

MIRAI MR02-K06 Leg1 Conductivity-Temperature-Depth Profiler (CTD)

Last Modified: 2017-06-22

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

Cruise ID: [MR02-K06 Leg1](#)

Conductivity-Temperature-Depth Profiler (CTD): Processed (DMO)-QCed

Data Policy: [JAMSTEC](#)

Observation Items: Pressure, Temperature, Salinity, Dissolved oxygen

Science Keywords:

OCEANS > OCEAN CHEMISTRY > OXYGEN
OCEANS > OCEAN TEMPERATURE > WATER TEMPERATURE
OCEANS > SALINITY/DENSITY > SALINITY

Cruise Report

http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR02-K06_leg1_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:

Water sampling system with CTD (30
litters * 24 bottles)



Instrument:

Water sampling system with CTD (12
litters * 36 bottles)



Instrument:

Water sampling system with CTD (12
litters * 12 bottles)



Instrument:

Conductivity temperature depth
measurements (CTD)



Overview

CTD(Conductivity-Temperature-Depth profiler) is used to observe the vertical profiles of temperature and conductivity.

Usually, this system is operated with multicylinder water sampler.

Observed signal is transmitted from sensor to the operation room on board using wire cable, and electric power is supplied from vessel to sensor.

Details of sensors attached to CTD system for MR02-K06 Leg1 cruise are presented in "System".

The following software, developed and supplied by the Sea-Bird Electronics, Inc., was used in MR02-K06 Leg1.

SEASAVE(ver 5.27b) for data acquisition

SEASOFT(ver 5.27b) for data processing

Data presented on this website is averaged over 1db.

System

• Pressure sensor

Model : SBE9plus, Sea-Bird Electronics,Inc.

Serial number : 79511

Measurement range : up to 10500m

Accuracy : 0.015% F.S.

Resolution : 0.001% F.S.

• Temperature sensor

Model : SBE3, Sea-Bird Electronics,Inc.

Serial number : 031524

Measurement range : -5.0 to +35degC

Accuracy : 0.001degC

Resolution : 0.0002degC

• Salinity sensor

Model : SBE4, Sea-Bird Electronics,Inc.

Serial number : 041206

Measurement range : 0.0 to 7 S/m

Accuracy : 0.0003 S/m

Resolution : 0.00004 S/m

- DO sensor

Model : SBE43, Sea-Bird Electronics, Inc.
Serial number : 430205
Measurement range : 120% of surface saturation
Accuracy : 2% of saturation

Sensors used in each cast is as follows.

Cast name	Serial number of sensor			
	Pressure	Temperature	Salinity	Dissolved Oxygen
K6S001	79511	031524	041206	430205
K6S002	79511	031524	041206	430205
K6S003	79511	031524	041206	430205
K6S004	79511	031524	041206	430205
K6S005	79511	031524	041206	430205
K6S006	79511	031524	041206	430205
K6S007	79511	031524	041206	430205
K6S008	79511	031524	041206	430205
K6S009	79511	031524	041206	430205
K6S010	79511	031524	041206	430205
K6S011	79511	031524	041206	430205
K6S012	79511	031524	041206	430205
K6S013	79511	031524	041206	430205
K6S014	79511	031524	041206	430205
K6S015	79511	031524	041206	430205
K6S016	79511	031524	041206	430205
K6S017	79511	031524	041206	430205
K6S018	79511	031524	041206	430205
K6S019	79511	031524	041206	430205
K6S020	79511	031524	041206	430205
K6S021	79511	031524	041206	430205
K6S022	79511	031524	041206	430205
K6S023	79511	031524	041206	430205
K6S024	79511	031524	041206	430205
K6S025	79511	031524	041206	430205
K6S026	79511	031524	041206	430205
K6S027	79511	031524	041206	430205
K6S028	79511	031524	041206	430205
K6S029	79511	031524	041206	430205
K6S030	79511	031524	041206	430205
K6S031	79511	031524	041206	430205
K6S032	79511	031524	041206	430205
K6S033	79511	031524	041206	430205
K6S034	79511	031524	041206	430205
K6S035	79511	031524	041206	430205
K6S036	79511	031524	041206	430205
K6S037	79511	031524	041206	430205
K6S038	79511	031524	041206	430205
K6S039	79511	031524	041206	430205
K6S040	79511	031524	041206	430205
K6S041	79511	031524	041206	430205
K6S042	79511	031524	041206	430205
K6S043	79511	031524	041206	430205
K6S044	79511	031524	041206	430205
K6S045	79511	031524	041206	430205
K6S046	79511	031524	041206	430205
K6S047	79511	031524	041206	430205
K6S048	79511	031524	041206	430205
K6S049	79511	031524	041206	430205
K6S050	79511	031524	041206	430205
K6S051	79511	031524	041206	430205
K6S052	79511	031524	041206	430205
K6S053	79511	031524	041206	430205
K6S054	79511	031524	041206	430205
K6S055	79511	031524	041206	430205
K6S056	79511	031524	041206	430205
K6S057	79511	031524	041206	430205
K6S058	79511	031524	041206	430205
K6S059	79511	031524	041206	430205
K6S060	79511	031524	041206	430205
K6S061	79511	031524	041206	430205
K6S062	79511	031524	041206	430205
K6S063	79511	031524	041206	430205
K6S064	79511	031524	041206	430205
K6S065	79511	031524	041206	430205
K6S066	79511	031524	041206	430205
K6S067	79511	031524	041206	430205
K6S068	79511	031524	041206	430205

