

## MIRAI MR10-05 Leg2 Conductivity-Temperature-Depth Profiler (CTD)

Last Modified: 2017-07-27

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

Cruise ID: [MR10-05 Leg2](#)

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

Data Policy: [JAMSTEC](#)

Observation Items: Pressure, Temperature, Salinity, Dissolved oxygen, Fluorescence, PAR, Potential temperature, Density

Science Keywords:

OCEANS > OCEAN CHEMISTRY > OXYGEN  
OCEANS > OCEAN TEMPERATURE > WATER TEMPERATURE  
OCEANS > SALINITY/DENSITY > SALINITY  
OCEANS > OCEAN OPTICS > PHOTOSYNTHETICALLY ACTIVE RADIATION  
OCEANS > OCEAN OPTICS > FLUORESCENCE  
OCEANS > OCEAN TEMPERATURE > POTENTIAL TEMPERATURE

### Cruise Report

[http://www.godac.jamstec.go.jp/catalog/data/doc\\_catalog/media/MR10-05\\_leg1-2\\_all.pdf](http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR10-05_leg1-2_all.pdf)

#### For Using Data

##### Principal Investigator

Motoyo Itoh (JAMSTEC)

##### Use Constraints

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

##### Data Citation

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

### Instrument

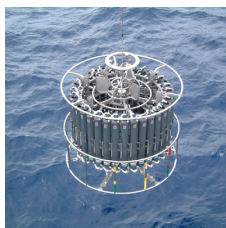
Instrument:

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



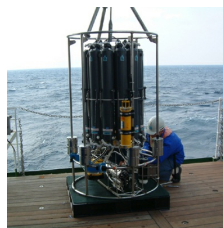
Instrument:

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)



### System

#### (1) Temperature sensor

Model : SBE3, Sea-Bird Electronics, Inc.  
Measurement range : -5.0 to +35degC  
Accuracy : 0.001degC  
Resolution : 0.0002degC  
Calibration : Primary and secondary sensor data was calibrated by using the data from SBE35 temperature sensor.

#### (2) Salinity sensor

Model : SBE4, Sea-Bird Electronics, Inc.  
Measurement range : 0.0 to 7S/m  
Accuracy : 0.0003S/m  
Resolution : 0.00004S/m  
Calibration : Primary and secondary sensor data was calibrated by using the bottle salinity data measured by Autosol salinometer.

#### (3) Pressure sensor

Model : SBE9plus, Sea-Bird Electronics, Inc.  
Measurement range : up to 10500m  
Accuracy : 0.015%F.S.  
Resolution : 0.001%F.S.

#### (4) DO sensor

Model : SBE43, Sea-Bird Electronics, Inc.  
Measurement range : 120% of surface saturation  
Accuracy : 2% of saturation  
Calibration : Primary and secondary sensor data was calibrated by using the bottle oxygen data obtained by Winkler method.

#### (5) Fluorometer

Model : Seapoint Sensors, Inc.  
Measurement range : 0-5ug/l

Resolution : 0.02ug/l  
Calibration : Not calibrated  
(6) PAR sensor  
Model : Satlantic, Inc.  
Measurement range : 0-5000μmol photons m-2 s-1  
Accuracy : 5%  
Calibration : Not calibrated

#### Notice

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 MR10-05, the Chief Scientist, Motoyo Itoh (JAMSTEC), and the following Principal Investigators (PI) for gathering the data.

Chief Scientist  
Motoyo Itoh  
Japan Agency for Marine - Earth Science and Technology (JAMSTEC)  
2-15 Natsushima, Yokosuka, Kanagawa 237-0061, Japan  
Tel: +81-46-867-9488, Fax: +81-46-867-9437  
E-mail: [motoyo@jamstec.go.jp](mailto:motoyo@jamstec.go.jp)

PI for CTD  
Motoyo Itoh (JAMSTEC)

PI for bottle salinity  
Shigeto Nishino (JAMSTEC)

