

MIRAI MR15-03 Leg1 Conductivity-Temperature-Depth Profiler (CTD)

Last Modified: 2017-10-31

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

Cruise ID: [MR15-03 Leg1](#)

Conductivity-Temperature-Depth Profiler (CTD): Processed (PI)

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/MR15-03_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)



Data Citation

Nishino, S., 2015, R/V Mirai Cruise Report MR15-03, edited by Nishino, S., 297pp., JAMSTEC, Yokosuka, Japan.

Upon consultation in advance with the chief of investigation and the person(s) in charge of research issues who gathered that data, we request that the text of the results material contain a statement to the effect that it was obtained during the R/V Mirai cruise of MR15-03, the Chief Scientist, Shigeto Nishino (JAMSTEC), and the following Principal Investigators (PIs) for gathering the data.

Chief Scientist

Shigeto Nishino

Japan Agency for Marine - Earth Science and Technology (JAMSTEC)

2-15 Natsushima, Yokosuka, Kanagawa 237-0061, Japan

Tel: +81-46-867-9487

E-mail: nishinos@jamstec.go.jp

PI for CTD

Shigeto Nishino (JAMSTEC)

Overview

Exchange format data (150 CSV files)

Output items are as follows.

- Pressure (001M001 - 107M001: SN 1027, 108M001 - 109M001: SN 0575)
- Temperature (SN 031359)
- Salinity (SN 042435)
- Dissolved oxygen (RINKO III; SN 0024)
- Fluorescence (SN 2936)
- Light transmission (SN 1363DR)
- Coefficient of beam attenuation (SN 1363DR)
- PAR (SN 049)

System

System

- (1) Pressure sensor: SBE9plus, Sea-Bird Electronics, Inc.
- (2) Temperature sensor: SBE3, Sea-Bird Electronics, Inc.
- (3) Salinity sensor: SBE4, Sea-Bird Electronics, Inc.
- (4) DO sensor: RINKO III, JFE Advantech Co., Ltd.
- (5) Fluorometer: Seapoint Sensors, Inc.
- (6) Transmissometer: C-Star, WET Labs, Inc.
- (7) PAR sensor: Satlantic, Inc.

Correction method

- Temperature

Coefficients of primary temperature correction: correct_tmp_pri_MR1503_p490.txt

Coefficients of dependencies for pressure (Pcor) and time (Tcor) and offset were calculated from the data > 490dbar.

$\text{corrCTDTMP} = \text{CTDTMP} - (\text{Pcor} * \text{CTDPRS} + \text{Tcor} * \text{Sumdate} + \text{offset})$

(Sumdate is assumed to be elapsed days from the sensor calibration date)

- Salinity

Coefficients of primary conductivity correction: correct_cnd_pri_MR1503_p490.txt

Coefficients of dependencies for pressure (Pcor), conductivity (Ccor), conductivity * pressure (CPcor) and offset were calculated from the data > 490dbar.

In this cruise, the time coefficient (Tcor) calculated from the elapsed days based on the first observation is not included.

$\text{corrCTDCND} = \text{CTDCND} - (\text{Ccor} * \text{CTDCND} + \text{Pcor} * \text{CTDPRS} + \text{CPcor} * \text{CTDCND} * \text{CTDPRS} + \text{Offset})$

- Dissolved oxygen

Time variables and correction coefficients of primary RINKO III: correct_rnk_pri_MR1503_t.txt

(Sumdate is assumed to be integrated days during the sensor was switched on)

- Fluorescence

Coefficients of primary fluorescence correction: correct_fl_pri_MR1503_w.txt

We linearly correlated the fluorescence with the bottle data obtained from the Welschmeyer method.

For the coefficients calculation, all the data were used without dividing into time zones.

$\text{corrCTDFL} = \text{slope} * \text{CTDFL} + \text{offset}$

- Light transmission

Time variable of light transmission: correct_xms_MR1503.txt

Vdark was an average of CTD pre-casts for deeper than 990dbar stations.

