

MIRAI MR18-05C Conductivity-Temperature-Depth Profiler (CTD)

Last Modified: 2021-01-29

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

Cruise ID: [MR18-05C](#)

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/MR18-05C_all.pdf

For Using Data

Principal Investigator

Data Management Office

Use Constraints

See [Terms and Conditions](#) about constrain of use.

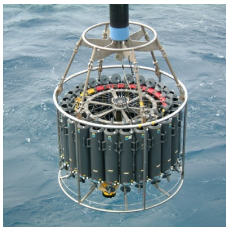
Data Citation

See [Terms and Conditions](#) about data citation.

Instrument

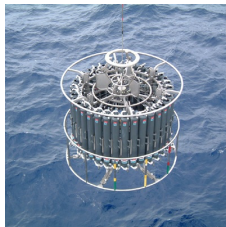
Instrument:

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



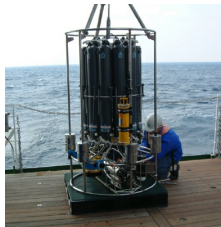
Instrument:

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



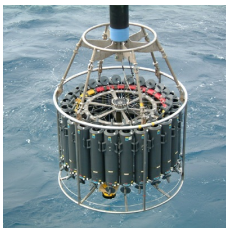
Instrument:

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 MR18-05C cruise are presented in "System".

The following software, developed and supplied by the Sea-Bird Electronics, Inc., was used in MR18-05C.

SEASAVE(ver 7.23.2) for data acquisition

SEASOFT(ver 7.26.7.114) for data processing

Data presented on this website is averaged over 1db.

System

· Pressure sensor

Model : SBE9plus, Sea-Bird Electronics,Inc.

Serial number : 117457

Measurement range : up to 10500 m

Accuracy : 0.015% F.S.

Resolution : 0.001% F.S.

· Temperature sensor

Model : SBE3, Sea-Bird Electronics,Inc.

Serial number : 031464, 031525

Measurement range : -5.0 to +35 degC

Accuracy : 0.001 degC

Resolution : 0.0002 degC

· Salinity sensor

Model : SBE4, Sea-Bird Electronics,Inc.

Serial number : 043036, 042435

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 : 430330, 432211
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
001M001	117457	031464	043036	430330
001M002	117457	031525	042435	432211
002M001	117457	031525	042435	432211
002M002	117457	031525	042435	432211
003M001	117457	031525	042435	432211
003M002	117457	031525	042435	432211
004M001	117457	031525	042435	432211
004M002	117457	031525	042435	432211
005M001	117457	031525	042435	432211
005M002	117457	031525	042435	432211
006M001	117457	031525	042435	432211
006M002	117457	031525	042435	432211
007M001	117457	031525	042435	432211
007M002	117457	031525	042435	432211
008M001	117457	031525	042435	432211
008M002	117457	031525	042435	432211
009M001	117457	031525	042435	432211
009M002	117457	031525	042435	432211
010M001	117457	031525	042435	432211
010M002	117457	031525	042435	432211
011M001	117457	031525	042435	432211
011M002	117457	031525	042435	432211
012M001	117457	031525	042435	432211
012M002	117457	031525	042435	432211
013M001	117457	031525	042435	432211
013M002	117457	031525	042435	432211
014M001	117457	031525	042435	432211
014M002	117457	031525	042435	432211
015M001	117457	031525	042435	432211
016M001	117457	031525	042435	432211
016M002	117457	031525	042435	432211
017M001	117457	031525	042435	432211
017M002	117457	031525	042435	432211
018M001	117457	031525	042435	432211
018M002	117457	031525	042435	432211
019M001	117457	031525	042435	432211
019M002	117457	031525	042435	432211
020M001	117457	031525	042435	432211
020M002	117457	031525	042435	432211
021M001	117457	031525	042435	432211
022M001	117457	031525	042435	432211
023M001	117457	031525	042435	432211
024M001	117457	031525	042435	432211
025M001	117457	031525	042435	432211
026M001	117457	031525	042435	432211
026M002	117457	031525	042435	432211
027M001	117457	031525	042435	432211
027M002	117457	031525	042435	432211
028M001	117457	031525	042435	432211
028M002	117457	031525	042435	432211
029M001	117457	031525	042435	432211
030M001	117457	031525	042435	432211
031M001	117457	031525	042435	432211
032M001	117457	031525	042435	432211
032M002	117457	031525	042435	432211
033M001	117457	031525	042435	432211
033M002	117457	031525	042435	432211
034M001	117457	031525	042435	432211
034M002	117457	031525	042435	432211
035M001	117457	031525	042435	432211
036M001	117457	031525	042435	432211
037M001	117457	031525	042435	432211
038M001	117457	031525	042435	432211
039M001	117457	031525	042435	432211
040M001	117457	031525	042435	432211
041M001	117457	031525	042435	432211
042M001	117457	031525	042435	432211
042M002	117457	031525	042435	432211

