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Data and Sample **R**esearch System
for **W**hole Cruise Information in JAMSTEC

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MIRAI MR99-K02 Underway Thermosalinograph

Last Modified: 2017-06-29

ReadMe | Observation Data | Data Format

Cruise ID: **MR99-K02**

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 TEMPERATURE	> SEA SURFACE TEMPERATURE

Cruise Report

http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR99-K02_all.pdf

> ℹ **For Using Data**
>
> **Principal Investigator**
>   Data Management Office
>
> **Use Constraints**
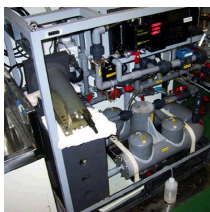>   See **Terms and Conditions** about constrain of use.
>
> **Data Citation**
>   See **Terms and Conditions** about data citation.

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 : 2088
    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
1999/05/08, 10:17	start	40-32.26N, 144-56.91E
1999/05/10, 15:30	stop	43-59.08N, 155-00.30E
1999/05/10, 15:50	start	43-59.04N, 155-00.12E
1999/05/12, 13:06	stop	43-47.75N, 154-40.00E
1999/05/12, 13:23	start	43-43.46N, 154-40.13E
1999/05/14, 05:09	stop	44-41.21N, 155-52.10E
1999/05/14, 05:25	start	44-41.75N, 155-53.26E
1999/05/18, 06:15	stop	50-00.78N, 165-01.04E
1999/05/18, 06:30	start	50-00.99N, 165-01.07E
1999/05/23, 04:14	stop	44-00.12N, 154-58.74E
1999/05/23, 04:26	start	44-00.05N, 154-58.77E
1999/05/23, 07:37	stop	44-02.13N, 154-59.08E
1999/05/23, 07:46	start	44-02.21N, 154-59.15E
1999/05/29, 10:28	stop	40-57.23N, 149-29.33E
1999/05/29, 10:38	start	40-55.64N, 149-26.59E

Date/Time (UTC)	Start/Stop	Remarks
1999/05/30, 08:58	stop	40-49.30N, 143-24.15E

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

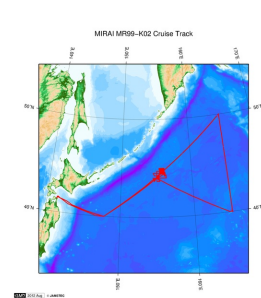Please see the site of NODC of the following link for quality control procedure in detail.

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.

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-K02 Cruise Track

Enlarge Image

MR99-K02
Ship Name: MIRAI
Period: 1999-05-07 - 1999-05-30
Chief Scientist: Makio Honda (JAMSTEC)
Project Name: [Station K2,Station KNOT]

Update History

2017-06-29	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
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

Go to a Dive Information
Dive ID: [---- ▼] [   ] Go

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

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DARWIN Data and Sample Research System for Whole Cruise Information in JAMSTEC

MIRAI MR99-K02 Underway Thermosalinograph

Last Modified: 2017-06-29

ReadMe | Observation Data | **Data Format**

Cruise ID: **MR99-K02**
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	MRYY-(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

MR99-K02
Ship Name: MIRAI
Period: 1999-05-07 - 1999-05-30
Chief Scientist: Makio Honda (JAMSTEC)
Project Name: [Station K2,Station KNOT]

MIRAI MR99-K02 Cruise Track

🔍 **Enlarge Image**

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Cruise ID: **MR99-K02**
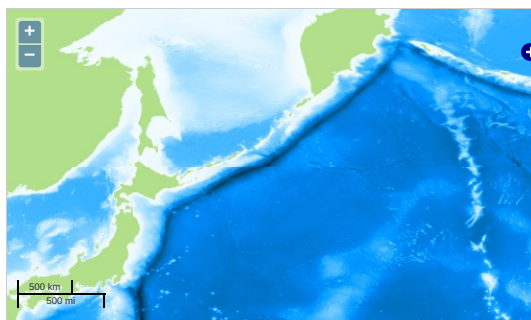**Underway Thermosalinograph**: Processed (DMO)-QCed
Data Policy: **JAMSTEC**
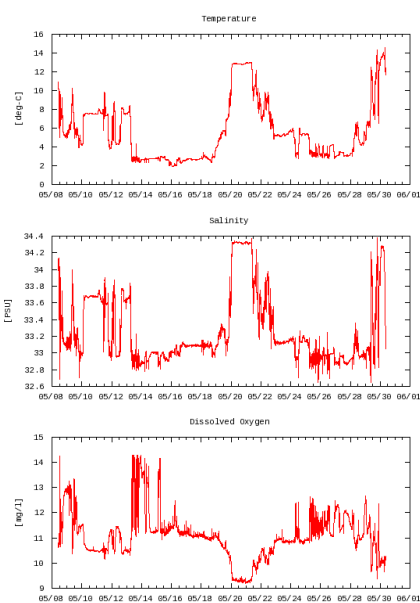**Observation Items**: Temperature, Salinity, Dissolved oxygen
Science Keywords:

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

Observation Map

500 km
500 mi

Imagery reproduced from ...

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

Figures

MR99-K02: Underway Thermosalino Graph

Data List

[Add to Basket]

	File names
☐	19990508.dat
☐	19990509.dat
☐	19990510.dat
☐	19990511.dat
☐	19990512.dat
☐	19990513.dat
☐	19990514.dat
☐	19990515.dat
☐	19990516.dat
☐	19990517.dat
☐	19990518.dat
☐	19990519.dat
☐	19990520.dat
☐	19990521.dat
☐	19990522.dat
☐	19990523.dat

	File names
☐	19990524.dat
☐	19990525.dat
☐	19990526.dat
☐	19990527.dat
☐	19990528.dat
☐	19990529.dat
☐	19990530.dat
☐	ex_read.f (Sample Program)

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