

MIRAI MR99-K06 Underway Thermosalinograph

Last Modified: 2017-06-29

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

Cruise ID: **MR99-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

Cruise Report

http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR99-K06_all.pdf

For Using Data

Principal Investigator

Data Management Office

JAMSTEC / BPPT joint cruise in the Indonesian waters.

Use Constraints

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

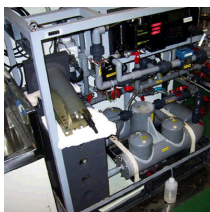
Data Citation

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 : 2607
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
1999/10/15, 11:05	start	33-15.83N, 143-02.67E
1999/10/17, 08:03	stop	22-56.29N, 143-53.00E
1999/10/20, 10:16	start	13-04.55N, 143-46.43E
1999/10/24, 05:56	stop	02-03.83N, 137-50.08E
1999/10/24, 06:31	start	02-00.92N, 137-43.72E
1999/10/24, 07:05	stop	02-00.00N, 137-51.99E
1999/10/24, 07:17	start	01-59.89N, 137-55.13E
1999/10/24, 10:10	stop	01-56.03N, 137-55.03E
1999/10/24, 10:20	start	01-55.99N, 137-52.42E
1999/10/24, 10:29	stop	01-55.93N, 137-50.08E
1999/10/24, 12:04	start	01-51.93N, 138-00.15E
1999/10/24, 21:59	stop	02-01.59N, 138-05.64E
1999/10/25, 02:30	start	02-04.48N, 138-03.43E

Date/Time (UTC)	Start/Stop	Remarks
1999/10/26, 03:52	start	00-09.94N, 138-00.00E
1999/10/26, 06:14	stop	00-06.13N, 138-00.14E
1999/10/26, 08:24	start	00-02.04N, 138-00.12E
1999/10/26, 10:50	stop	00-01.93S, 137-59.98E
1999/10/26, 13:00	start	00-07.02S, 138-00.11E
1999/10/26, 17:29	stop	00-02.13N, 138-00.00E
1999/10/26, 18:26	start	00-02.09N, 138-00.03E
1999/10/26, 21:47	stop	00-03.78N, 138-00.03E
1999/10/26, 23:07	start	00-03.81N, 138-00.01E
1999/11/06, 00:24	stop	05-01.76S, 155-59.96E
1999/11/06, 07:00	start	04-04.51S, 156-00.00E
1999/11/06, 07:41	stop	03-54.53S, 156-00.00E
1999/11/06, 08:20	start	03-44.13S, 156-00.00E
1999/11/06, 16:14	stop	02-00.90S, 156-04.69E
1999/11/06, 16:51	start	02-06.12S, 155-59.90E
1999/11/06, 22:42	stop	02-05.38S, 155-59.99E
1999/11/06, 23:51	start	02-04.97S, 156-00.82E
1999/11/11, 08:30	stop	01-58.01N, 156-02.24E
1999/11/11, 08:46	start	01-58.14N, 156-01.96E
1999/11/12, 08:55	stop	04-09.94N, 156-03.58E
1999/11/12, 13:16	start	99-99.999, 999-99.999
1999/11/12, 13:17	stop	41-21.81N, 141-14.59E
1999/11/12, 13:22	start	99-99.999, 999-99.999
1999/11/12, 13:23	stop	04-55.90N, 156-04.85E
1999/11/13, 01:22	start	05-00.26N, 155-59.93E
1999/11/13, 10:19	stop	05-50.54N, 155-59.98E
1999/11/14, 00:29	start	08-04.69N, 156-00.00E
1999/11/14, 01:11	stop	08-03.15N, 155-59.98E
1999/11/14, 06:20	start	07-59.85N, 155-59.90E
1999/11/16, 01:31	stop	14-34.30N, 150-03.83E
1999/11/16, 03:37	start	14-38.64N, 149-55.20E
1999/11/17, 21:14	stop	15-19.15N, 149-28.08E
1999/11/18, 01:07	start	14-59.95N, 148-26.47E
1999/11/18, 03:25	stop	14-48.66N, 147-49.92E

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.

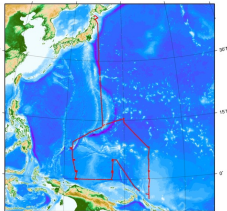
[QUALITY CONTROL AND PROCESSING OF HISTORICAL OCEANOGRAPHIC TEMPERATURE, SALINITY, AND OXYGEN DATA](#)

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 additional to temperature, salinity, dissolved oxygen that has been opened to the public. Please contact us from "Contact Us" above if necessary.

Related Information



MIRAI MR99-K06 Cruise Track

MR99-K06
Ship Name: MIRAI
Period: 1999-10-13 - 1999-11-18
Chief Scientist: Kentaro Ando (JAMSTEC)
Project Name: [Tropical Ocean Climate Study (TOCS)]


[Enlarge Image](#)

Update History

2017-06-29	An observation data was registered.
2016-04-07	An observation data was registered.
2014-07-12	An observation data was registered.
2014-04-09	An observation data was registered.
2013-01-25	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

Go to a Cruise Information

Cruise ID:

Go

Go to a Dive Information

Dive ID:

Go

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 MR99-K06 Underway Thermosalinograph

Last Modified: 2017-06-29

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

 Cruise ID: [MR99-K06](#)

Underway Thermosalinograph: Processed (DMO)-QCed

 Data Policy: [JAMSTEC](#)

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.