Cast name	Serial number of sensor		Salinity	Dissolved Oxygen
	Pressure	Temperature		
043M001	117457	031525	042435	432211
044M001	117457	031525	042435	432211
045M001	117457	031525	042435	432211
046M001	117457	031525	042435	432211
047M001	117457	031525	042435	432211
048M001	117457	031525	042435	432211
048M002	117457	031525	042435	432211
048M003	117457	031525	042435	432211
048M004	117457	031525	042435	432211
048M005	117457	031525	042435	432211
048M006	117457	031525	042435	432211
048M008	117457	031525	042435	432211
048M009	117457	031525	042435	432211
048M010	117457	031525	042435	432211
048M011	117457	031525	042435	432211
049M001	117457	031525	042435	432211
050M001	117457	031525	042435	432211
051M001	117457	031525	042435	432211
052M001	117457	031525	042435	432211
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054M001	117457	031525	042435	432211
055M001	117457	031525	042435	432211
056M001	117457	031525	042435	432211
056M002	117457	031525	042435	432211
056M003	117457	031525	042435	432211
056M004	117457	031525	042435	432211
056M005	117457	031525	042435	432211
056M006	117457	031525	042435	432211
056M007	117457	031525	042435	432211
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056M009	117457	031525	042435	432211
056M010	117457	031525	042435	432211
056M011	117457	031525	042435	432211
056M012	117457	031525	042435	432211
056M013	117457	031525	042435	432211
057M001	117457	031525	042435	432211
058M001	117457	031525	042435	432211
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058M006	117457	031525	042435	432211
058M007	117457	031525	042435	432211
058M008	117457	031525	042435	432211
058M009	117457	031525	042435	432211
058M010	117457	031525	042435	432211
058M011	117457	031525	042435	432211
058M012	117457	031525	042435	432211
058M013	117457	031525	042435	432211
059M001	117457	031525	042435	432211
060M001	117457	031525	042435	432211
061M001	117457	031525	042435	432211
062M001	117457	031525	042435	432211
062M002	117457	031525	042435	432211
062M003	117457	031525	042435	432211
062M004	117457	031525	042435	432211
062M005	117457	031525	042435	432211
062M006	117457	031525	042435	432211
062M007	117457	031525	042435	432211
062M008	117457	031525	042435	432211
062M009	117457	031525	042435	432211
062M010	117457	031525	042435	432211
062M011	117457	031525	042435	432211
062M012	117457	031525	042435	432211
062M013	117457	031525	042435	432211
063M001	117457	031525	042435	432211
064M001	117457	031525	042435	432211
064M002	117457	031525	042435	432211
064M003	117457	031525	042435	432211
064M004	117457	031525	042435	432211
064M005	117457	031525	042435	432211
065M001	117457	031525	042435	432211
065M002	117457	031525	042435	432211
065M003	117457	031525	042435	432211
065M004	117457	031525	042435	432211
065M005	117457	031525	042435	432211
065M006	117457	031525	042435	432211

