MIRAI MR16-09 Leg3 Cloud Ceiling

Last Modified: 2017-09-29

ReadMe | Observation Data | Data Format

Cruise ID: MR16-09 Leg3
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/MR16-09_leg1-4_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.

Period (UTC)
2017-02-10 21:00 – 2017-03-03 07:00

Instrument
Instrument:
Ceilometer (MR13-02B -)

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:	CL51
Serial number:	J0510004
Measurement range:	up to 15000m (Backscatter measuement) up to 13000m (Cloud detection)
Resolution:	10m
Sampling rate:	10-120 seconds available (36sec as default)
Accuracy:	greater of +-1% or +-5m
Location:	Compass deck bow side (18 meters high from sea surface)
Recording software:	CL-VIEW Ver2.00 (after MR13-02B Leg1)

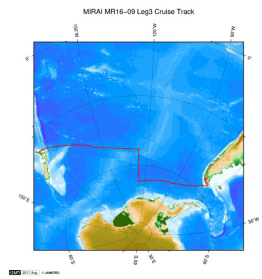
Note

(1) File naming rule for YYMMDDHH.DAT(CL-VIEW Ver2.00).

YY :	Year in 2 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



Enlarge Image

MR16-09 Leg3
Ship Name: MIRAI
Period: 2017-02-08 - 2017-03-04
Chief Scientist: Hiroshi Uchida (JAMSTEC)
Project Name: [POST-WOCE Hydrography]
Proposal Title: Ship-borne measurements of aerosols in the marine atmosphere: Investigation of potential influence of marine aerosol particles on the climate;

Update History

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Ceiling Raw

The record length of the data file is 56 bytes.

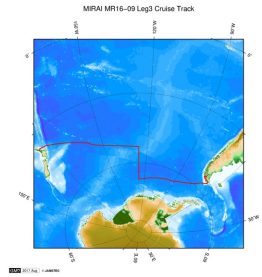
No.	Column	Content	Format	Remarks
1	1 - 8	Date	i4,i2,i2	YYYYMMDD (UTC)
2	10 - 15	Time	i2,i2,i2	hhmmss (UTC)
3	17 - 19	Operating software	a3	'CT0' : CT-VIEW 'CL0' : CL-VIEW
4	20 - 21	Software version	i2	Version of operating software
5	22	Data status	i1	1: Cloud base height/vertical visibility data 2: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

Information of the Submersibles
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

Go to a Cruise Information
Cruise ID: Go

Go to a Dive Information
Dive ID: ---- Go

JAMSTEC 国立研究開発法人 海洋研究開発機構
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

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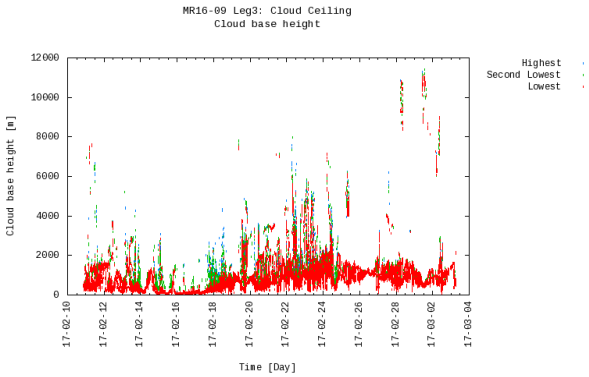
Observation Map

Imagery reproduced from ...

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

Figures



Data List

Add to Basket

File names
17021000.DAT
17021100.DAT
17021200.DAT
17021300.DAT
17021400.DAT
17021500.DAT
17021600.DAT
17021700.DAT
17021800.DAT
17021900.DAT
17022000.DAT
17022100.DAT
17022200.DAT
17022300.DAT
17022400.DAT
17022500.DAT
17022600.DAT
17022700.DAT
17022800.DAT
17030100.DAT
17030200.DAT
17030300.DAT

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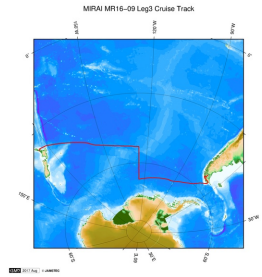

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