

MIRAI MR00-K06 Underway Thermosalinograph

Last Modified: 2017-06-29

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Cruise ID: [MR00-K06](#)

Underway Thermosalinograph: Processed (DMO)-QCed

Data Policy: [JAMSTEC](#)

Observation Items: Temperature, Salinity, Dissolved oxygen

Science Keywords:

OCEANS > OCEAN CHEMISTRY > OXYGEN
OCEANS > SALINITY/DENSITY > SALINITY
OCEANS > OCEAN > SEA SURFACE
OCEANS TEMPERATURE TEMPERATURE

For Using Data

Principal Investigator

Data Management Office

Use Constraints

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

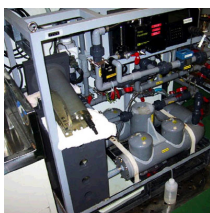
Data Citation

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

Instrument

Instrument:

Continuous sea surface water monitoring system (- MR10-03 Leg2)



Overview

Thermosalinograph measures the following surface parameters continuously.

- temperature
- salinity
- dissolved oxygen

Sea surface water is continuously pumped up at 4.5 meters depth to the sea surface monitoring laboratory and then flowed into each analysis equipment through a steel pipe and a vinyl-chloride pipe.

The flow rate of this system is controlled by some valves. Data are recorded in the personal computer.

System

- Temperature sensor
Model : SBE 3S, Sea-Bird Electronics, Inc.
Serial number : 2175
Measurement range : -5 to 35 deg-C (ITS-90)
Sensor location : Bow thruster room
- Salinity sensor
SEACAT THERMOSALINOGRAPH
Model : SBE-21, Sea-Bird Electronics, Inc.
Serial number : 2641
Measurement range : [temperature] -5 to +35 deg-C (ITS-90), [conductivity] 0 to 6.5 S/m
Sensor location : Sea surface monitoring laboratory
- DO sensor
Model : 2127A, Orbisphere Laboratories Japan Inc.
Serial number : 31757
Measurement range : 0 to 14 ppm
Sensor location : Sea surface monitoring laboratory

Data acquisition

Date/Time (UTC)	Start/Stop	Remarks
2000/08/04, 02:31	start	40-35.48N, 141-32.23E
2000/08/04, 04:44	stop	40-33.29N, 141-30.04E
2000/08/04, 04:48	start	40-33.29N, 141-30.04E
2000/08/04, 05:30	stop	40-33.29N, 141-30.04E
2000/08/04, 09:03	start	40-43.51N, 141-47.83E
2000/08/05, 12:47	stop	44-11.46N, 150-03.16E
2000/08/06, 19:30	start	48-06.16N, 159-48.09E
2000/08/09, 08:50	stop	51-14.98N, 167-36.18E
2000/08/11, 00:14	start	51-14.96N, 167-37.73E
2000/08/12, 08:56	stop	51-14.87N, 167-36.40E
2000/08/16, 06:43	start	53-15.23N, 156-34.87W
2000/08/16, 09:50	stop	53-07.02N, 155-34.19W
2000/08/16, 10:30	start	53-05.00N, 155-20.84W
2000/08/16, 11:52	stop	53-00.95N, 154-54.10W
2000/08/16, 12:14	start	52-59.97N, 154-47.09W
2000/08/20, 00:14	stop	49-03.57N, 132-34.11W
2000/08/29, 00:33	start	49-58.51N, 134-04.35W