Cast name	Serial number of sensor	Pressure	Temperature	Salinity	Dissolved Oxygen
065M007	117457	031525	042435	432211	
065M008	117457	031525	042435	432211	
065M009	117457	031525	042435	432211	
065M010	117457	031525	042435	432211	
066M001	117457	031525	042435	432211	
066M002	117457	031525	042435	432211	
066M003	117457	031525	042435	432211	
067M001	117457	031525	042435	432211	
067M002	117457	031525	042435	432211	
067M003	117457	031525	042435	432211	
067M005	117457	031525	042435	432211	
068M001	117457	031525	042435	432211	
069M001	117457	031525	042435	432211	
070M001	117457	031525	042435	432211	
071M001	117457	031525	042435	432211	
072M001	117457	031525	042435	432211	
073M001	117457	031525	042435	432211	

Calibration Information

Calibration Information is as follows.

Calibration Information

Data processing

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

("*" is not SEASOFT original procedure.)

command	function
datcnv	Convert raw data to engineering units, and store converted data in file.
tcorp*	Corrected the pressure sensitivity of the temperature(SBE3) sensor.
rincocor*	Corrected the hysteresis of dissolved oxygen(RINKO III) sensor.
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.
wfilter	Median filter removes spikes of fluorometer data.
sectionu*	Extract rows of data from file.
loopedit	Mark a scan with badflag if scan fails pressure reversal or minimum velocity tests.
despike*	Remove spikes of the data.
Derive	Calculate oxygen. (with oxygen sensor)
binavg	Average data, basing bins on pressure, depth, scan number, or time range.
bottomcut*	Bottom cut deletes discontinuous scan bottom data if it's created by BINAvg.
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.

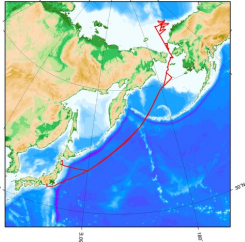
QUALITY CONTROL AND PROCESSING OF HISTORICAL OCEANOGRAPHIC TEMPERATURE, SALINITY, AND OXYGEN DATA

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

Note

- (1) In this cruise, there is extra data (dissolved oxygen (RINKO III), fluorescence intensity, turbidity, light transmission, distance to bottom) in additional to temperature, salinity, dissolved oxygen that has been opened to the public. Please contact us from "Contact Us" above if necessary.

Related Information



MR18-05C
Ship Name: MIRAI
Period: 2018-10-24 - 2018-12-06
Chief Scientist: Jun Inoue (National Institute of Polar Research)
Project Name: [Arctic Ocean Climate System Reaserch]
Proposal ▶ Predictability study on weather and sea-ice forecasts linked with user engagement
Title:

[Enlarge Image](#)

Update History

2021-01-29 An observation data was registerd.

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Data Policy

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Amount of Public Info.
Data
Map Search

Information of the Ships
NATSUSHIMA
KAIYO
YOKOSUKA
MIRAI

Information of the Submersibles
KAIKO
SHINKAI 2000
SHINKAI 6500
DEEP TOW

Go to a Cruise Information

Cruise ID:

Go to a Dive Information

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Detailed Search

KAIREI
CHIKYU
KAIMEI
SHINSEI MARU
HAKUHO MARU

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

Dive ID:

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JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

MIRAI MR18-05C Conductivity-Temperature-Depth Profiler (CTD)

Last Modified: 2021-01-29

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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

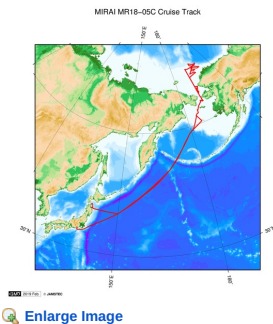
QCed data were added flag according to the NODC (National Oceanographic Data Center) quality control procedure, additionally visually checked. Please see the site of NODC of the following link for quality control procedure.

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

Sample Program

[ex_read2.f](#)

Related Information



MR18-05C

Ship Name: MIRAI

Period: 2018-10-24 - 2018-12-06

Chief Scientist: Jun Inoue (National Institute of Polar Research)

Project Name: [Arctic Ocean Climate System Research]

Proposal ▶ Predictability study on weather and sea-ice forecasts linked with user engagement

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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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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.