Vref was calculated from a slope (conf1) and intercept (conf0) of temporal variation using the data within 3σ for deeper than 990dbar stations.

Vref offset was set to be a value not to exceed 100% for the light transmission and fall below 0 for the coefficient of beam attenuation, when they were calculated from the above-mentioned slope.

$V_{\text{dark}} = 0.0012$

$V_{\text{ref}} = -0.0003759 (\text{conf1}) * \text{sumdate} + 4.6113355 (\text{conf0}) + 0.0027041 (\text{offset})$

(Sumdate is assumed to be elapsed days from the time of the first observation at Sta. 001, Cast 1 (001M001), when the CTD was at the bottom.)

- PAR

offset = -0.046

* Reference files of the correction coefficients

Coefficients of primary temperature correction: correct_tmp_pri_MR1503_p490.txt

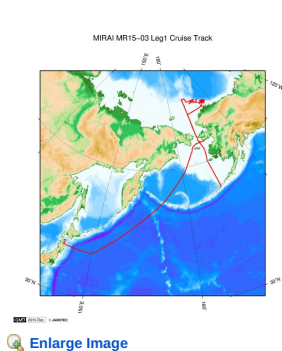
Coefficients of primary conductivity correction: correct_cnd_pri_MR1503_p490.txt

Time variables and correction coefficients of primary RINKO III: correct_rnk_pri_MR1503_t.txt

Coefficients of primary fluorescence correction: correct_fl_pri_MR1503_w.txt

Time variable of light transmission: correct_xms_MR1503.txt

Related Information



MR15-03 Leg1

Ship Name: MIRAI

Period: 2015-08-23 - 2015-10-06

Chief Scientist: Shigeto Nishino (JAMSTEC)

Project Name: [Arctic Ocean Climate System Reaserch]

Proposal ▶ Observational studies on the Arctic Ocean climate and ecosystem variability

Title:

[Enlarge Image](#)

Update History

2017-10-31 An observation data was registered.

JAMSTEC

[Site Policy](#)

[Privacy Policy](#)

[Application for Data and Samples](#)

[Data Policy](#)

[What's New](#)

[Update History](#)

[Feeds](#)

Lists

[Publication List](#)

[Amount of Public Info.](#)

Data

[Map Search](#)

[Data Tree](#)

[Detailed Search](#)

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 \(CLOW\)](#)

Go to a Cruise Information

Cruise ID:

Go to a Dive Information

Dive ID:



MIRAI MR15-03 Leg1 Conductivity-Temperature-Depth Profiler (CTD)

Last Modified: 2017-10-31

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

Cruise ID: [MR15-03 Leg1](#)

Conductivity-Temperature-Depth Profiler (CTD): Processed (PI)

Data Policy: [JAMSTEC](#)

CTD WOCE-type1

Format Description for the Processed (PI) 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

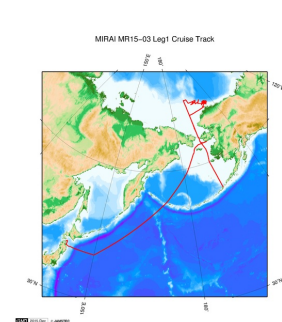
Data part

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'.

Related Information



[Enlarge Image](#)

MR15-03 Leg1

Ship Name: MIRAI

Period: 2015-08-23 - 2015-10-06

Chief Scientist: Shigeto Nishino (JAMSTEC)

Project Name: [Arctic Ocean Climate System Reaserch]

Proposal ▶ Observational studies on the Arctic Ocean climate and ecosystem variability

Title:

Update History

2017-10-31 An observation data was registerd.