Date/Time (UTC)	Start/Stop	Remarks
2000/08/31, 07:24	start	53-03.67N, 154-34.91W
2000/08/31, 07:45	stop	53-04.99N, 155-02.47W
2000/08/31, 09:08	start	53-09.95N, 155-34.36W
2000/08/31, 09:09	stop	53-10.01N, 155-34.75W
2000/08/31, 09:59	start	53-12.94N, 155-54.43W
2000/08/31, 11:38	stop	53-19.26N, 156-34.82W
2000/09/07, 17:30	start	70-00.16N, 164-36.40W
2000/09/08, 05:26	stop	71-27.92N, 157-09.34W
2000/09/08, 05:50	start	71-30.06N, 156-54.29W
2000/09/08, 06:00	stop	71-30.97N, 156-47.94W
2000/09/08, 06:45	start	71-35.04N, 156-18.55W
2000/09/08, 21:35	stop	71-35.17N, 156-17.30W
2000/09/08, 21:55	start	71-30.91N, 156-24.75W
2000/09/08, 21:59	stop	71-30.05N, 156-26.11W
2000/09/08, 22:49	start	71-30.19N, 156-26.37W
2000/09/08, 22:52	stop	71-30.97N, 156-26.08W
2000/09/08, 23:08	start	71-35.20N, 156-26.98W
2000/09/11, 02:24	stop	71-35.01N, 156-19.38W
2000/09/11, 03:39	start	71-30.95N, 156-39.36W
2000/09/11, 03:47	stop	71-30.10N, 156-45.27W
2000/09/11, 04:19	start	71-26.63N, 157-09.67W
2000/09/15, 01:15	stop	71-13.73N, 146-56.29W
2000/09/15, 01:32	start	71-13.70N, 146-55.79W
2000/09/16, 02:35	stop	70-00.05N, 139-14.06W
2000/09/16, 23:18	start	70-00.02N, 138-30.10W
2000/09/20, 22:06	stop	71-38.95N, 149-48.34W
2000/09/21, 00:22	start	71-36.89N, 149-59.20W
2000/09/27, 03:06	stop	71-47.49N, 157-31.43W
2000/09/27, 03:21	start	71-50.00N, 157-38.08W
2000/09/27, 21:42	stop	71-43.86N, 156-44.72W
2000/09/27, 23:31	start	71-43.73N, 156-44.35W
2000/09/28, 06:12	stop	71-19.89N, 159-44.53W
2000/09/28, 07:01	start	71-16.40N, 160-10.16W
2000/09/28, 10:52	stop	71-11.64N, 160-06.52W
2000/09/28, 11:02	start	71-11.58N, 160-06.57W
2000/09/29, 00:28	stop	70-00.08N, 164-45.51W
2000/10/07, 11:45	start	51-17.87N, 166-43.45E
2000/10/08, 03:02	stop	49-06.56N, 161-18.74E
2000/10/09, 07:48	start	43-43.73N, 153-42.03E
2000/10/12, 04:29	stop	99-99.999, 999-99.999

Calibration Information

Calibration Information is as follows.

Calibration Information

Data processing

(1) 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

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 (fluorescence intensity, particle size of plankton) in addition to temperature, salinity, dissolved oxygen that has been opened to the public. Please contact us from "Contact Us" above if necessary.

Related Information

MR00-K06
 Ship Name: MIRAI
 Period: 2000-08-03 - 2000-10-13
 Chief Scientist: Takatoshi Takizawa (JAMSTEC)
 Project Name: [Arctic Ocean Climate System Reaserch]

Enlarge Image

Update History

2017-06-29	An observation data was registerd.
2014-07-12	An observation data was registerd.
2014-03-08	An observation data was registerd.
2012-12-25	An observation data was registerd.

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JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

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TSG DMO (MR98-K01 - MR10-03)

Format Description for the Corrected Data

Please see the site of each cruise.

Format Description for the QCed Data (MR98-K01 - MR10-03)

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

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	TSG
3	8 - 22	Cruise ID	a15	MYYY-(K)XX(_legx)
4	68 - 71	Number of data lines	i4	
5	72 - 73	Terminator	-	CR+LF

Data part

No.	Column	Content	Unit	Format	Remarks
1	1 - 8	Date	-	i8	YYYYMMDD (UTC)
2	10 - 13	Time	-	i4	hhmm (UTC)
3	15 - 23	Latitude	-	i2,a1,f5.2,a1	dd-mm.mmN(S)
4	25 - 34	Longitude	-	i3,a1,f5.2,a1	ddd-mm.mmE(W)
5	35 - 45	Temperature	deg-C	f11.4	ITS-90
6	46 - 56	Salinity	PSU	f11.4	PSS-78
7	57 - 67	Dissolved oxygen	mg/l	f11.4	
8	68 - 78	Flag	-	i11	1 - 6 : space 7 : flag of date/time 8 : flag of latitude/longitude 9 : flag of temperature 10 : flag of salinity 11 : flag of dissolved oxygen * reference : Definition of Quality Control Flags
9	79 - 80	Terminator	-	-	CR+LF

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

* The check only about range check for Thermosalinograph data.