Cast name	Serial number of sensor		Salinity	Dissolved Oxygen
	Pressure	Temperature		
K6S069	79511	031524	041206	430205
K6S070	79511	031524	041206	430205
K6S071	79511	031524	041206	430205
K6S072	79511	031524	041206	430205
K6S073	79511	031524	041206	430205
K6S074	79511	031524	041206	430205
K6S075	79511	031524	041206	430205
K6S076	79511	031524	041206	430205
K6S077	79511	031524	041206	430205
K6S078	79511	031524	041206	430205
K6S079	79511	031524	041206	430205
K6S080	79511	031524	041206	430205
K6S081	79511	031524	041206	430205
K6S082	79511	031524	041206	430205
K6S083	79511	031524	041206	430205
K6S084	79511	031524	041206	430205
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K6S109	79511	031524	041206	430205
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K6S117	79511	031524	041206	430205
K6S118	79511	031524	041206	430205
K6S119	79511	031524	041206	430205
K6S120	79511	031524	041206	430205
K6S121	79511	031524	041206	430205
K6S122	79511	031524	041206	430205
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K6S125	79511	031524	041206	430205
K6S126	79511	031524	041206	430205
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K6S128	79511	031524	041206	430205
K6S129	79511	031524	041206	430205
K6S130	79511	031524	041206	430205
K6S131	79511	031524	041206	430205
K6S132	79511	031524	041206	430205
K6S133	79511	031524	041206	430205
K6S134	79511	031524	041206	430205
K6S135	79511	031524	041206	430205
K6S136	79511	031524	041206	430205
K6S137	79511	031524	041206	430205
K6S138	79511	031524	041206	430205
K6S139	79511	031524	041206	430205
K6S140	79511	031524	041206	430205
K6S141	79511	031524	041206	430205
K6S142	79511	031524	041206	430205
K6S143	79511	031524	041206	430205
K6S144	79511	031524	041206	430205
K6S145	79511	031524	041206	430205

Cast name	Serial number of sensor	Pressure	Temperature	Salinity	Dissolved Oxygen
K6S146	79511	031524	041206	430205	
K6S147	79511	031524	041206	430205	
K6S148	79511	031524	041206	430205	
K6S149	79511	031524	041206	430205	
K6S150	79511	031524	041206	430205	
K6S151	79511	031524	041206	430205	
K6S152	79511	031524	041206	430205	
K6S153	79511	031524	041206	430205	
K6S154	79511	031524	041206	430205	
K6S155	79511	031524	041206	430205	
K6S156	79511	031524	041206	430205	
K6S157	79511	031524	041206	430205	
K6S158	79511	031524	041206	430205	
K6S159	79511	031524	041206	430205	
K6S160	79511	031524	041206	430205	
K6S161	79511	031524	041206	430205	
K6S162	79511	031524	041206	430205	
K6S163	79511	031524	041206	430205	
K6S164	79511	031524	041206	430205	
K6S165	79511	031524	041206	430205	
K6S166	79511	031524	041206	430205	
K6S167	79511	031524	041206	430205	
K6S168	79511	031524	041206	430205	
K6S169	79511	031524	041206	430205	
K6S170	79511	031524	041206	430205	
K6S171	79511	031524	041206	430205	
K6S172	79511	031524	041206	430205	

Calibration Information

Calibration Information is as follows.