JAMSTEC

[Site Policy](#)
[Privacy Policy](#)
[Application for Data and Samples](#)
[Data Policy](#)
[What's New](#)
[Update History](#)
[Feeds](#)

Lists

[Publication List](#)
[Amount of Public Info.](#)

[Data](#)
[Map Search](#)
[Data Tree](#)
[Detailed Search](#)

Information of the Ships

[NATSUSHIMA](#)
[KAIYO](#)
[YOKOSUKA](#)
[MIRAI](#)
[KAIREI](#)
[CHIKYU](#)
[KAIMEI](#)
[SHINSEI MARU](#)

Information of the Submersibles

[KAIKO](#)
[SHINKAI 2000](#)
[SHINKAI 6500](#)
[DEEP TOW](#)
[HYPER-DOLPHIN](#)
[URASHIMA](#)
[YOKOSUKA DEEP TOW](#)
[6K Camera DEEP TOW](#)

Go to a Cruise Information

Cruise ID:

Go to a Dive Information

Dive ID:

HAKUHO MARU

6K Sonar DEEP TOW

KM-ROV

POWER GRAB SAMPLER
(SHELL)

POWER GRAB SAMPLER
(CLOW)

BMS

Copyright 2011 Japan Agency for Marine-Earth Science and
Technology



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

MIRAI MR15-03 Leg1 Conductivity-Temperature-Depth Profiler (CTD)

Last Modified: 2017-10-31

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

Cruise ID: [MR15-03 Leg1](#)

Conductivity-Temperature-Depth Profiler (CTD): Processed (PI)

Data Policy: [JAMSTEC](#)

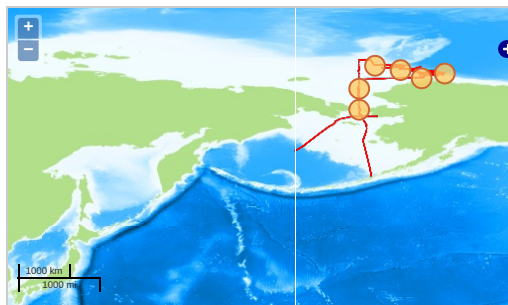
Observation Items: Pressure, Temperature, Salinity, Dissolved oxygen

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

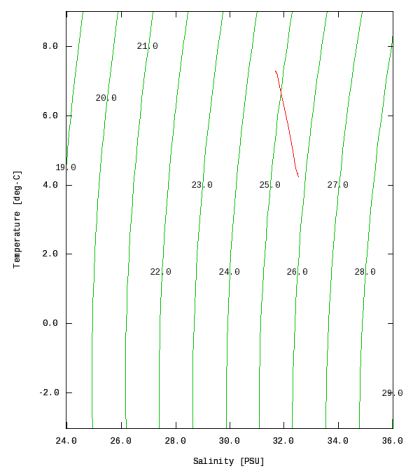
Imagery reproduced from ...

Figures

001M001



MR15-03 Leg1: 001M001
Conductivity-Temperature-Depth Profiler (CTD): Salinity




Data List

[Add to Basket](#)

File names

<input type="checkbox"/>	00001_00001_ct1.csv
<input type="checkbox"/>	00002_00001_ct1.csv
<input type="checkbox"/>	00003_00001_ct1.csv
<input type="checkbox"/>	00004_00001_ct1.csv
<input type="checkbox"/>	00005_00001_ct1.csv
<input type="checkbox"/>	00006_00001_ct1.csv
<input type="checkbox"/>	00006_00002_ct1.csv
<input type="checkbox"/>	00007_00001_ct1.csv
<input type="checkbox"/>	00008_00001_ct1.csv
<input type="checkbox"/>	00009_00001_ct1.csv
<input type="checkbox"/>	00010_00001_ct1.csv
<input type="checkbox"/>	00011_00001_ct1.csv
<input type="checkbox"/>	00012_00001_ct1.csv

