

## KAIMEI KM16-06 Underway Thermosalinograph

Last Modified: 2018-08-31

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

Cruise ID: [KM16-06](#)

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

**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



**Overview**

Thermosalinograph measures the following surface parameters continuously.

- temperature
- salinity
- dissolved oxygen

Sea surface water is continuously pumped up at 3.1 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  
Model : SBE38, Sea-Bird Electronics, Inc.  
Measurement range : -5 to 35 deg-C (ITS-90)  
Sensor location : Bow thruster room
- Salinity  
Model : SBE45, Sea-Bird Electronics, Inc.  
Measurement range : [temperature] -5 to +35 deg-C (ITS-90), [conductivity] 0 to 7 S/m  
Sensor location : Sea surface monitoring laboratory
- Dissolved oxygen  
Model : RINKO II ARO-CAR, JFE Advantech Co., Ltd.  
Measurement range : 0 - 200%  
Sensor location : Sea surface monitoring laboratory
- Fluorescence and turbidity  
Model : C3 Submersible Fluorometer, Turner Designs  
Measurement range : [fluorescence] 0.03 - 500 µg/L, [turbidity] 0 - 1500 NTU  
Sensor location : Sea surface monitoring laboratory

**Number of significant figures of data**

After considering the accuracy of the sensors, the significant digit of data was changed as in the following list.

Data	Raw (ASCII data)	On this web site
Temperature	0.0001 [deg-C]	0.001 [deg-C]
Salinity	0.0001 [PSU]	0.001 [PSU]
Dissolved oxygen	0.01 [µmol/kg]	0.1 [µmol/kg]

**Data missing period**

stop		restart
2016/08/07 05:22	-	2016/08/09 07:11
2016/08/10 21:40	-	2016/08/12 09:51

**Data processing**

DMO-QCed data are flagged after the data check process shown below:

- 1) Range check

For details about range set of temperature, salinity and oxygen data, please refer the web site of NODC (National Oceanographic Data Center) from the following link for quality control procedure.

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

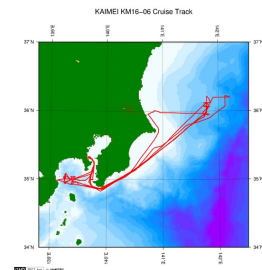
- 2) Visual check

If an value were extremely out from time-series plot of each variable or were affected by ambient air due to unstable flow of sampled water, it may be put flag "A" which means doubtful value.

**About this data**

This cruise obtained data of fluorescence and turbidity, in addition to data of temperature, salinity and dissolved oxygen. Please [contact us](#) for usage of those data.

**Related Information**



[Enlarge Image](#)

**KM16-06**  
Ship Name: KAIMEI  
Period: 2016-08-02 - 2016-08-15  
Chief Scientist: Katsuhisa Maeno (JAMSTEC)

#### Update History

Date	Description
2018-08-31	An observation data was registered.

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[Feeds](#)

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[Publication List](#)  
[Amount of Public Info.](#)

#### Data

[Map Search](#)  
[Data Tree](#)  
[Detailed Search](#)

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#### Information of the Submersibles

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[6K Sonar DEEP TOW](#)  
[KM-ROV](#)  
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Cruise ID:

#### Go to a Dive Information

Dive ID:

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JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

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Cruise ID: **KM16-06**

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### TSG DMO

#### Format Description for the QCed Data

Each data file contains one line header and daily observation data.

#### 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	e.g. MRYX-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	f11.3	ITS-90
6	46 - 56	Salinity	PSU	f11.3	PSS-78
7	57 - 67	Dissolved oxygen	μmol/kg	f11.1	
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
9	79 - 80	Terminator	-	-	CR+LF

\* This format has been applied since MR10-04 cruise of R/V Mirai.

\* Temperature, Salinity, Dissolved oxygen: Missing value is presented by '-5', and error value is presented by '-9'.

#### Definition of Quality Control Flags

##### 1. Observed Level Flags

- 0 - accepted value
- 1 - range outlier ( outside of broad range check )
- A - doubtful value
- N - missing value

##### 2. Date and time flag (Thermosalinograph only)

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

##### 3. Position flag (Thermosalinograph only)

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

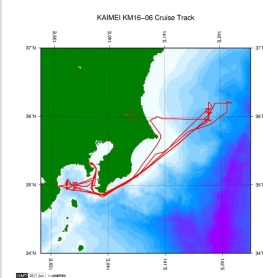
For details about range set of temperature, salinity and oxygen data, please refer the web site of NODC (National Oceanographic Data Center) from the following link for quality control procedure.

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#### Sample Program

[ex\\_read2.f](#)

### Related Information



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Ship Name: KAIMEI  
Period: 2016-08-02 - 2016-08-15  
Chief Scientist: Katsuhisa Maeno (JAMSTEC)

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2018-08-31 An observation data was registerd.

Application for Data and Samples  
Data Policy

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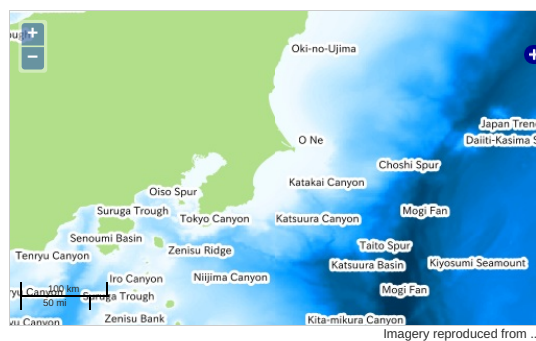
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Science Keywords:

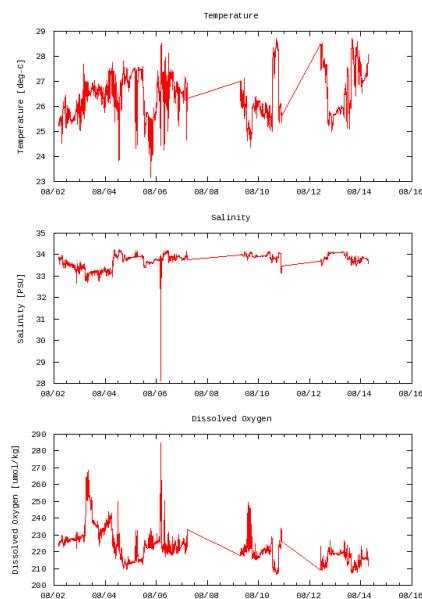
OCEANS > OCEAN CHEMISTRY > OXYGEN  
OCEANS > SALINITY/DENSITY > SALINITY  
> OCEAN > SEA SURFACE  
OCEANS TEMPERATURE TEMPERATURE

### Observation Map



### Figures

KM16-06: Underway Thermosalino Graph

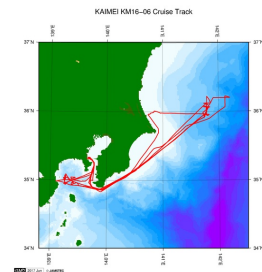


### Data List

[Add to Basket](#)

- ☐ **File names**
- ☐ 20160802.dat
  - ☐ 20160803.dat
  - ☐ 20160804.dat
  - ☐ 20160805.dat
  - ☐ 20160806.dat
  - ☐ 20160807.dat
  - ☐ 20160809.dat
  - ☐ 20160810.dat
  - ☐ 20160812.dat
  - ☐ 20160813.dat
  - ☐ 20160814.dat
  - ☐ ex\_read2.f (Sample Program)

### Related Information



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