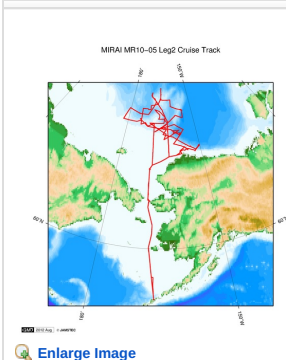
PI for bottle oxygen  
Shigeto Nishino (JAMSTEC)

PI for total alkalinity  
Shigeto Nishino (JAMSTEC)

PI for total inorganic carbon  
Shigeto Nishino (JAMSTEC)

PI for chlorophyll a  
Shigeto Nishino (JAMSTEC)

#### Related Information



#### MR10-05 Leg2

Ship Name: MIRAI  
Period: 2010-09-02 - 2010-10-16  
Chief Scientist: Motoyo Ito (JAMSTEC)  
Project Name: [Arctic Ocean Climate System Reaserch]  
Proposal ▶ Arctic Climate Oceanography  
Title:

#### Update History

2017-07-27	An observation data was registerd.
2015-03-06	An observation data was registerd.
2013-03-08	An observation data was registerd.
2012-10-31	An observation data was registerd.

#### JAMSTEC

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[Data Policy](#)

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#### 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 \(CLOW\)](#)  
[BMS](#)

#### Go to a Cruise Information

Cruise ID:

#### Go to a Dive Information

Dive ID:



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Data Policy: [JAMSTEC](#)

File names: Stn\_c\_ct1.wct

Ex.) 001\_1\_ct1.wct

Stn = station number

c = cast number

CRUISE ID: MR1005

DATE: MMDDYY

STNNBR: Station number

CASTNO: Cast number

NO. RECORDS: Number of records

INSTRUMENT NO.: 0575

SAMPLING RATE: 24.00 HZ

CTDPRS: CTD-pressure [db]

CTDTMP: CTD-temperature Primary [ITS-90, deg C]

1CTDTMP: CTD-temperature Secondary [ITS-90, deg C]

CTDCND: CTD-conductivity Primary [S/m]

1CTDCND: CTD-conductivity Secondary [S/m]

CTDSAL: CTD-salinity Primary [PSS-788]

1CTDSAL: CTD-salinity Secondary [PSS-788]

CTDOXY: CTD-oxygen Primary [umol/kg]

1CTDOXY: CTD-oxygen Secondary [umol/kg]

CTDOXV: CTD-oxygen voltage Primary [volts]

1CTDOXV: CTD-oxygen voltage Secondary [volts]

THETA: CTD-Potential temperature Primary [TEOS-10]

1THETA: CTD-Potential temperature Secondary [TEOS-10]

DENS: CTD-Potential density Primary temperature/salinity [KG/M^3]

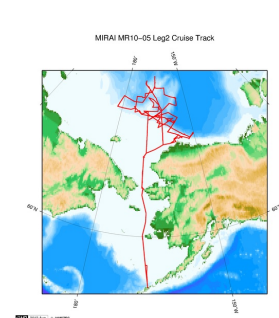
1DENS: CTD-Potential density Secondary temperature/salinity [KG/M^3]

FLUOR: CTD-fluorescence [ug/l]

PAR: CTD-PAR (Photosynthetically Active Radiation) [umol photons m^-2 s^-1]

QUALT1: Quality flags (1: raw data, 2: calibrated data, 3: noisy data, 6: linear interpolated between good data)

### Related Information



[Enlarge Image](#)

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Ship Name: MIRAI

Period: 2010-09-02 - 2010-10-16

Chief Scientist: Motoyo Ito (JAMSTEC)

Project Name: [Arctic Ocean Climate System Reaserch]

Proposal ▶ Arctic Climate Oceanography

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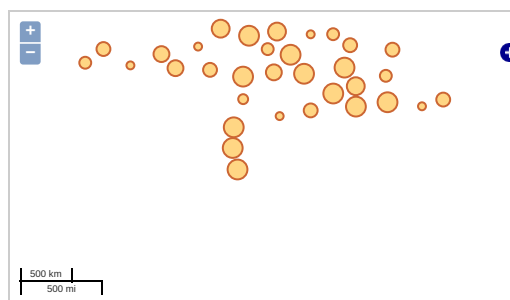
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OCEANS > OCEAN TEMPERATURE > POTENTIAL TEMPERATURE

### Observation Map

1. Clicking the icon displays a balloon with observation information.



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

Imagery reproduced from ...