	00012_00001_ct1.csv
	00014_00001_ct1.csv
	00015_00001_ct1.csv
	00016_00001_ct1.csv
	00017_00001_ct1.csv
	00018_00001_ct1.csv
	00019_00001_ct1.csv
	00020_00001_ct1.csv
	00021_00001_ct1.csv
	00022_00001_ct1.csv
	00023_00001_ct1.csv
	00023_00002_ct1.csv
	00024_00001_ct1.csv
	00025_00001_ct1.csv
	00026_00001_ct1.csv
	00027_00001_ct1.csv
	00028_00001_ct1.csv
	00029_00001_ct1.csv
	00030_00001_ct1.csv
	00031_00001_ct1.csv
	00032_00001_ct1.csv
	00032_00002_ct1.csv
	00033_00001_ct1.csv
	00034_00001_ct1.csv
	00034_00002_ct1.csv
	00035_00001_ct1.csv
	00036_00001_ct1.csv
	00037_00001_ct1.csv
	00038_00001_ct1.csv
	00039_00001_ct1.csv
	00039_00002_ct1.csv
	00040_00001_ct1.csv
	00041_00001_ct1.csv
	00042_00001_ct1.csv
	00043_00001_ct1.csv
	00044_00001_ct1.csv
	00045_00001_ct1.csv
	00046_00001_ct1.csv
	00047_00001_ct1.csv
	00048_00001_ct1.csv
	00049_00001_ct1.csv
	00050_00001_ct1.csv
	00051_00001_ct1.csv
	00052_00001_ct1.csv
	00053_00001_ct1.csv
	00053_00002_ct1.csv
	00053_00003_ct1.csv
	00053_00004_ct1.csv
	00053_00005_ct1.csv
	00053_00006_ct1.csv
	00053_00007_ct1.csv
	00053_00008_ct1.csv
	00053_00009_ct1.csv
	00053_00010_ct1.csv
	00053_00011_ct1.csv
	00053_00012_ct1.csv
	00053_00013_ct1.csv
	00053_00014_ct1.csv
	00053_00015_ct1.csv
	00053_00016_ct1.csv
	00054_00001_ct1.csv
	00054_00002_ct1.csv
	00054_00003_ct1.csv
	00055_00001_ct1.csv
	00056_00001_ct1.csv
	00056_00002_ct1.csv
	00056_00003_ct1.csv
	00056_00004_ct1.csv
	00056_00005_ct1.csv
	00056_00006_ct1.csv
	00056_00007_ct1.csv
	00056_00008_ct1.csv
	00056_00009_ct1.csv
	00056_00010_ct1.csv
	00056_00011_ct1.csv
	00056_00012_ct1.csv
	00056_00013_ct1.csv
	00056_00014_ct1.csv
	00056_00015_ct1.csv
	00056_00016_ct1.csv
	00056_00017_ct1.csv
	00057_00001_ct1.csv

	00000001_ct1.csv
	00059_00001_ct1.csv
	00060_00001_ct1.csv
	00061_00001_ct1.csv
	00062_00001_ct1.csv
	00062_00002_ct1.csv
	00063_00001_ct1.csv
	00064_00001_ct1.csv
	00065_00001_ct1.csv
	00066_00001_ct1.csv
	00067_00001_ct1.csv
	00068_00001_ct1.csv
	00069_00001_ct1.csv
	00070_00001_ct1.csv
	00071_00001_ct1.csv
	00072_00001_ct1.csv
	00073_00001_ct1.csv
	00074_00001_ct1.csv
	00075_00001_ct1.csv
	00076_00001_ct1.csv
	00077_00001_ct1.csv
	00078_00001_ct1.csv
	00079_00001_ct1.csv
	00080_00001_ct1.csv
	00081_00001_ct1.csv
	00082_00001_ct1.csv
	00083_00001_ct1.csv
	00084_00001_ct1.csv
	00085_00001_ct1.csv
	00085_00002_ct1.csv
	00086_00001_ct1.csv
	00087_00001_ct1.csv
	00088_00001_ct1.csv
	00089_00001_ct1.csv
	00090_00001_ct1.csv
	00091_00001_ct1.csv
	00092_00001_ct1.csv
	00093_00001_ct1.csv
	00094_00001_ct1.csv
	00095_00001_ct1.csv
	00096_00001_ct1.csv
	00097_00001_ct1.csv
	00098_00001_ct1.csv
	00098_00002_ct1.csv
	00099_00001_ct1.csv
	00100_00001_ct1.csv
	00101_00001_ct1.csv
	00102_00001_ct1.csv
	00103_00001_ct1.csv
	00104_00001_ct1.csv
	00105_00001_ct1.csv
	00106_00001_ct1.csv
	00107_00001_ct1.csv
	00108_00001_ct1.csv
	00109_00001_ct1.csv
	correct_cnd_pri_MR1503_p490.txt
	correct_fl_pri_MR1503_w.txt
	correct_rnk_pri_MR1503_t.txt
	correct_tmp_pri_MR1503_p490.txt
	correct_xms_MR1503.txt