Calibration Information

Data processing

(1) Data processing sequence for SEASOFT is as follows;

command	function
datcrv	Convert raw data to engineering units, and store converted data in file.
section	Extract rows of data from file.
alignctd	Align data relative to pressure(typically used for conductivity, temperature, and oxygen).
wildedit	Mark a data value with badflag to eliminate wild points.
celltm	Perform conductivity thermal mass correction.
filter	Low-pass filter columns of data.
loopedit	Mark a scan with badflag if scan fails pressure reversal or minimum velocity tests.
binavg	Average data, basing bins on pressure, depth, scan number, or time range.
derive	Calculate salinity, density, etc..
split	Split data in file into upcast and downcast files.

(2) Quality control

QCed data were added flag according to the NODC (National Oceanographic Data Center) quality control procedure.

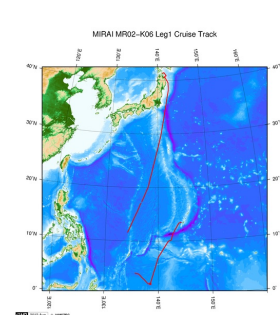
- 1) The gradient check of adjacent depth data
- 2) The density inversion check
- 3) The broad range check set up at given ocean space and depth

Please see the site of NODC of the following link for quality control procedure in detail.

QUALITY CONTROL AND PROCESSING OF HISTORICAL OCEANOGRAPHIC TEMPERATURE, SALINITY, AND OXYGEN DATA

In addition, an abnormal value is identified by a visual check, and the data after visual QC is released.

Related Information



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MR02-K06 Leg1

Ship Name: MIRAI
Period: 2002-11-13 - 2002-12-16
Chief Scientist: Kunio Yoneyama (JAMSTEC)
Project Name: [MJO Research]

Update History

2017-06-22	An observation data was registered.
2014-07-18	An observation data was registered.
2014-02-06	An observation data was registered.
2013-03-27	An observation data was registered.
2012-12-25	An observation data was registered.

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[URASHIMA](#)
[YOKOSUKA DEEP TOW](#)
[6K Camera DEEP TOW](#)
[6K Sonar DEEP TOW](#)
[KM-ROV](#)
[POWER GRAB SAMPLER \(SHELL\)](#)
[POWER GRAB SAMPLER \(CLOW\)](#)
[BMS](#)

Cruise ID:

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Dive ID:

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海洋研究開発機構
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

MIRAI MR02-K06 Leg1 Conductivity-Temperature-Depth Profiler (CTD)

Last Modified: 2017-06-22

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 Cruise ID: [MR02-K06 Leg1](#)

Conductivity-Temperature-Depth Profiler (CTD): Processed (DMO)-QCed

 Data Policy: [JAMSTEC](#)

CTD DMO

Format Description for the Corrected Data

Provided in the Exchange Format of CCHDO (CLIVAR and Carbon Hydrographic Data Office). Please see the following link for details of Exchange Format.

[CCHDO | CLIVAR & Carbon Hydrographic Data Office](#)

Data in following cruise is not expressed with Exchange Format. Please see the site of each cruise for format.

MR02-K05 Leg1

MR04-05

Format Description for the QCed Data

Each data file contains one line header (meta data) followed by data lines for each cast.

The number of data lines are recorded in the header.