### Data List

[Add to Basket](#)

#### File names

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

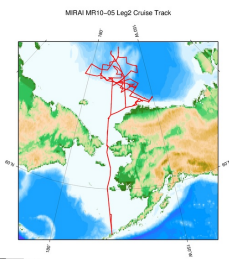
Observation	Time and Date	Lat. [°]	Lon. [°]
001_01	2010-09-04 00:00	65.7560	191.5030
002_01	2010-09-04 00:00	65.7140	191.7460
003_01	2010-09-04 00:00	65.8190	191.1680
004_01	2010-09-05 00:00	66.0050	191.1700
005_01	2010-09-05 00:00	66.4970	191.1640
006_01	2010-09-05 00:00	67.0020	191.1630
007_01	2010-09-05 00:00	67.6660	191.0770
008_01	2010-09-05 00:00	68.0010	191.1650
009_01	2010-09-05 00:00	68.4990	191.1660
010_01	2010-09-05 00:00	69.0010	191.1610
011_01	2010-09-05 00:00	69.5010	191.1680
012_01	2010-09-05 00:00	70.0000	192.0020
013_01	2010-09-06 00:00	71.0000	191.9980
014_01	2010-09-06 00:00	72.0010	192.0040
015_01	2010-09-06 00:00	73.0000	191.9990
016_01	2010-09-07 00:00	74.0010	191.9960
017_01	2010-09-07 00:00	74.9980	191.9930
018_01	2010-09-07 00:00	74.6020	189.0630
018_02	2010-09-07 00:00	74.5990	189.0960
019_01	2010-09-08 00:00	74.2550	197.4100
020_01	2010-09-08 00:00	74.0020	196.7750
021_01	2010-09-08 00:00	73.6710	195.8990
022_01	2010-09-10 00:00	71.9630	209.7670
023_01	2010-09-10 00:00	71.6590	208.7670