● Observation List

The list of observation is shown as follows.

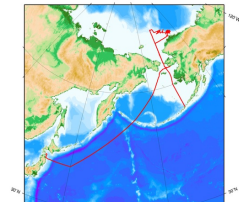
Observation	Time and Date	Lat. [°]	Lon. [°]
001M001	2015-09-06 06:37	65.7616	-168.7533
002M001	2015-09-06 09:42	66.0004	-168.7545
003M001	2015-09-06 13:12	66.5016	-168.7597
004M001	2015-09-06 16:28	67.0015	-168.7500
005M001	2015-09-06 20:32	67.5004	-168.7521
006M001	2015-09-07 00:18	68.0001	-168.7520
006M002	2015-09-07 01:26	67.9985	-168.7774
007M001	2015-09-07 05:48	68.5002	-168.7518
008M001	2015-09-07 09:20	69.0007	-168.7478
009M001	2015-09-07 13:35	69.5007	-168.7485
010M001	2015-09-07 16:53	69.9996	-168.7497
011M001	2015-09-07 21:11	70.5016	-168.7523
012M001	2015-09-08 00:52	70.9992	-168.7521
013M001	2015-09-08 23:31	71.3350	-157.6645
014M001	2015-09-09 01:46	71.5788	-157.8376
015M001	2015-09-09 04:18	71.4136	-157.5007
016M001	2015-09-09 07:08	71.2483	-157.1611
017M001	2015-09-09 08:42	71.2892	-157.2504
018M001	2015-09-09 09:20	71.3307	-157.3329

Observation	Time and Date	Lat. (°)	Lon. (°)
01M001	2015-09-09 10:23	71.3123	-157.4170
020M001	2015-09-09 11:22	71.4546	-157.5891
021M001	2015-09-09 12:09	71.4964	-157.6774
022M001	2015-09-11 15:10	71.5999	-154.8370
023M001	2015-09-11 17:42	71.7407	-155.2109
023M002	2015-09-11 20:11	71.7736	-155.3306
024M001	2015-09-11 22:17	71.8779	-156.0297
025M001	2015-09-12 00:49	71.8252	-155.8461
026M001	2015-09-12 03:17	71.8044	-155.3786
027M001	2015-09-12 06:33	71.6660	-155.0236
028M001	2015-09-12 15:51	72.0011	-157.4675
029M001	2015-09-12 18:14	72.1325	-156.9674
030M001	2015-09-12 20:10	72.2896	-156.7023
031M001	2015-09-13 18:31	72.1036	-154.6773
032M001	2015-09-13 22:13	72.0000	-154.7067
032M002	2015-09-14 01:02	72.0032	-154.7610
033M001	2015-09-14 02:37	71.9172	-154.9718
034M001	2015-09-14 05:24	71.7361	-155.2003
034M002	2015-09-14 06:34	71.7359	-155.2005
035M001	2015-09-14 08:52	72.0220	-155.8928
036M001	2015-09-14 10:43	72.1041	-155.7757
037M001	2015-09-14 12:34	72.1840	-155.6512
038M001	2015-09-14 15:46	72.2640	-155.5325
039M001	2015-09-14 21:59	72.3914	-155.4027
039M002	2015-09-15 00:16	72.3923	-155.4667
040M001	2015-09-15 04:14	72.4365	-156.5909
041M001	2015-09-15 07:00	72.3992	-156.5971
042M001	2015-09-15 08:51	72.3624	-156.6351
043M001	2015-09-15 10:33	72.3250	-156.6682
044M001	2015-09-15 12:27	72.2888	-156.7031
045M001	2015-09-15 14:06	72.2083	-156.8441
046M001	2015-09-15 16:38	72.0652	-157.2200
047M001	2015-09-15 19:05	71.9516	-158.0012
048M001	2015-09-15 21:23	72.1387	-157.3889
049M001	2015-09-15 23:21	72.0011	-156.8942
050M001	2015-09-16 00:57	72.0847	-156.4322
051M001	2015-09-16 02:29	72.1908	-156.2133
052M001	2015-09-16 04:32	72.3367	-156.1753
053M001	2015-09-16 11:58	72.3379	-155.3802
053M002	2015-09-16 15:11	72.3400	-155.3837
053M003	2015-09-16 18:03	72.3398	-155.3897
053M004	2015-09-16 19:54	72.3404	-155.3916
053M005	2015-09-17 00:00	72.3377	-155.3785
053M006	2015-09-17 03:02	72.3408	-155.3849
053M007	2015-09-17 06:01	72.3426	-155.3854
053M008	2015-09-17 07:57	72.3395	-155.3851
053M009	2015-09-17 11:58	72.3415	-155.3825
053M010	2015-09-17 15:09	72.3418	-155.3811
053M011	2015-09-17 18:02	72.3451	-155.3919
053M012	2015-09-17 19:57	72.3554	-155.3928
053M013	2015-09-18 00:00	72.3402	-155.3910
053M014	2015-09-18 03:06	72.3427	-155.3894
053M015	2015-09-18 06:00	72.3432	-155.3924
053M016	2015-09-18 08:13	72.3418	-155.3917
054M001	2015-09-18 19:20	72.4728	-155.4014
054M002	2015-09-18 21:15	72.4710	-155.3912
054M003	2015-09-19 03:51	72.4831	-155.4022
055M001	2015-09-19 19:54	72.3823	-155.9961
056M001	2015-09-19 23:59	72.2803	-155.9892
056M002	2015-09-20 03:00	72.2776	-155.9733
056M003	2015-09-20 05:58	72.2965	-155.9862
056M004	2015-09-20 07:56	72.2717	-155.9549
056M005	2015-09-20 11:58	72.2809	-155.9749
056M006	2015-09-20 15:04	72.2796	-155.9663
056M007	2015-09-20 17:59	72.2790	-155.9765
056M008	2015-09-20 19:43	72.2926	-156.0274
056M009	2015-09-20 23:59	72.2801	-155.9806
056M010	2015-09-21 02:42	72.2825	-155.9895
056M011	2015-09-21 06:01	72.2815	-155.9862
056M012	2015-09-21 07:55	72.2795	-155.9756
056M013	2015-09-21 11:56	72.2831	-155.9814
056M014	2015-09-21 15:03	72.2839	-155.9797
056M015	2015-09-21 18:01	72.2824	-155.9925
056M016	2015-09-21 19:56	72.2818	-155.9850
056M017	2015-09-21 23:58	72.2799	-156.0021
057M001	2015-09-22 04:48	71.9988	-154.6994
058M001	2015-09-22 06:29	72.1050	-154.6771
059M001	2015-09-22 08:01	72.2071	-154.6442
060M001	2015-09-22 11:03	72.1859	-153.5583
061M001	2015-09-22 14:13	72.0217	-153.8442
062M001	2015-09-22 16:50	71.8323	-153.8246
063M002	2015-09-22 18:49	71.8323	-153.8164

Observation	Time and Date	Lat. [°]	Lon. [°]
063M001	2015-09-23 06:25	72.3709	-155.5188
064M001	2015-09-23 09:52	72.2647	-155.9658
065M001	2015-09-23 13:07	72.1945	-156.2583
066M001	2015-09-23 16:00	72.2665	-156.4147
067M001	2015-09-23 21:13	72.1676	-155.5153
068M001	2015-09-24 00:24	72.1746	-156.2242
069M001	2015-09-24 02:45	72.1679	-155.8747
070M001	2015-09-24 06:00	72.1676	-156.6787
071M001	2015-09-24 08:21	72.1678	-157.1874
072M001	2015-09-24 14:27	72.5813	-159.6900
073M001	2015-09-24 15:54	72.6844	-159.4075
074M001	2015-09-24 17:16	72.7803	-159.1002
075M001	2015-09-24 23:10	73.2089	-157.8037
076M001	2015-09-25 03:56	73.0016	-158.5093
077M001	2015-09-25 05:47	72.8873	-158.8007
078M001	2015-09-25 11:00	72.7995	-161.4018
079M001	2015-09-25 13:07	73.0248	-161.2502
080M001	2015-09-25 15:17	73.2996	-160.7949
081M001	2015-09-25 17:37	73.2137	-161.2636
082M001	2015-09-25 21:25	73.1359	-162.2986
083M001	2015-09-26 01:33	73.0596	-163.6373
084M001	2015-09-26 04:29	73.0580	-164.6020
085M001	2015-09-26 17:25	73.3051	-160.7791
085M002	2015-09-26 19:00	73.3103	-160.7601
086M001	2015-09-27 05:04	72.9791	-161.1987
087M001	2015-09-27 06:48	73.1114	-161.5896
088M001	2015-09-27 08:37	73.2442	-161.9787
089M001	2015-09-27 10:46	73.3748	-162.3670
090M001	2015-09-27 12:43	73.5069	-162.7670
091M001	2015-09-27 14:44	73.3308	-163.0669
092M001	2015-09-27 16:36	73.4882	-162.2432
093M001	2015-09-27 19:00	73.5045	-161.3935
094M001	2015-09-27 22:05	73.4755	-160.1362
095M001	2015-09-28 10:49	73.5679	-165.9367
096M001	2015-09-28 13:21	73.8866	-166.1659
097M001	2015-09-28 15:51	74.1946	-166.4153
098M001	2015-09-28 18:06	74.4617	-166.6356
098M002	2015-09-28 19:40	74.4627	-166.6172
099M001	2015-09-29 00:17	74.5004	-168.7520
100M001	2015-09-29 04:42	74.0001	-168.7548
101M001	2015-09-29 09:21	73.4988	-168.7563
102M001	2015-09-29 22:27	72.0018	-168.7458
103M001	2015-09-30 02:33	71.5001	-168.7497
104M001	2015-09-30 06:21	70.9987	-168.7468
105M001	2015-09-30 09:44	70.4993	-168.7523
106M001	2015-10-01 00:07	67.9984	-168.7470
107M001	2015-10-01 04:02	68.4989	-168.7502
108M001	2015-10-03 09:19	67.0005	-168.7482
109M001	2015-10-03 16:01	66.0020	-168.7507

Related Information

MIRAI MR15-03 Leg1 Cruise Track



Enlarge Image

MR15-03 Leg1

Ship Name: MIRAI

Period: 2015-08-23 - 2015-10-06

Chief Scientist: Shigeto Nishino (JAMSTEC)

Project Name: [Arctic Ocean Climate System Reaserch]

Proposal ▶ Observational studies on the Arctic Ocean climate and ecosystem variability

Title:

Update History

2017-10-31

An observation data was registerd.