Header part

No.	Column	Content	Format	Remarks
1	1	Header ID	a1	fixed as '#'
2	3 - 6	Data ID	a4	CTD
3	8 - 22	Cruise ID	a15	MYYY-(K)XX(_legx)
4	24 - 31	Cast name	a8	
5	33 - 40	Date	i8	YYYYMMDD (UTC)
6	42 - 45	Time	i4	hhmm (UTC)
7	47 - 55	Latitude	i2,a1,f5.2,a1	dd-mm.mmN(S)
8	57 - 66	Longitude	i3,a1,f5.2,a1	ddd-mm.mmE(W)
9	68 - 71	Number of data lines	i4	
10	72 - 73	Terminator	-	CR+LF

Data part

No.	Column	Content	Unit	Format	Remarks
1	1 - 11	Pressure	dbar	f11.3	
2	12 - 22	Temperature	deg-C	f11.4	ITS-90
3	23 - 33	Salinity	PSU	f11.4	PSS-78
4	34 - 44	Dissolved oxygen	umol/kg	f11.3	
5	45 - 55	Flag	-	i11	1 - 7 : space 8 : flag of pressure 9 : flag of temperature 10 : flag of salinity 11 : flag of dissolved oxygen * reference : Definition of Quality Control Flags
6	56 - 57	Terminator	-	-	CR+LF

Each contents of the data part is stored in 11 bytes.

Missing value is presented by '-5', and error value is presented by '-9'.

Definition of Quality Control Flags

1. Depth Flags

- 0 - accepted value
- 1 - error in recorded depth (same or less than previous depth)
- 2 - density inversion

2. Observed Level Flags

- N - missing value
- 0 - accepted value
- 1 - range outlier (outside of broad range check)
- 2 - failed inversion check
- 3 - failed gradient check
- 4 - zero anomaly
- 5 - failed combined gradient and inversion checks
- 6 - failed range and inversion checks
- 7 - failed range and gradient checks
- 8 - failed range and zero anomaly checks
- 9 - failed range and combined gradient and inversion checks
- A - failed visual check

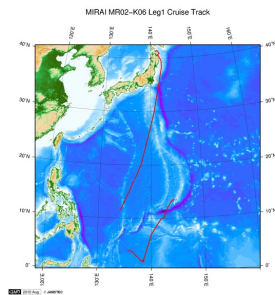
QCed data were added flag according to the NODC (National Oceanographic Data Center) quality control procedure, additionally visually checked. Please see the site of NODC of the following link for quality control procedure.

[QUALITY CONTROL AND PROCESSING OF HISTORICAL OCEANOGRAPHIC TEMPERATURE, SALINITY, AND OXYGEN DATA](#)

Sample Program

[ex_read2.f](#)

Related Information



 [Enlarge Image](#)

MR02-K06 Leg1

Ship Name: MIRAI
Period: 2002-11-13 - 2002-12-16
Chief Scientist: Kunio Yoneyama (JAMSTEC)
Project Name: [MJO Research]

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Data

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Information of the Ships

NATSUSHIMA

KAIYO

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 to a Dive Information

Dive ID:

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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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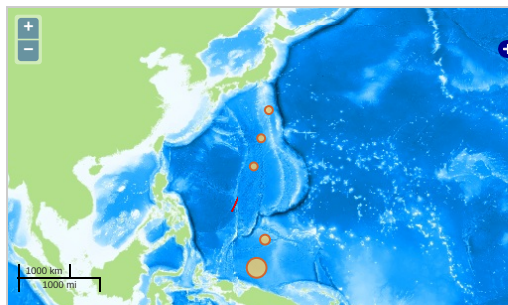
Observation Items: Pressure, Temperature, Salinity, Dissolved oxygen

Science Keywords:

OCEANS > OCEAN CHEMISTRY > OXYGEN
OCEANS > OCEAN > WATER
TEMPERATURE TEMPERATURE
OCEANS > SALINITY/DENSITY > SALINITY

Observation Map

1. Clicking the icon displays a balloon with observation information.
2. Then click the observation name, figures will be displayed.



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

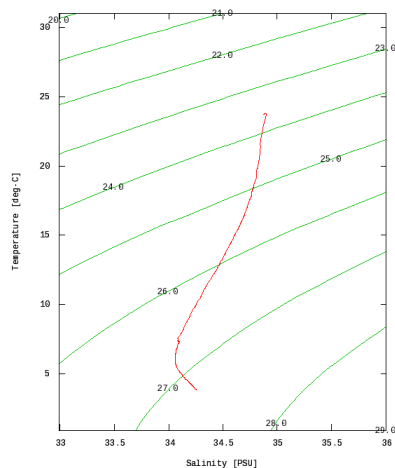
Imagery reproduced from ...