Observation	Time and Date	East (m)	North (m)
025_01	2010-09-11 00:00	71.4550	208.1910
026_01	2010-09-11 00:00	71.3670	207.8810
027_01	2010-09-11 00:00	71.7260	204.8210
028_01	2010-09-12 00:00	71.7340	204.9020
029_01	2010-09-13 00:00	71.3390	202.0150
030_01	2010-09-13 00:00	71.1060	200.6770
031_01	2010-09-13 00:00	71.0010	198.0000
032_01	2010-09-13 00:00	72.0000	198.0030
033_01	2010-09-14 00:00	72.9990	198.0030
034_01	2010-09-14 00:00	74.0000	198.0050
035_01	2010-09-16 00:00	78.2580	190.0080
036_01	2010-09-16 00:00	78.0720	190.6580
037_01	2010-09-16 00:00	77.8500	191.6100
038_01	2010-09-17 00:00	77.6300	192.5270
039_01	2010-09-17 00:00	76.0000	184.7500
040_01	2010-09-18 00:00	76.4500	179.6000
041_01	2010-09-18 00:00	76.0010	178.9040
042_01	2010-09-18 00:00	75.4110	178.2120
043_01	2010-09-19 00:00	75.2330	177.9840
044_01	2010-09-19 00:00	75.0000	177.7180
045_01	2010-09-19 00:00	74.9980	179.0010
046_01	2010-09-19 00:00	74.9980	179.9980
047_01	2010-09-19 00:00	74.9980	181.9940
048_01	2010-09-19 00:00	75.0000	183.9940
049_01	2010-09-19 00:00	75.2500	185.9890
050_01	2010-09-20 00:00	75.0000	185.9980
051_01	2010-09-20 00:00	74.7510	185.9970
052_01	2010-09-20 00:00	74.9990	187.9950
053_01	2010-09-21 00:00	75.4000	185.9980
054_01	2010-09-21 00:00	75.5840	186.0000
055_01	2010-09-21 00:00	75.8350	186.0010
056_01	2010-09-21 00:00	76.2520	186.0070
057_01	2010-09-22 00:00	76.6670	186.0030
058_01	2010-09-22 00:00	76.6680	188.0030
059_01	2010-09-22 00:00	76.6670	190.0070
060_01	2010-09-22 00:00	77.0830	190.0020
061_01	2010-09-22 00:00	77.1360	190.6650
062_01	2010-09-22 00:00	77.1430	191.0680
063_01	2010-09-23 00:00	77.1750	191.6130
064_01	2010-09-23 00:00	77.2090	192.0970
065_01	2010-09-23 00:00	77.2630	193.6610
066_01	2010-09-23 00:00	78.0000	195.0090
067_01	2010-09-23 00:00	78.4990	195.0030
068_01	2010-09-23 00:00	79.1890	195.0250
069_01	2010-09-24 00:00	78.9660	195.0010
070_01	2010-09-24 00:00	78.8670	195.0020
071_01	2010-09-24 00:00	77.7650	196.2150
072_01	2010-09-24 00:00	77.7570	198.0000
073_01	2010-09-25 00:00	77.7670	199.9920
074_01	2010-09-25 00:00	77.3690	199.9650
075_01	2010-09-25 00:00	76.9750	199.9300
076_01	2010-09-25 00:00	76.7900	201.5020
077_01	2010-09-25 00:00	76.6150	202.9870
078_01	2010-09-26 00:00	76.3920	205.2600
079_01	2010-09-26 00:00	75.5120	204.7200
080_01	2010-09-26 00:00	75.6140	203.9330
081_01	2010-09-26 00:00	75.6630	203.7160
082_01	2010-09-27 00:00	75.7470	202.9010
083_01	2010-09-27 00:00	75.8650	201.9160
084_01	2010-09-27 00:00	74.0030	197.9880
085_01	2010-09-28 00:00	72.9980	198.0060
086_01	2010-09-28 00:00	71.0000	198.0020
087_01	2010-09-28 00:00	71.1060	200.6770
088_01	2010-09-29 00:00	71.2490	202.8410
089_01	2010-09-29 00:00	71.2880	202.7530
090_01	2010-09-29 00:00	71.3300	202.6760
091_01	2010-09-29 00:00	71.3710	202.5880
092_01	2010-09-29 00:00	71.4130	202.5090
093_01	2010-09-29 00:00	71.4530	202.4200
094_01	2010-09-29 00:00	71.4960	202.3330
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096_01	2010-09-29 00:00	71.5770	202.1610
097_01	2010-09-29 00:00	71.9320	204.3480
098_01	2010-09-29 00:00	71.8670	204.5070
099_01	2010-09-29 00:00	71.8130	204.7120
100_01	2010-09-29 00:00	71.7640	204.7600
101_01	2010-09-29 00:00	71.7330	204.8850
102_01	2010-09-29 00:00	71.7000	204.9450
103_01	2010-09-30 00:00	71.6810	205.0320
104_01	2010-09-30 00:00	71.6400	205.0780
105_01	2010-09-30 00:00	71.6010	205.1620

