

HAKUHO MARU KH-18-J03C Conductivity-Temperature-Depth Profiler (CTD)

Last Modified: 2021-09-15

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Cruise ID: [KH-18-J03C](#)

Conductivity-Temperature-Depth Profiler (CTD): Processed (PI)

Data Policy: [JAMSTEC](#)

Observation Items: Pressure, Temperature, Salinity, Dissolved oxygen

Science Keywords:

OCEANS > OCEAN CHEMISTRY > OXYGEN
OCEANS > OCEAN TEMPERATURE > WATER TEMPERATURE
OCEANS > SALINITY/DENSITY > SALINITY

Cruise Report

http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/KH-18-J03C_all.pdf

For Using Data

Principal Investigator

Masahide Wakita (JAMSTEC RIGC MIO)

Use Constraints

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

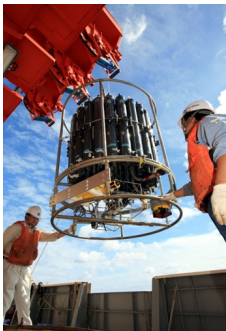
Data Citation

See [Terms and Conditions](#) about data citation.

Instrument

Instrument:

CTD (conductivity temperature depth measurements)



Overview

CTD(Conductivity-Temperature-Depth profiler) is used to observe the vertical profiles of temperature and conductivity.

Usually, this system is operated with multicylinder water sampler.

Observed signal is transmitted from sensor to the operation room on board using wire cable, and electric power is supplied from vessel to sensor.

Details of sensors attached to CTD system for KH-18-J03C cruise are presented in "System".

The following software, developed and supplied by the Sea-Bird Electronics, Inc., was used in KH-18-J03C.

SEASAVE(ver 7.23.2) for data acquisition

SEASOFT(ver 7.23.2) for data processing

Data presented on this website is averaged over 1db.

System

· Pressure sensor

Model : SBE9plus, Sea-Bird Electronics,Inc.

Serial number : 89961

Measurement range : up to 10500m

Accuracy : 0.015%F.S.

Resolution : 0.001% F.S.

· Temperature sensor

Model : SBE3, Sea-Bird Electronics,Inc.

Serial number : 034378

Measurement range : -5.0 to +35degC

Accuracy :0.001degC

Resolution : 0.0002degC

· Salinity sensor

Model : SBE4, Sea-Bird Electronics,Inc.

Serial number : 042732

Measurement range : 0.0 to 7 S/m

Accuracy : 0.0003 S/m

Resolution : 0.00004 S/m

· DO sensor

Model : SBE43, Sea-Bird Electronics,Inc.

Serial number : 430781

Measurement range : 120% of surface saturation

Accuracy : 2% of saturation

Sensors used in each cast is as follows.

Cast name	Serial number of sensor
Pressure	89961
Temperature	034378
Salinity	042732
Dissolved Oxygen	430781

Station name	Pressure Serial number of sensor	Temperature Serial number of sensor	Salinity	Dissoived Oxygen
Station name	Pressure	Temperature	Salinity	Dissoived Oxygen
D4	89961	034378	042732	430781
D5	89961	034378	042732	430781
D6	89961	034378	042732	430781
D7	89961	034378	042732	430781
H1	89961	034378	042732	430781
H2	89961	034378	042732	430781
H3	89961	034378	042732	430781
H4	89961	034378	042732	430781
H5	89961	034378	042732	430781
H6	89961	034378	042732	430781
M2	89961	034378	042732	430781
M3	89961	034378	042732	430781
M4	89961	034378	042732	430781
O1	89961	034378	042732	430781
O2	89961	034378	042732	430781
O3	89961	034378	042732	430781
O4	89961	034378	042732	430781

Data processing

(1) Data processing sequence for SEASOFT is as follows;

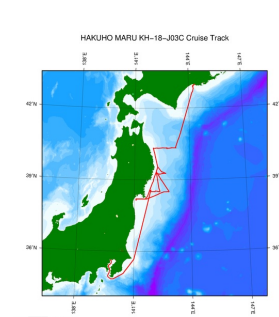
"*a*" is not SEASOFT original procedure.

command	function
datcnv	Convert raw data to engineering units, and store converted data in file.
alignctd	Align data relative to pressure(typically used for conductivity, temperature, and oxygen)
wildedit	Mark a data value with badflag to eliminate wild points.
celltm	Perform conductivity thermal mass correction.
filter	Low-pass filter columns of data.
wfilter	Median filter removes spikes of fluorometer data.
loopedit	Mark a scan with badflag if scan fails pressure reversal or minimum velocity tests.
binavg	Average data, basing bins on pressure, depth, scan number, or time range.
Derive	Calculate oxygen. (with oxygen sensor)
split	Split data in file into upcast and downcast files.

Notice

Contant mail (mwakita@jamstec.go.jp)

Related Information



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KH-18-J03C

Ship Name: HAKUHO MARU

Period: 2018-08-20 - 2018-08-29

Chief Scientist: Shuichi Watanabe (JAMSTEC)

Project Name: [Tohoku Ecosystem-Associated Marine Sciences (TEAMS)]

Proposal Researches on marine ecosystem dynamics in the Tsunami affected area off Sanriku

Title:

Update History

2021-09-15	An observation data was registerd.
2020-11-10	An observation data was registerd.
2020-01-31	An observation data was registerd.

JAMSTEC

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CHIKYU

KAIMEI

SHINSEI MARU

HAKUHO MARU

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DEEP TOW

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YOKOSUKA DEEP TOW

6K Camera DEEP TOW

6K Sonar DEEP TOW

KM-ROV

POWER GRAB SAMPLER (SHELL)

POWER GRAB SAMPLER (CLOW)

BMS

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Dive ID:

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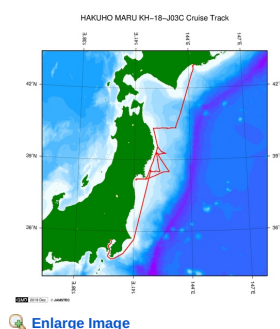
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Column	Description
1	Cruise
2	Station
3	Type
4	mon/day/yr
5	hh:mm
6	Lon (°E)
7	Lat (°E)
8	Depth [m]
9	Pressure[db]
10	Depth[m]
11	Temperature[degC]
12	Conductivity[S/m]
13	Temperature[degC]
14	Conductivity[S/m]
15	Oxygen[V]
16	Oxygen[umol/kg]
17	Oxygen[V]
18	Oxygen[umol/kg]
19	Fluorescence
20	Altimeter[m]
21	number of scans per bin
22	Salinity[PSU]
23	Density $\sigma\theta$ [kg/m ³]
24	Potential Tempretucre [degC]
25	Sound Velocity[m/s]
26	Practical Salinity[PSU]
27	Density2 $\sigma\theta$ [kg/m ³]
28	Potential Tempretucre2 [degC]
29	Sound Velocity2[m/s]
30	flag

Related Information



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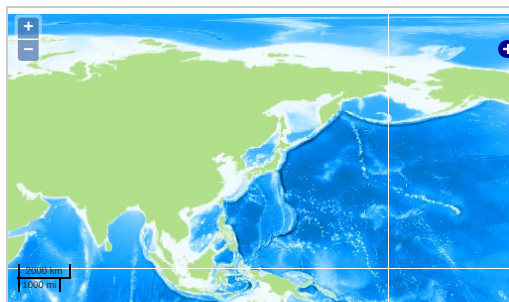
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TEMPERATURE TEMPERATURE
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Observation Map



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

Imagery reproduced from ...

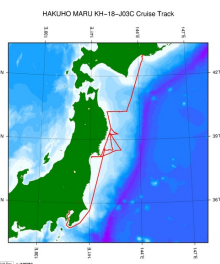
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File names

☐ KH-18-J03C_CTD.csv

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