Figures

K6S001



MR02-K06 Leg1: K6S001
Conductivity-Temperature-Depth Profiler (CTD): Salinity



Only values evaluated as "good" (all flags are 0) are plotted in profiles.
Please see Format Page for the definition of quality flags.







Data List

[Add to Basket](#)

File names

<input type="checkbox"/>	K6S001.dat
<input type="checkbox"/>	K6S002.dat
<input type="checkbox"/>	K6S003.dat
<input type="checkbox"/>	K6S004.dat
<input type="checkbox"/>	K6S005.dat
<input type="checkbox"/>	K6S006.dat
<input type="checkbox"/>	K6S007.dat
<input type="checkbox"/>	K6S008.dat
<input type="checkbox"/>	K6S009.dat
<input type="checkbox"/>	K6S010.dat
<input type="checkbox"/>	K6S011.dat
<input type="checkbox"/>	K6S012.dat
<input type="checkbox"/>	K6S013.dat

File names
K6S014.dat
K6S015.dat
K6S016.dat
K6S017.dat
K6S018.dat
K6S019.dat
K6S020.dat
K6S021.dat
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	ex_read2.f (Sample Program)

● Observation List
The list of observation is shown as follows.

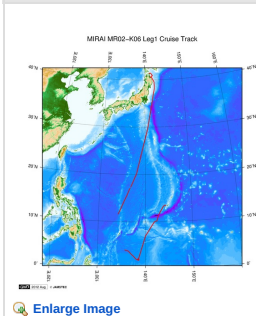
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Observation	Time and Date	Lat. (N)	Long. (E)
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K6S003	2002-11-17 20:02	20.0008	138.0000
K6S004	2002-11-21 23:30	1.9938	138.5071
K6S005	2002-11-22 02:27	1.9300	138.4986
K6S006	2002-11-22 05:26	1.8798	138.5771
K6S007	2002-11-22 08:27	1.9961	138.5000
K6S008	2002-11-22 11:28	1.9221	138.4275
K6S009	2002-11-22 14:28	1.9861	138.5061
K6S010	2002-11-22 17:29	1.9933	138.4886
K6S011	2002-11-22 20:29	1.9975	138.5023
K6S012	2002-11-22 23:27	2.0080	138.4955
K6S013	2002-11-23 02:24	1.9966	138.4963
K6S014	2002-11-23 05:22	2.0040	138.5013
K6S015	2002-11-23 08:22	1.9996	138.5026
K6S016	2002-11-23 11:27	2.0015	138.5165
K6S017	2002-11-23 14:27	1.9915	138.5068
K6S018	2002-11-23 17:27	1.9956	138.5038
K6S019	2002-11-23 20:27	1.9956	138.5033
K6S020	2002-11-23 23:28	1.9951	138.5038
K6S021	2002-11-24 02:20	1.9970	138.5038
K6S022	2002-11-24 05:26	2.0030	138.5031
K6S023	2002-11-24 08:23	2.0008	138.5061
K6S024	2002-11-24 11:27	1.9900	138.5075
K6S025	2002-11-24 14:25	1.9935	138.5100
K6S026	2002-11-24 17:28	1.9950	138.5031
K6S027	2002-11-24 20:28	1.9975	138.5080
K6S028	2002-11-24 23:26	1.9958	138.5023