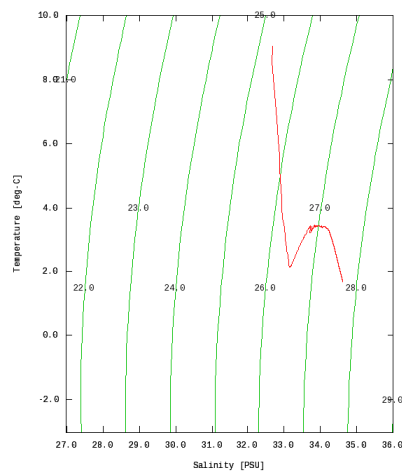
— Observation Line — Navigation ● Observation, Dive Point, Hole

Figures

001M001



MR18-05C: 001M001
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

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	069M001.dat
	070M001.dat
	071M001.dat
	072M001.dat
	073M001.dat
	ex_read2.f (Sample Program)

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

Observation	Time and Date	Lat. [°]	Lon. [°]
001M001	2018-10-28 23:52	47.2088	161.7986
001M002	2018-10-29 03:54	47.2105	161.8100
002M001	2018-11-02 09:07	62.0028	-175.0753
002M002	2018-11-26 13:12	62.0101	-175.0798
003M001	2018-11-02 10:07	62.0498	-175.2100
003M002	2018-11-26 12:26	62.0523	-175.1963
004M001	2018-11-02 11:55	62.2021	-174.8953
004M002	2018-11-26 10:57	62.2210	-174.8671
005M001	2018-11-02 13:41	62.3900	-174.5706
005M002	2018-11-26 09:34	62.3905	-174.5606
006M001	2018-11-02 15:16	62.4656	-174.1053

