

MIRAI MR07-06 Leg2 Underway Thermosalinograph

Last Modified: 2017-06-29

[ReadMe](#)

[Observation
Data](#)

[Data Format](#)

Cruise ID: [MR07-06 Leg2](#)

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
TEMPERATURE TEMPERATURE

Cruise Report

http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR07-06_leg1-2_all.pdf

For Using Data

Principal Investigator

Yuichiro Kumamoto (JAMSTEC)

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, Hach Ultra Analytics Japan Inc.
Serial number : 47477
Measurement range : 0 to 14 ppm
Sensor location : Sea surface monitoring laboratory

Data acquisition

Date/Time (UTC)	Start/Stop	Remarks
2007/11/23, 02:00	start	08-20.42N, 176-43.50E
2007/12/23, 01:28	stop	35-32.76S, 175-09.32E

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

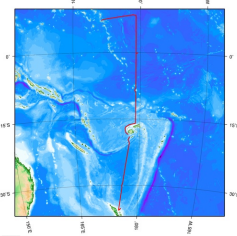
(1) In this cruise, there is extra data (fluorescence intensity) in additional to temperature, salinity, dissolved oxygen that has been opened to the public. Please contact us from "Contact Us" above if necessary.

About this data

Please see the [Data book](#) for details of data.

Related Information

MIRAI MR07-06 Leg2 Cruise Track



[Enlarge Image](#)

MR07-06 Leg2

Ship Name: MIRAI
Period: 2007-11-21 - 2007-12-25
Chief Scientist: Akihiko Murata (JAMSTEC)
Project Name: [POST-WOCE Hydrography]

Update History

2017-06-29	An observation data was registered.
2017-04-11	An observation data was registered.
2014-07-30	An observation data was registered.
2014-03-11	An observation data was registered.
2012-10-27	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](#)
[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:

Copyright 2011 Japan Agency for Marine-Earth Science and Technology



JAMSTEC
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

国立研究開発法人
海洋研究開発機構

MIRAI MR07-06 Leg2 Underway Thermosalinograph

Last Modified: 2017-06-29

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

 Cruise ID: [MR07-06 Leg2](#)

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](#)

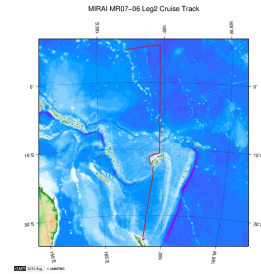
Sample Program

[ex_read.f](#)

Related Information

MR07-06 Leg2

Ship Name: MIRAI
Period: 2007-11-21 - 2007-12-25
Chief Scientist: Akihiko Murata (JAMSTEC)
Project Name: [POST-WOCE Hydrography]



[Enlarge Image](#)

Update History

2017-06-29	An observation data was registerd.
2017-04-11	An observation data was registerd.
2014-07-30	An observation data was registerd.
2014-03-11	An observation data was registerd.
2012-10-27	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](#)
[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:

Copyright 2011 Japan Agency for Marine-Earth Science and Technology



MIRAI MR07-06 Leg2 Underway Thermosalinograph

Last Modified: 2017-06-29

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

Cruise ID: [MR07-06 Leg2](#)

Underway Thermosalinograph: Processed (DMO)-QCed

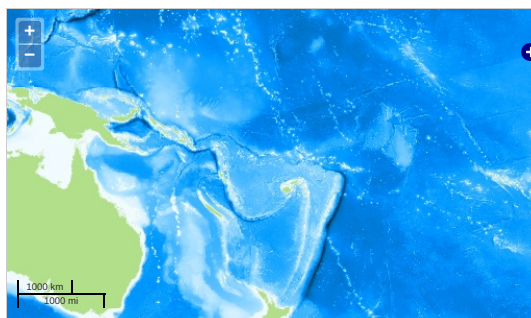
Data Policy: [JAMSTEC](#)

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

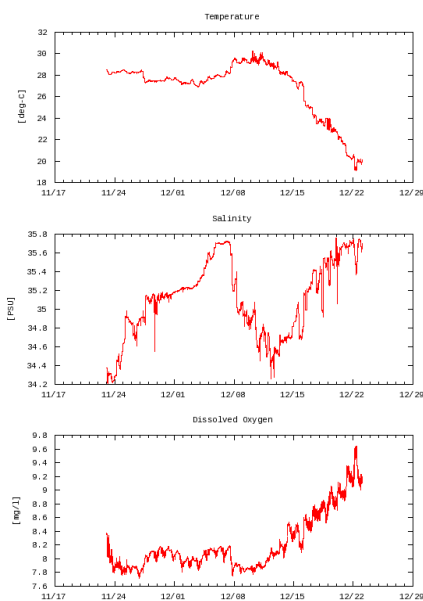


Imagery reproduced from ...

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

Figures

MR07-06 Leg2: Underway Thermosalino Graph



Data List

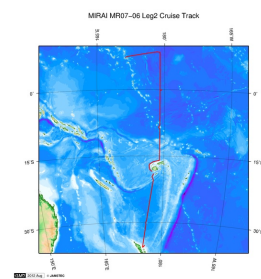
[Add to Basket](#)

☐ File names

<input type="checkbox"/>	20071123.dat
<input type="checkbox"/>	20071124.dat
<input type="checkbox"/>	20071125.dat
<input type="checkbox"/>	20071126.dat
<input type="checkbox"/>	20071127.dat
<input type="checkbox"/>	20071128.dat
<input type="checkbox"/>	20071129.dat
<input type="checkbox"/>	20071130.dat
<input type="checkbox"/>	20071201.dat
<input type="checkbox"/>	20071202.dat
<input type="checkbox"/>	20071203.dat
<input type="checkbox"/>	20071204.dat
<input type="checkbox"/>	20071205.dat
<input type="checkbox"/>	20071206.dat
<input type="checkbox"/>	20071207.dat
<input type="checkbox"/>	20071208.dat

File names
<input type="checkbox"/> 20071209.dat
<input type="checkbox"/> 20071210.dat
<input type="checkbox"/> 20071211.dat
<input type="checkbox"/> 20071212.dat
<input type="checkbox"/> 20071213.dat
<input type="checkbox"/> 20071214.dat
<input type="checkbox"/> 20071215.dat
<input type="checkbox"/> 20071216.dat
<input type="checkbox"/> 20071217.dat
<input type="checkbox"/> 20071218.dat
<input type="checkbox"/> 20071219.dat
<input type="checkbox"/> 20071220.dat
<input type="checkbox"/> 20071221.dat
<input type="checkbox"/> 20071222.dat
<input type="checkbox"/> 20071223.dat
<input type="checkbox"/> ex_read.f (Sample Program)

Related Information



[Enlarge Image](#)

MR07-06 Leg2

Ship Name: MIRAI
Period: 2007-11-21 - 2007-12-25
Chief Scientist: Akihiko Murata (JAMSTEC)
Project Name: [POST-WOCE Hydrography]

Update History

2017-06-29	An observation data was registerd.
2017-04-11	An observation data was registerd.
2014-07-30	An observation data was registerd.
2014-03-11	An observation data was registerd.
2012-10-27	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
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:

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