K6S029	2002-11-25 02:26	1.9953	138.5071
K6S030	2002-11-25 05:26	1.9981	138.5011
K6S031	2002-11-25 08:24	1.9993	138.5015
K6S032	2002-11-25 11:28	1.9960	138.5065
K6S033	2002-11-25 14:23	1.9970	138.4965
K6S034	2002-11-25 17:29	1.9953	138.4961
K6S035	2002-11-25 20:28	2.0011	138.5016
K6S036	2002-11-25 23:26	2.0000	138.5010
K6S037	2002-11-26 02:26	1.9993	138.5036
K6S038	2002-11-26 05:25	2.0003	138.5036
K6S039	2002-11-26 08:27	2.0111	138.4983
K6S040	2002-11-26 11:27	2.0019	138.4993
K6S041	2002-11-26 14:27	2.0038	138.5093
K6S042	2002-11-26 17:28	1.9931	138.5029
K6S043	2002-11-26 20:28	2.0036	138.5048
K6S044	2002-11-26 23:26	2.0006	138.5003
K6S045	2002-11-27 02:26	1.9993	138.5075
K6S046	2002-11-27 05:27	2.0005	138.5036
K6S047	2002-11-27 08:27	1.9981	138.5008
K6S048	2002-11-27 11:27	1.9988	138.5000
K6S049	2002-11-27 14:27	2.0046	138.5029
K6S050	2002-11-27 17:27	2.0003	138.4991
K6S051	2002-11-27 20:28	1.9988	138.4943
K6S052	2002-11-27 23:26	2.0053	138.5001
K6S053	2002-11-28 02:27	2.0008	138.5018
K6S054	2002-11-28 05:30	1.9883	138.4943
K6S055	2002-11-28 08:28	1.9998	138.5115
K6S056	2002-11-28 11:30	2.0010	138.4983
K6S057	2002-11-28 14:25	2.0041	138.5081
K6S058	2002-11-28 17:28	1.9981	138.5086
K6S059	2002-11-28 20:28	1.9985	138.4993
K6S060	2002-11-28 23:27	1.9901	138.5023
K6S061	2002-11-29 02:28	1.9988	138.5046
K6S062	2002-11-29 05:27	1.9978	138.5060
K6S063	2002-11-29 08:27	1.9958	138.4968
K6S064	2002-11-29 11:27	1.9998	138.5033
K6S065	2002-11-29 14:26	2.0005	138.5056
K6S066	2002-11-29 17:28	2.0011	138.5063
K6S067	2002-11-29 20:28	2.0000	138.5006
K6S068	2002-11-29 23:26	1.9981	138.4943
K6S069	2002-11-30 02:27	2.0006	138.5018
K6S070	2002-11-30 05:27	1.9940	138.5055
K6S071	2002-11-30 08:27	1.9960	138.5043
K6S072	2002-11-30 11:27	1.9998	138.5120
K6S073	2002-11-30 14:27	2.0028	138.4956
K6S074	2002-11-30 17:29	1.9983	138.5066
K6S075	2002-11-30 20:28	1.9985	138.5048
K6S076	2002-11-30 23:26	1.9995	138.5015
K6S077	2002-12-01 02:25	2.0021	138.5038
K6S078	2002-12-01 05:29	2.0013	138.5011
K6S079	2002-12-01 08:25	1.9973	138.5016
K6S080	2002-12-01 11:26	1.9985	138.5066
K6S081	2002-12-01 14:26	1.9988	138.5028
K6S082	2002-12-01 17:25	2.0021	138.5008
K6S083	2002-12-01 20:25	2.0030	138.5008