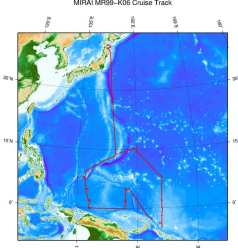
[QUALITY CONTROL AND PROCESSING OF HISTORICAL OCEANOGRAPHIC TEMPERATURE, SALINITY, AND OXYGEN DATA](#)


Sample Program

[ex_read.f](#)

Related Information

MIRAI MR99-K06 Cruise Track



 [Enlarge Image](#)

MR99-K06

Ship Name: MIRAI

Period: 1999-10-13 - 1999-11-18

Chief Scientist: Kentaro Ando (JAMSTEC)

Project Name: [Tropical Ocean Climate Study (TOCS)]

Update History	
2017-06-29	An observation data was registerd.
2016-04-07	An observation data was registerd.
2014-07-12	An observation data was registerd.
2014-04-09	An observation data was registerd.
2013-01-25	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

KAIIMEI

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:

 **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

Copyright 2011 Japan Agency for Marine-Earth Science and Technology

MIRAI MR99-K06 Underway Thermosalinograph

Last Modified: 2017-06-29

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

Cruise ID: [MR99-K06](#)

Underway Thermosalinograph: Processed (DMO)-QCed

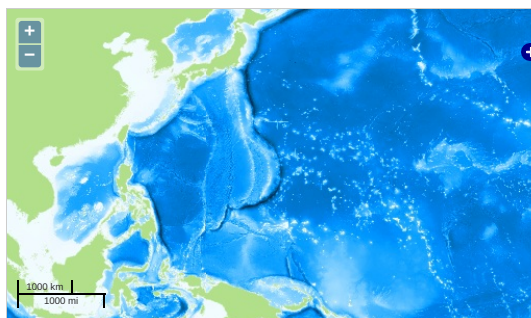
Data Policy: [JAMSTEC](#)

Observation Items: Temperature, Salinity, Dissolved oxygen

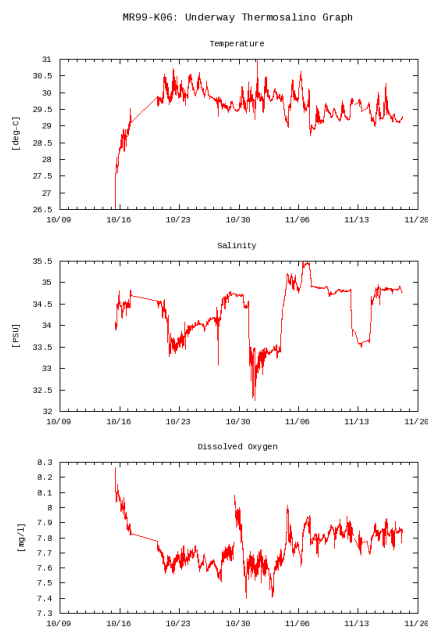
Science Keywords:

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

Observation Map



Figures



Data List

[Add to Basket](#)

☐ File names

☐ 19991015.dat

☐ 19991016.dat

☐ 19991017.dat

☐ 19991020.dat

☐ 19991021.dat

☐ 19991022.dat

☐ 19991023.dat

☐ 19991024.dat

☐ 19991025.dat

☐ 19991026.dat

☐ 19991027.dat

☐ 19991028.dat

☐ 19991029.dat

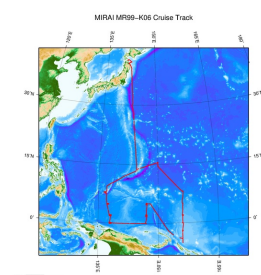
☐ 19991030.dat

☐ 19991031.dat

☐ 19991101.dat

File names
<input type="checkbox"/> 19991102.dat
<input type="checkbox"/> 19991103.dat
<input type="checkbox"/> 19991104.dat
<input type="checkbox"/> 19991105.dat
<input type="checkbox"/> 19991106.dat
<input type="checkbox"/> 19991107.dat
<input type="checkbox"/> 19991108.dat
<input type="checkbox"/> 19991109.dat
<input type="checkbox"/> 19991110.dat
<input type="checkbox"/> 19991111.dat
<input type="checkbox"/> 19991112.dat
<input type="checkbox"/> 19991113.dat
<input type="checkbox"/> 19991114.dat
<input type="checkbox"/> 19991115.dat
<input type="checkbox"/> 19991116.dat
<input type="checkbox"/> 19991117.dat
<input type="checkbox"/> 19991118.dat
<input type="checkbox"/> ex_read.f (Sample Program)

Related Information



[Enlarge Image](#)

MR99-K06

Ship Name: MIRAI

Period: 1999-10-13 - 1999-11-18

Chief Scientist: Kentaro Ando (JAMSTEC)

Project Name: [Tropical Ocean Climate Study (TOCS)]

Update History

2017-06-29	An observation data was registered.
2016-04-07	An observation data was registered.
2014-07-12	An observation data was registered.
2014-04-09	An observation data was registered.
2013-01-25	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 \(CLOW\)](#)
[BMS](#)

Go to a Cruise Information

Cruise ID:

Go to a Dive Information

Dive ID:

