

MIRAI MR11-03 Cloud Ceiling

Last Modified: 2014-08-08

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Cruise ID: **MR11-03**

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/MR11-03_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:

Ceiliometer (- MR12-05Leg3)



Overview

Ceiliometer 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: $\pm 2\%$ or $\pm 1/2$ * 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)

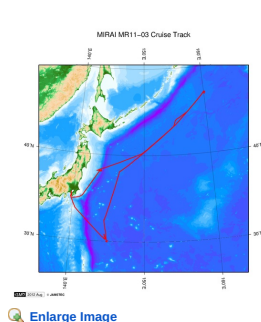
Note

(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.

Related Information



MR11-03

Ship Name: MIRAI

Period: 2011-04-14 - 2011-05-05

Chief Scientist: Makio Honda (JAMSTEC)

Project Name: [Station K2, Station S1, Station KEO, Station KNOT]

Proposal ▶ Studies on the microbial-geochemical processes that regulate the operation of the biological pump in the subarctic and subtropical regions of the western North Pacific

Title:

[Enlarge Image](#)

Update History

2014-08-08 An observation data was registered.
2012-09-28 An observation data was registered.

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SHINSEI MARU
HAKUHO MARU

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KAIKO
SHINKAI 2000
SHINKAI 6500
DEEP TOW
HYPER-DOLPHIN
URASHIMA
YOKOSUKA DEEP TOW
6K Camera DEEP TOW
6K Sonar DEEP TOW
KM-ROV
POWER GRAB
SAMPLER (SHELL)
POWER GRAB
SAMPLER (CLOW)
BMS

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Cruise ID:

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Cruise ID: **MR11-03**

Cloud Ceiling: Raw

Data Policy: [JAMSTEC](#)

Ceiling Raw

The record length of the data file is 56 bytes.

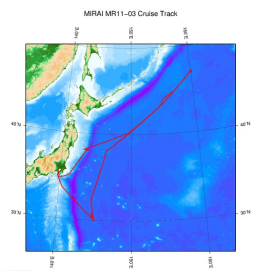
No.	Column	Content	Format	Remarks
1	1 - 8	Date	i4,i2,i2	YYYYMMDD (UTC)
2	10 - 15	Time	i2,i2,i2	hhmmss (UTC)
3	17 - 19	Operating software	a3	'CT0' : CT-VIEW 'CL0' : CL-VIEW
4	20 - 21	Software version	i2	Version of operating software
5	22	Data status	i1	1: Cloud base height/vertical visibility data 2: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

Related Information



MIRAI MR11-03 Cruise Track

[Enlarge Image](#)

MR11-03

Ship Name: MIRAI
Period: 2011-04-14 - 2011-05-05
Chief Scientist: Makio Honda (JAMSTEC)
Project Name: [Station K2, Station S1, Station KEO, Station KNOT]
Proposal ▶ Studies on the microbial-geochemical processes that regulate the operation of the biological pump in the subarctic and subtropical regions of the western North Pacific

Update History	
2014-08-08	An observation data was registerd.
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Information of the Ships

NATSUSHIMA

KAIYO

YOKOSUKA

MIRAI

KAIREI

CHIKYU

KAIIMEI

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6K Camera DEEP TOW

6K Sonar DEEP TOW

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POWER GRAB SAMPLER (SHELL)

POWER GRAB SAMPLER (CLOW)

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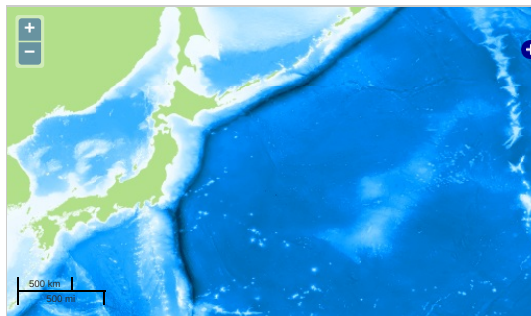
Data Policy: [JAMSTEC](#)