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K6S088	2002-12-02 11:26	2.0001	138.4950
K6S089	2002-12-02 14:27	2.0013	138.5018
K6S090	2002-12-02 17:27	1.9998	138.5023
K6S091	2002-12-02 20:25	2.0016	138.5006
K6S092	2002-12-02 23:24	1.9975	138.4968
K6S093	2002-12-03 02:26	2.0018	138.5016
K6S094	2002-12-03 05:25	1.9995	138.5026
K6S095	2002-12-03 08:25	1.9920	138.5004
K6S096	2002-12-03 11:27	1.9951	138.5043
K6S097	2002-12-03 14:27	1.9970	138.5058
K6S098	2002-12-03 17:28	2.0025	138.5060
K6S099	2002-12-03 20:24	2.0030	138.5055
K6S100	2002-12-03 23:24	2.0003	138.5089
K6S101	2002-12-04 02:26	2.0040	138.5003
K6S102	2002-12-04 05:26	1.9980	138.5003
K6S103	2002-12-04 08:26	1.9936	138.5055
K6S104	2002-12-04 11:32	1.9925	138.5040
K6S105	2002-12-04 14:28	2.0076	138.5196
K6S106	2002-12-04 17:28	2.0030	138.5068
K6S107	2002-12-04 20:25	2.0028	138.5006
K6S108	2002-12-04 23:24	2.0011	138.4985
K6S109	2002-12-05 02:26	1.9985	138.4950
K6S110	2002-12-05 05:26	1.9983	138.5000
K6S111	2002-12-05 08:25	1.9981	138.5011
K6S112	2002-12-05 12:08	1.9968	138.5105
K6S113	2002-12-05 14:26	2.0005	138.5080
K6S114	2002-12-05 17:27	2.0076	138.5053
K6S115	2002-12-05 20:26	2.0025	138.5001
K6S116	2002-12-05 23:24	2.0011	138.5013
K6S117	2002-12-06 02:26	1.9976	138.5066
K6S118	2002-12-06 05:25	1.9965	138.5038
K6S119	2002-12-06 08:27	2.0010	138.4956
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K6S121	2002-12-06 14:30	2.0031	138.5088
K6S122	2002-12-06 17:27	2.0025	138.5018
K6S123	2002-12-06 20:24	2.0081	138.5126
K6S124	2002-12-06 23:24	2.0030	138.5028
K6S125	2002-12-07 02:25	2.0111	138.5016
K6S126	2002-12-07 05:25	1.9955	138.5065
K6S127	2002-12-07 08:29	1.9898	138.4906
K6S128	2002-12-07 11:27	1.9985	138.5015
K6S129	2002-12-07 14:26	2.0025	138.4998
K6S130	2002-12-07 17:27	1.9938	138.5029
K6S131	2002-12-07 20:24	2.0023	138.5010
K6S132	2002-12-07 23:24	2.0038	138.4966
K6S133	2002-12-08 02:26	2.0038	138.5025
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K6S139	2002-12-08 20:26	2.0018	138.5031
K6S140	2002-12-08 23:24	2.0018	138.5011
K6S141	2002-12-09 02:25	2.0030	138.5048
K6S142	2002-12-09 05:25	1.9991	138.5015
K6S143	2002-12-09 08:25	2.0048	138.5086
K6S144	2002-12-09 11:27	1.9978	138.5040
K6S145	2002-12-09 14:27	2.0076	138.5011
K6S146	2002-12-09 17:27	2.0036	138.5010
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K6S148	2002-12-09 23:24	2.0008	138.5043
K6S149	2002-12-10 02:26	2.0031	138.5001
K6S150	2002-12-10 05:25	1.9988	138.5025
K6S151	2002-12-10 08:25	2.0025	138.5058
K6S152	2002-12-10 11:28	2.0045	138.5066
K6S153	2002-12-10 14:27	2.0055	138.5081
K6S154	2002-12-10 17:27	2.0045	138.5063
K6S155	2002-12-10 20:26	2.0046	138.5040
K6S156	2002-12-11 00:05	1.9973	138.5160
K6S157	2002-12-11 02:26	2.0055	138.5015
K6S158	2002-12-11 05:25	2.0041	138.5041
K6S159	2002-12-11 08:25	1.9965	138.5143
K6S160	2002-12-11 11:27	2.0025	138.5025
K6S161	2002-12-11 14:27	2.0016	138.4978
K6S162	2002-12-11 17:27	1.9975	138.5001
K6S163	2002-12-11 20:25	2.0008	138.4968
K6S164	2002-12-11 23:25	2.0010	138.4981

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K6S165	2002-12-12 02:25	2.0095	138.4955
K6S166	2002-12-12 05:26	2.0010	138.4998
K6S167	2002-12-12 08:25	1.9965	138.5076
K6S168	2002-12-12 11:27	2.0013	138.5000
K6S169	2002-12-12 14:26	2.0010	138.5004
K6S170	2002-12-13 03:26	5.0048	139.4173
K6S171	2002-12-13 13:05	6.9966	139.9988
K6S172	2002-12-13 14:57	7.0115	139.9960

Related Information



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MR02-K06 Leg1

Ship Name: MIRAI
Period: 2002-11-13 - 2002-12-16
Chief Scientist: Kunio Yoneyama (JAMSTEC)
Project Name: [MJO Research]

Update History

2017-06-22	An observation data was registered.
2014-07-18	An observation data was registered.
2014-02-06	An observation data was registered.
2013-03-27	An observation data was registered.
2012-12-25	An observation data was registered.

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