Observation	Time and Date	Lat. (°)	Lon. (°)
006M002	2018-11-26 08:00	62.4880	-174.8728
007M001	2018-11-02 17:11	62.5593	-173.5535
007M002	2018-11-26 06:11	62.5683	-173.5505
008M001	2018-11-02 18:46	62.7800	-173.5051
008M002	2018-11-26 04:34	62.7955	-173.5018
009M001	2018-11-02 20:28	63.0248	-173.4628
009M002	2018-11-26 01:54	63.2790	-173.4508
010M001	2018-11-02 22:28	63.2745	-173.0903
010M002	2018-11-26 00:41	63.2811	-173.0701
011M001	2018-11-03 01:17	63.5946	-172.5991
011M002	2018-11-25 22:26	63.6015	-172.5983
012M001	2018-11-03 10:15	64.6643	-169.9366
012M002	2018-11-25 14:11	64.6791	-169.9273
013M001	2018-11-03 12:21	64.9428	-169.8945
013M002	2018-11-25 12:29	64.9575	-169.8775
014M001	2018-11-03 14:18	64.9885	-169.1738
014M002	2018-11-25 10:29	64.9885	-169.1393
015M001	2018-11-03 16:13	64.6940	-169.1010
016M001	2018-11-03 18:26	64.6706	-168.2426
016M002	2018-11-25 05:57	64.6701	-168.2403
017M001	2018-11-04 01:18	65.9920	-168.7573
017M002	2018-11-24 22:20	65.9998	-168.7528
018M001	2018-11-04 04:03	66.4900	-168.7536
018M002	2018-11-24 19:20	66.5016	-168.7533
019M001	2018-11-04 07:04	66.9953	-168.7548
019M002	2018-11-24 12:22	67.0053	-168.7368
020M001	2018-11-04 09:45	67.4916	-168.7508
020M002	2018-11-23 12:17	67.5071	-168.7578
021M001	2018-11-04 10:56	67.6643	-168.9103
022M001	2018-11-04 12:11	67.7760	-168.6260
023M001	2018-11-04 13:20	67.8861	-168.2773
024M001	2018-11-04 14:35	68.0038	-167.8990
025M001	2018-11-04 15:49	68.1165	-167.5353
026M001	2018-11-04 16:43	68.1815	-167.3208
026M002	2018-11-24 02:15	68.1840	-167.3083
027M001	2018-11-04 17:43	68.2421	-167.1341
027M002	2018-11-24 03:18	68.2311	-167.1455
028M001	2018-11-04 18:30	68.2931	-166.9540
028M002	2018-11-24 04:26	68.2968	-166.9378
029M001	2018-11-04 22:11	68.4975	-168.7396
030M001	2018-11-05 01:27	68.9973	-168.7536
031M001	2018-11-05 04:13	69.4961	-168.7553
032M001	2018-11-05 07:07	69.9906	-168.7615
032M002	2018-11-22 22:40	69.9988	-168.7456
033M001	2018-11-05 09:57	70.4946	-168.7529
033M002	2018-11-22 19:38	70.5001	-168.7495
034M001	2018-11-05 12:38	70.9853	-168.7543
034M002	2018-11-22 16:22	71.0001	-168.7288
035M001	2018-11-05 15:21	71.4878	-168.7529
036M001	2018-11-05 18:12	71.9975	-168.7523
037M001	2018-11-05 20:58	72.4980	-168.7553
038M001	2018-11-05 23:52	72.9980	-168.7518
039M001	2018-11-06 01:28	73.2461	-168.7611
040M001	2018-11-06 15:50	73.0011	-160.0281
041M001	2018-11-06 20:47	73.2761	-158.9713
042M001	2018-11-07 03:37	73.2538	-160.9831
042M002	2018-11-10 00:01	73.2505	-160.9981
043M001	2018-11-07 06:06	73.4865	-161.9565
044M001	2018-11-07 08:32	73.7473	-162.9881
045M001	2018-11-07 10:46	73.9980	-163.9808
046M001	2018-11-07 13:52	73.5153	-163.9996
047M001	2018-11-07 16:09	73.2586	-163.0350
048M001	2018-11-07 18:41	73.0033	-162.0055
048M002	2018-11-10 02:21	73.0008	-161.9811
048M003	2018-11-11 00:47	72.9985	-161.9805
048M004	2018-11-11 22:11	73.0020	-161.9850
048M005	2018-11-12 22:07	73.0030	-161.9983
048M006	2018-11-13 22:34	73.0018	-161.9845
048M008	2018-11-15 23:00	73.0026	-161.9880
048M009	2018-11-16 20:30	73.0156	-162.0376
048M010	2018-11-17 23:30	72.9998	-162.0011
048M011	2018-11-18 23:57	72.9980	-161.9961
049M001	2018-11-07 20:59	72.7541	-161.0050
050M001	2018-11-07 23:12	72.5055	-160.0023
051M001	2018-11-08 01:30	72.2538	-159.0021
052M001	2018-11-08 03:46	72.0038	-158.0071
053M001	2018-11-08 07:28	72.0008	-159.9763
054M001	2018-11-08 09:53	72.2430	-160.9640
055M001	2018-11-08 12:18	72.4905	-161.9430
056M001	2018-11-08 14:36	72.7398	-162.9530
056M002	2018-11-10 05:26	72.7531	-162.9836
056M003	2018-11-11 03:15	72.7538	-162.9781

