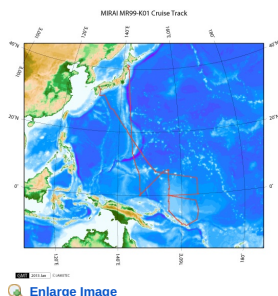
**Overview**  
Ceilometer is the system that measures cloud base height by laser pulse emitted vertically.  
Up to three levels of cloud base can be detected by measuring the change of strength of backscatter signal.  
And the cloud base height is calculated from the elapsed time from laser pulse emission 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
C9021101.DAT19990211,011057-C9021504.DAT19990215,042856	DataLack			
C9022304.DAT19990223,054153-C9022304.DAT19990223,052949	Date/Time			
C9022504.DAT19990225,053048	Format			
C9022510.DAT19990225,155848	Format			
C9022604.DAT19990226,045949-C9022604.DAT19990226,050149	DataLack			
C9022604.DAT19990226,050249-C9022604.DAT19990226,050548	DataLack			
C9022604.DAT19990226,050548-C9022604.DAT19990226,051148	DataLack			
C9022604.DAT19990226,052948-C9022604.DAT19990226,054148	DataLack			
C9022604.DAT19990226,054448-C9022604.DAT19990226,055659	DataLack			
C9022604.DAT19990226,055659-C9022604.DAT19990226,055859	DataLack			
C9022604.DAT19990226,060259-C9022606.DAT19990226,060959	DataLack			
C9022623.DAT19990227,033159-C9022703.DAT19990227,035707	DataLack			
C9030821.DAT19990308,235248-C9031203.DAT19990312,074946	DataLack			
C9031315.DAT19990313,153746-C9031315.DAT19990313,153946	DataLack			
C9031315.DAT19990313,154046	Format			
C9031521.DAT19990315,223743-C9031521.DAT19990315,223957	DataLack			
C9032021.DAT19990321,015154	Format			
C9032315.DAT19990323,203153-C9032503.DAT19990325,050852	DataLack			
C9032609.DAT19990326,141751-C9032715.DAT19990327,185950	DataLack			

Related Information



[Enlarge Image](#)

#### MR99-K01

Ship Name: MIRAI  
Period: 1999-02-07 - 1999-03-31  
Chief Scientist: Yoshifumi Kuroda (JAMSTEC)  
Project Name: [Tropical Ocean Climate Study (TOCS)]

#### Update History

2014-07-12	An observation data was registerd.
2013-01-25	An observation data was registerd.

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## MIRAI MR99-K01 Cloud Ceiling

Last Modified: 2014-07-12

ReadMe Observation Data **Data Format**

Cruise ID: [MR99-K01](#)

Cloud Ceiling: Raw

Data Policy: [JAMSTEC](#)

### Ceiling Raw

The record length of the data file is 56 bytes.

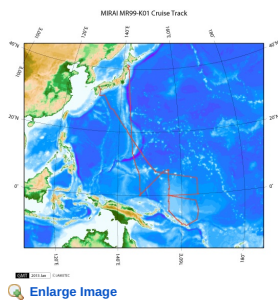
No.	Column	Content	Format	Remarks
1	1 - 8	Date	i4,i2,i2	YYYYMMDD (UTC)
2	10 - 15	Time	i2,i2,i2	hhmmss (UTC)
3	17 - 19	Operating software	a3	'CT0' : CT-VIEW 'CL0' : CL-VIEW
4	20 - 21	Software version	i2	Version of operating software
5	22	Data status	i1	1: Cloud base height/vertical visibility data 2: 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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#### MR99-K01

Ship Name: MIRAI  
Period: 1999-02-07 - 1999-03-31  
Chief Scientist: Yoshifumi Kuroda (JAMSTEC)  
Project Name: [Tropical Ocean Climate Study (TOCS)]

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

Cruise ID: [MR99-K01](#)

Cloud Ceiling: Raw

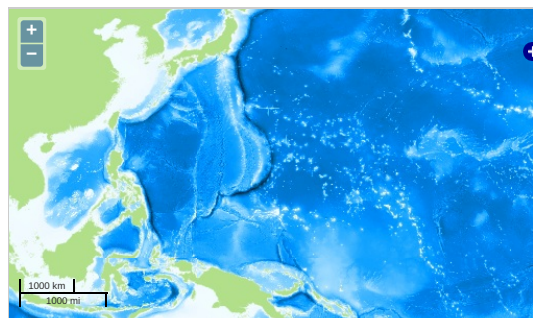
Data Policy: [JAMSTEC](#)

Observation Items: Cloud base height

Science Keywords:

ATMOSPHERE > CLOUDS > CLOUD  
BASE

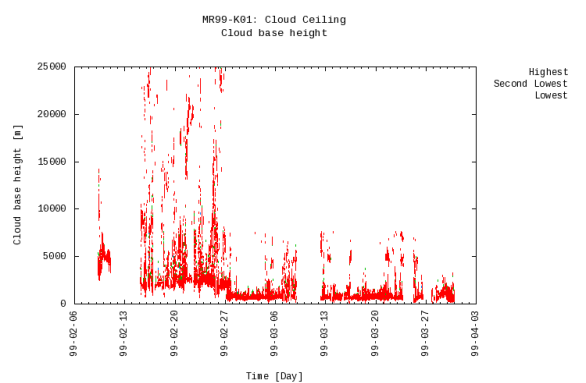
### Observation Map



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

Imagery reproduced from ...

### Figures



### Data List

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☐ File names

☐ C9020907.DAT

☐ C9020913.DAT

☐ C9020919.DAT

☐ C9021001.DAT

☐ C9021007.DAT

☐ C9021013.DAT

☐ C9021019.DAT

☐ C9021101.DAT

☐ C9021504.DAT

☐ C9021510.DAT

☐ C9021516.DAT

☐ C9021522.DAT

☐ C9021604.DAT

☐ C9021610.DAT

☐ C9021616.DAT

☐ C9021622.DAT

☐ C9021704.DAT

☐ C9021710.DAT

☐ C9021716.DAT

☐ C9021722.DAT

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☐ C9021810.DAT

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☐ C9021904.DAT

☐ C9021910.DAT

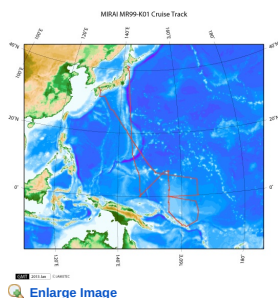
☐ C9021916.DAT

☐ C9021922.DAT

	C9021922.DAT
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#### Related Information



**MR99-K01**  
 Ship Name: MIRAI  
 Period: 1999-02-07 - 1999-03-31  
 Chief Scientist: Yoshifumi Kuroda (JAMSTEC)  
 Project Name: [Tropical Ocean Climate Study (TOCS)]

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