Observation Items: Cloud base height

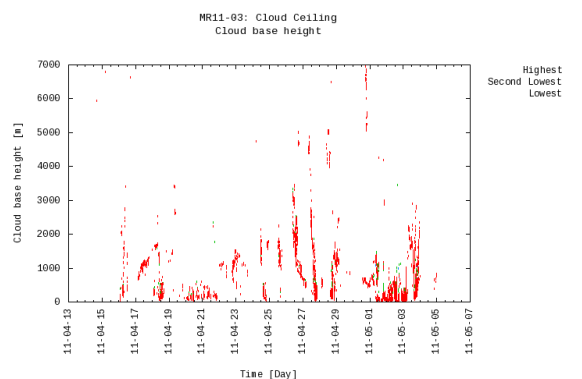
Science Keywords:

ATMOSPHERE > CLOUDS > CLOUD
BASE

Observation Map



Figures



Data List

[Add to Basket](#)

☐ File names

☐ A1041400.DAT

☐ A1041500.DAT

☐ A1041600.DAT

☐ A1041700.DAT

☐ A1041800.DAT

☐ A1041900.DAT

☐ A1042000.DAT

☐ A1042100.DAT

☐ A1042200.DAT

☐ A1042300.DAT

☐ A1042400.DAT

☐ A1042500.DAT

☐ A1042600.DAT

☐ A1042700.DAT

☐ A1042800.DAT

☐ A1042900.DAT

☐ A1043000.DAT

☐ A1050100.DAT

☐ A1050200.DAT

☐ A1050300.DAT

☐ A1050400.DAT

☐ A1050500.DAT

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Chief Scientist: Makio Honda (JAMSTEC)
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	Publication List	Amount of Public Info.
1980-1989	1980-1989	1980-1989
1990-1999	1990-1999	1990-1999
2000-2009	2000-2009	2000-2009
2010-2019	2010-2019	2010-2019
2020-2029	2020-2029	2020-2029
2030-2039	2030-2039	2030-2039
2040-2049	2040-2049	2040-2049
2050-2059	2050-2059	2050-2059
2060-2069	2060-2069	2060-2069
2070-2079	2070-2079	2070-2079
2080-2089	2080-2089	2080-2089
2090-2099	2090-2099	2090-2099
2100-2109	2100-2109	2100-2109
2110-2119	2110-2119	2110-2119
2120-2129	2120-2129	2120-2129
2130-2139	2130-2139	2130-2139
2140-2149	2140-2149	2140-2149
2150-2159	2150-2159	2150-2159
2160-2169	2160-2169	2160-2169
2170-2179	2170-2179	2170-2179
2180-2189	2180-2189	2180-2189
2190-2199	2190-2199	2190-2199
2200-2209	2200-2209	2200-2209
2210-2219	2210-2219	2210-2219
2220-2229	2220-2229	2220-2229
2230-2239	2230-2239	2230-2239
2240-2249	2240-2249	2240-2249
2250-2259	2250-2259	2250-2259
2260-2269	2260-2269	2260-2269
2270-2279	2270-2279	2270-2279
2280-2289	2280-2289	2280-2289
2290-2299	2290-2299	2290-2299
2300-2309	2300-2309	2300-2309
2310-2319	2310-2319	2310-2319
2320-2329	2320-2329	2320-2329
2330-2339	2330-2339	2330-2339
2340-2349	2340-2349	2340-2349
2350-2359	2350-2359	2350-2359
2360-2369	2360-2369	2360-2369
2370-2379	2370-2379	2370-2379
2380-2389	2380-2389	2380-2389
2390-2399	2390-2399	2390-2399
2400-2409	2400-2409	2400-2409
2410-2419	2410-2419	2410-2419
2420-2429	2420-2429	2420-2429
2430-2439	2430-2439	2430-2439
2440-2449	2440-2449	2440-2449
2450-2459	2450-2459	2450-2459
2460-2469	2460-2469	2460-2469
2470-2479	2470-2479	2470-2479
2480-2489	2480-2489	2480-2489
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2510-2519	2510-2519	2510-2519
2520-2529	2520-2529	2520-2529
2530-2539	2530-2539	2530-2539
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2560-2569	2560-2569	2560-2569
2570-2579	2570-2579	2570-2579
2580-2589	2580-2589	2580-2589
2590-2599	2590-2599	2590-2599
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2610-2619	2610-2619	2610-2619
2620-2629	2620-2629	2620-2629
2630-2639	2630-2639	2630-2639
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2770-2779	2770-2779	2770-2779
2780-2789	2780-2789	2780-2789
2790-2799	2790-2799	2790-2799
2800-2809	2800-2809	2800-2809
2810-2819	2810-2819	2810-2819
2820-2829	282	

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Cruise ID:

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