Observation	Time and Date	Lat. E1	Lon. E1
106_01	2010-09-30 00:00	72.1830	202.8110
107_01	2010-09-30 00:00	72.5000	200.0030
108_01	2010-09-30 00:00	72.5830	200.3030
109_01	2010-09-30 00:00	72.6830	200.5990
110_01	2010-09-30 00:00	72.7830	200.8970
111_01	2010-09-30 00:00	72.8830	201.2010
112_01	2010-09-30 00:00	72.9990	201.4990
113_01	2010-10-01 00:00	73.1500	202.0020
114_01	2010-10-01 00:00	73.3320	202.5270
115_01	2010-10-01 00:00	73.4770	203.0070
116_01	2010-10-01 00:00	74.0720	204.6720
117_01	2010-10-01 00:00	74.3990	202.9940
118_01	2010-10-02 00:00	74.5750	202.0760
119_01	2010-10-02 00:00	74.6770	201.6860
120_01	2010-10-02 00:00	74.8000	201.0040
121_01	2010-10-02 00:00	74.3790	194.7300
122_01	2010-10-03 00:00	74.2520	193.9980
123_01	2010-10-03 00:00	74.1130	193.2130
124_01	2010-10-03 00:00	74.0390	192.7630
125_01	2010-10-03 00:00	73.9820	192.4020
126_01	2010-10-03 00:00	75.0000	197.9960
127_01	2010-10-04 00:00	75.7490	194.4990
128_01	2010-10-04 00:00	76.0010	194.5010
129_01	2010-10-04 00:00	76.6240	191.9200
130_01	2010-10-04 00:00	76.5650	192.5630
131_01	2010-10-05 00:00	76.5160	193.1360
132_01	2010-10-05 00:00	76.4420	194.1840
133_01	2010-10-05 00:00	76.2630	195.0250
134_01	2010-10-05 00:00	75.9420	196.2140
135_01	2010-10-05 00:00	75.7370	197.0540
136_01	2010-10-05 00:00	75.0000	196.3980
137_01	2010-10-05 00:00	75.0000	194.9900
138_01	2010-10-06 00:00	75.0000	193.9950
139_01	2010-10-06 00:00	75.0040	192.7680
140_01	2010-10-06 00:00	75.0000	192.0000
141_01	2010-10-06 00:00	75.0010	190.9970
142_01	2010-10-06 00:00	74.9990	189.9960
143_01	2010-10-06 00:00	73.7130	197.2370
144_01	2010-10-07 00:00	73.0570	196.2550
145_01	2010-10-07 00:00	73.3260	198.0090
146_01	2010-10-07 00:00	73.4800	199.0030
147_01	2010-10-07 00:00	73.6350	199.9980
148_01	2010-10-07 00:00	73.7900	200.9990
149_01	2010-10-08 00:00	73.7200	203.3160
150_01	2010-10-08 00:00	73.5900	202.3480
151_01	2010-10-08 00:00	73.7450	201.5700
152_01	2010-10-08 00:00	73.8230	201.1780
153_01	2010-10-08 00:00	73.9010	200.7810
154_01	2010-10-09 00:00	74.0170	202.4970
155_01	2010-10-09 00:00	73.9010	201.7490
156_01	2010-10-09 00:00	73.7150	200.4910
157_01	2010-10-09 00:00	73.9600	200.4960
158_01	2010-10-09 00:00	74.1850	199.5000
159_01	2010-10-10 00:00	74.5010	195.5070
160_01	2010-10-10 00:00	74.6230	196.2540
161_01	2010-10-10 00:00	74.7510	197.0040
162_01	2010-10-10 00:00	74.0020	197.9910
163_01	2010-10-11 00:00	72.9990	198.0030
164_01	2010-10-11 00:00	70.9990	198.0010
165_01	2010-10-11 00:00	70.4960	195.2450
166_01	2010-10-12 00:00	69.9990	192.0010
167_01	2010-10-12 00:00	69.5010	191.1690
168_01	2010-10-12 00:00	69.0000	191.1660
169_01	2010-10-12 00:00	68.4990	191.1680
170_01	2010-10-12 00:00	67.9990	191.1670
171_01	2010-10-12 00:00	67.5040	191.1800
172_01	2010-10-13 00:00	67.0010	191.1680
173_01	2010-10-13 00:00	66.5040	191.1730
174_01	2010-10-13 00:00	66.0010	191.1670
175_01	2010-10-13 00:00	65.7550	191.5020
176_01	2010-10-13 00:00	65.8190	191.1680
177_01	2010-10-13 00:00	65.7070	191.7500

Related Information





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#### MR10-05 Leg2

Ship Name: MIRAI  
Period: 2010-09-02 - 2010-10-16  
Chief Scientist: Motoyo Ito (JAMSTEC)  
Project Name: [Arctic Ocean Climate System Reaserch]  
Proposal ▶ Arctic Climate Oceanography  
Title:

#### Update History

2017-07-27	An observation data was registered.
2015-03-06	An observation data was registered.
2013-03-08	An observation data was registered.
2012-10-31	An observation data was registered.

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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: