

## MIRAI MR07-07 Leg2 Underway Thermosalinograph

Last Modified: 2017-06-29

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[Observation  
Data](#)

[Data Format](#)

Cruise ID: [MR07-07 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/MR07-07\\_leg2-3\\_all.pdf](http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR07-07_leg2-3_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.

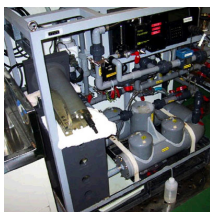
**Data Citation**

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, Hach Ultra Analytics Japan Inc.  
Serial number : 44733  
Measurement range : 0 to 14 ppm  
Sensor location : Sea surface monitoring laboratory

**Data acquisition**

Date/Time (UTC)	Start/Stop	Remarks
2008/02/01, 22:30	start	04-00.92N, 099-49.97E
2008/02/02, 08:00	stop	05-54.65N, 098-14.86E
2008/02/05, 06:30	start	02-16.72N, 091-57.50E
2008/02/11, 16:00	stop	02-18.32S, 094-51.76E
2008/02/13, 16:00	start	05-55.09N, 098-11.93E
2008/02/14, 08:00	stop	03-22.07N, 100-26.15E

**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.

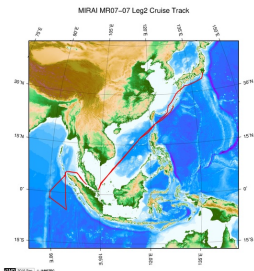
- 1) The gradient check of adjacent depth data

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.

**Related Information**



MIRAI MR07-07 Leg2 Cruise Track

 [Enlarge Image](#)

**MR07-07 Leg2**  
Ship Name: MIRAI  
Period: 2008-01-26 - 2008-02-25  
Chief Scientist: Hideaki Hase (JAMSTEC)  
Project Name: [Tropical Ocean Climate Study (TOCS)]

Update History	
2017-06-29	An observation data was registerd.
2016-10-11	An observation data was registerd.

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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:

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**JAMSTEC** 国立研究開発法人  
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JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

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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 : <a href="#">Definition of Quality Control Flags</a>
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

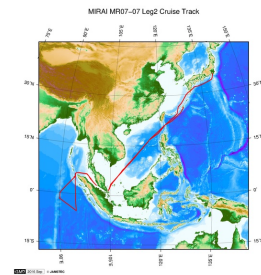
QCed data were added flag according to the NODC (National Oceanographic Data Center) quality control procedure, additionally visually checked. Please see the site of NODC of the following link for quality control procedure.

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#### Sample Program

[ex\\_read.f](#)

#### Related Information



[Enlarge Image](#)

#### MR07-07 Leg2

Ship Name: MIRAI  
Period: 2008-01-26 - 2008-02-25  
Chief Scientist: Hideaki Hase (JAMSTEC)  
Project Name: [Tropical Ocean Climate Study (TOCS)]

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KM-ROV  
POWER GRAB  
SAMPLER (SHELL)  
POWER GRAB  
SAMPLER (CLOW)  
BMS

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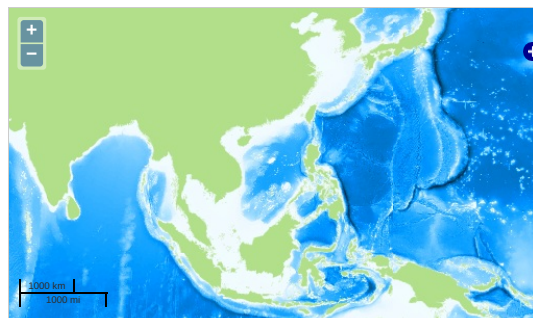
Data Policy: [JAMSTEC](#)

Observation Items: Temperature, Salinity, Dissolved oxygen

Science Keywords:

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

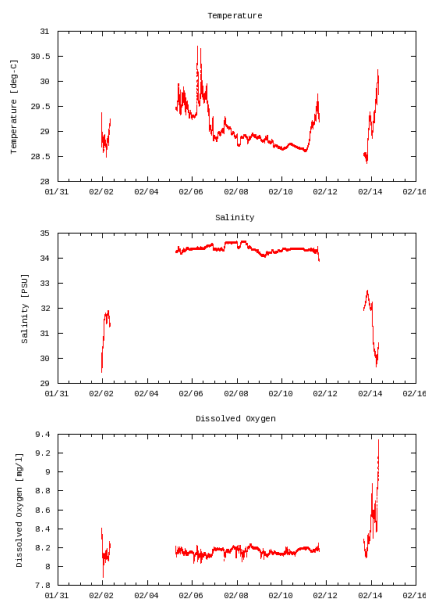
### Observation Map



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

### Figures

MR07-07 Leg2: Underway Thermosalino Graph



### Data List

[Add to Basket](#)

- ☐ File names
- ☐ 20080201.dat
- ☐ 20080202.dat
- ☐ 20080205.dat
- ☐ 20080206.dat
- ☐ 20080207.dat
- ☐ 20080208.dat
- ☐ 20080209.dat
- ☐ 20080210.dat
- ☐ 20080211.dat
- ☐ 20080213.dat
- ☐ 20080214.dat
- ☐ ex\_read.f (Sample Program)

### Related Information



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

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Cruise ID:

Dive ID:

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