3. Date and time flag (Thermosalinograph only)

- 0 - accepted data and time
- 1 - failed duplicate/missing/incorrect date and time

4. Position flag (Thermosalinograph only)

- 0 - accepted position
- 1 - failed estimated ship speed check including missing/incorrect position

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.

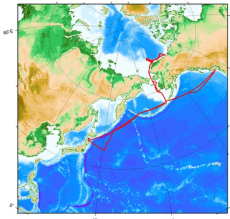
[QUALITY CONTROL AND PROCESSING OF HISTORICAL OCEANOGRAPHIC TEMPERATURE, SALINITY, AND OXYGEN DATA](#)


Sample Program

[ex_read.f](#)

Related Information

MIRAI MR00-K06 Cruise Track



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MR00-K06

Ship Name: MIRAI

Period: 2000-08-03 - 2000-10-13

Chief Scientist: Takatoshi Takizawa (JAMSTEC)

Project Name: [Arctic Ocean Climate System Reaserch]

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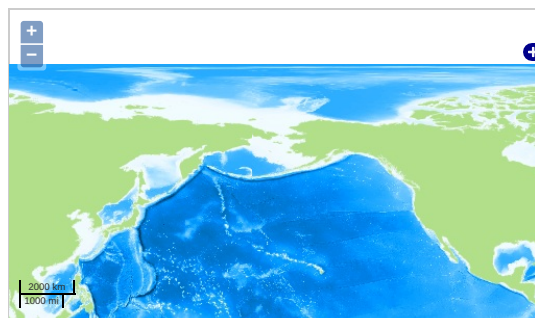
Data Policy: [JAMSTEC](#)

Observation Items: Temperature, Salinity, Dissolved oxygen

Science Keywords:

OCEANS > OCEAN CHEMISTRY > OXYGEN
OCEANS > SALINITY/DENSITY > SALINITY
OCEANS > OCEAN > SEA SURFACE
OCEANS TEMPERATURE TEMPERATURE

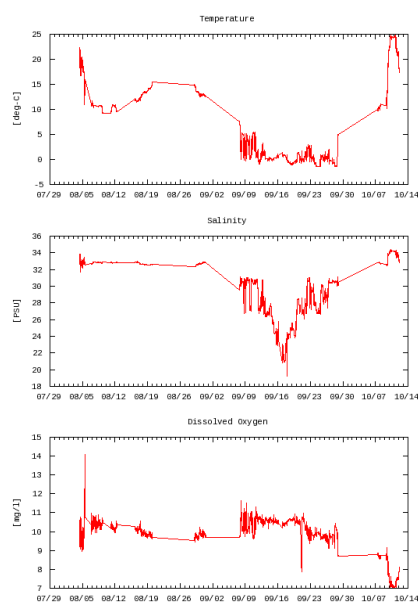
Observation Map



Imagery reproduced from ...

Figures

MR00-K06: Underway Thermosalino Graph



Data List

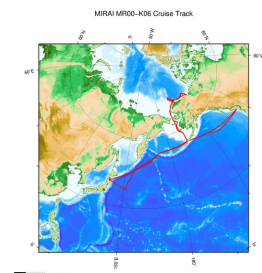
[Add to Basket](#)

☐ File names

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File names
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<input type="checkbox"/> 20001010.dat
<input type="checkbox"/> 20001011.dat
<input type="checkbox"/> 20001012.dat
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Related Information



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Chief Scientist: Takatoshi Takizawa (JAMSTEC)
Project Name: [Arctic Ocean Climate System Reaserch]

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