Observation	Time and Date	Lat. [°]	Lon. [°]
056M004	2018-11-12 00:46	72.7493	-162.9851
056M005	2018-11-13 00:32	72.7570	-162.9683
056M006	2018-11-14 00:58	72.7591	-162.9598
056M007	2018-11-15 03:43	72.7544	-162.9943
056M008	2018-11-16 01:30	72.7513	-162.9883
056M009	2018-11-16 23:29	72.7516	-162.9965
056M010	2018-11-18 01:52	72.7541	-163.0001
056M011	2018-11-19 02:14	72.7535	-163.0020
056M012	2018-11-20 01:12	72.7493	-162.9941
056M013	2018-11-21 01:41	72.7516	-163.0071
057M001	2018-11-08 17:00	72.9995	-163.9965
058M001	2018-11-08 19:54	72.5040	-163.9905
058M002	2018-11-10 07:44	72.5065	-163.9566
058M003	2018-11-11 07:28	72.5106	-163.9575
058M004	2018-11-12 03:01	72.5068	-163.9621
058M005	2018-11-13 02:54	72.5070	-163.9698
058M006	2018-11-14 03:20	72.5038	-163.9906
058M007	2018-11-15 06:30	72.5088	-163.9713
058M008	2018-11-16 03:48	72.5006	-163.9926
058M009	2018-11-17 01:48	72.5038	-163.9978
058M010	2018-11-18 04:13	72.5031	-163.9965
058M011	2018-11-19 04:31	72.5078	-163.9806
058M012	2018-11-20 03:30	72.4986	-163.9845
058M013	2018-11-21 03:53	72.5010	-163.9846
059M001	2018-11-08 22:05	72.2536	-163.0028
060M001	2018-11-09 00:38	72.0020	-162.0171
061M001	2018-11-09 03:58	71.9998	-163.9848
062M001	2018-11-09 06:22	72.2418	-164.9633
062M002	2018-11-10 10:28	72.2586	-164.9478
062M003	2018-11-11 10:32	72.2563	-164.9680
062M004	2018-11-12 05:28	72.2510	-164.9995
062M005	2018-11-13 05:26	72.2500	-165.0028
062M006	2018-11-14 05:36	72.2651	-164.9830
062M007	2018-11-15 08:51	72.2578	-164.9631
062M008	2018-11-16 06:04	72.2611	-164.9565
062M009	2018-11-17 04:07	72.2528	-164.9848
062M010	2018-11-18 06:20	72.2621	-164.9473
062M011	2018-11-19 06:41	72.2574	-164.9620
062M012	2018-11-20 05:42	72.2528	-164.9501
062M013	2018-11-21 06:07	72.2598	-164.9493
063M001	2018-11-09 22:31	73.2940	-160.8913
064M001	2018-11-10 21:50	73.1340	-161.3796
064M002	2018-11-11 20:26	73.1075	-161.6013
064M003	2018-11-14 21:32	73.1306	-161.5680
064M004	2018-11-17 21:44	73.1318	-161.5223
064M005	2018-11-18 22:36	73.0976	-161.6265
065M001	2018-11-12 07:46	72.0046	-165.9725
065M002	2018-11-13 07:44	72.0093	-165.9511
065M003	2018-11-14 07:53	72.0096	-165.9621
065M004	2018-11-15 11:06	72.0098	-165.9528
065M005	2018-11-16 08:14	72.0108	-165.9481
065M006	2018-11-17 06:19	72.0088	-165.9763
065M007	2018-11-18 08:33	72.0106	-165.9526
065M008	2018-11-19 08:52	72.0078	-165.9665
065M009	2018-11-20 07:52	72.0096	-165.9596
065M010	2018-11-21 08:30	72.0044	-165.9893
066M001	2018-11-12 20:29	73.0868	-161.7708
066M002	2018-11-13 20:30	73.0656	-161.7390
066M003	2018-11-15 21:01	73.1008	-161.8640
067M001	2018-11-17 08:36	71.7573	-166.9700
067M002	2018-11-18 10:47	71.7648	-166.9633
067M003	2018-11-19 11:01	71.7616	-166.9501
067M005	2018-11-21 10:46	71.7578	-166.9778
068M001	2018-11-22 00:42	71.6136	-163.7720
069M001	2018-11-22 01:31	71.5563	-163.5885
070M001	2018-11-22 02:22	71.4935	-163.4063
071M001	2018-11-22 03:12	71.4311	-163.2125
072M001	2018-11-22 04:03	71.3640	-163.0230
073M001	2018-11-22 05:28	71.2985	-162.8160

Related Information

MR18-05C

Ship Name: MIRAI

Period: 2018-10-24 - 2018-12-06

Chief Scientist: Jun Inoue (National Institute of Polar Research)

Project Name: [Arctic Ocean Climate System Reaserch]

Proposal ▶ Predictability study on weather and sea-ice forecasts linked with user engagement

Title:

MR18-05C Cruise Track



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Update History	
2021-01-29	An observation data was registerd.

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Publication List

Amount of Public Info.

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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)

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

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