

MIRAI MR06-03 Leg1 Conductivity-Temperature-Depth Profiler (CTD)

Last Modified: 2017-08-24

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Cruise ID: [MR06-03 Leg1](#)

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/MR06-03_leg1-2_all.pdf

For Using Data

Principal Investigator

Makio Honda (JAMSTEC)

Use Constraints

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

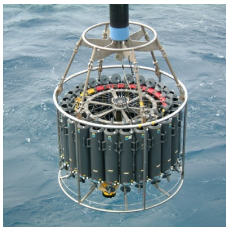
Data Citation

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

Instrument

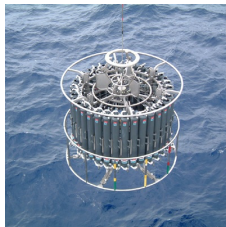
Instrument:

Water sampling system with CTD (30
litters * 24 bottles)



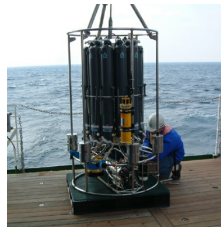
Instrument:

Water sampling system with CTD (12
litters * 36 bottles)



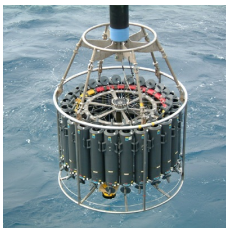
Instrument:

Water sampling system with CTD (12
litters * 12 bottles)



Instrument:

Conductivity temperature depth
measurements (CTD)



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 MR06-03 Leg1 cruise are presented in "System".

The following software, developed and supplied by the Sea-Bird Electronics, Inc., was used in MR06-03 Leg1.

SEASAVE(ver 5.27b) for data acquisition

SEASOFT(ver 5.27b) for data processing

Data presented on this website is averaged over 1db.

System

• Pressure sensor

Model : SBE9plus, Sea-Bird Electronics, Inc.

Serial number : 79511

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 : 031525

Measurement range : -5.0 to +35degC

Accuracy : 0.001degC

Resolution : 0.0002degC

• Salinity sensor

Model : SBE4, Sea-Bird Electronics, Inc.

Serial number : 041203

Measurement range : 0.0 to 7 S/m

Accuracy : 0.0003 S/m

- Resolution : 0.00004 S/m
- Salinity sensor
Model : SBE4, Sea-Bird Electronics, Inc.
Serial number : 042854
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 : 430394
Measurement range : 120% of surface saturation
Accuracy : 2% of saturation

Note

(1) Sensors used in each cast is as follows.

Cast name	Serial number of sensor			
	Pressure	Temperature	Salinity	Dissolved Oxygen
001M01	79511	031525	041203	430394
011M01	79511	031525	042854	430394
012M01	79511	031525	042854	430394
013M01	79511	031525	042854	430394
014M01	79511	031525	042854	430394
015M01	79511	031525	042854	430394
002M01	79511	031525	042854	430394
002M02	79511	031525	042854	430394
002M03	79511	031525	042854	430394
002M04	79511	031525	042854	430394
016M01	79511	031525	042854	430394
017M01	79511	031525	042854	430394
018M01	79511	031525	042854	430394
003M01	79511	031525	042854	430394
004M01	79511	031525	042854	430394
019M01	79511	031525	042854	430394
010M01	79511	031525	042854	430394
009M01	79511	031525	042854	430394
008M01	79511	031525	042854	430394
007M01	79511	031525	042854	430394
006M01	79511	031525	042854	430394
005M01	79511	031525	042854	430394
019M02	79511	031525	042854	430394
019M03	79511	031525	042854	430394
019M04	79511	031525	042854	430394

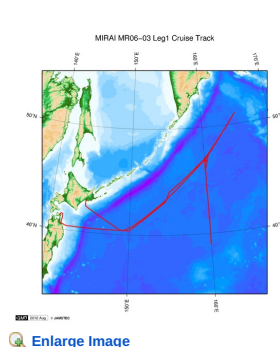
(2) Data processing sequence for SEASOFT is as follows;

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.
section	Extract rows of data from file.
loopedit	Mark a scan with badflag if scan fails pressure reversal or minimum velocity tests.
derive	Calculate oxygen. (with oxygen sensor)
binavg	Average data, basing bins on pressure, depth, scan number, or time range.
derive	Calculate salinity, density, etc..
split	Split data in file into upcast and downcast files.

(3) The time and position presented in the header is at the starting time of cast.

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

Related Information



MR06-03 Leg1
Ship Name: MIRAI
Period: 2006-05-26 - 2006-06-18
Chief Scientist: Makio Honda (JAMSTEC)
Project Name: [Station K2, Station KNOT]

Update History

2017-08-24	An observation data was registerd.
2014-07-29	An observation data was registerd.
2013-03-27	An observation data was registerd.
2012-11-25	An observation data was registerd.

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KAIREI
CHIKYU
KAIMEI
SHINSEI MARU
HAKUHO MARU

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SHINKAI 6500
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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

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Cruise ID:

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Dive ID:

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CTD WOCE-type2

Format Description for the Corrected Data

Provided in the Exchange Format of CCHDO (CLIVAR and Carbon Hydrographic Data Office). Please see the following link for details of Exchange Format.

[CCHDO | CLIVAR & Carbon Hydrographic Data Office](#)

Data in following cruise is not expressed with Exchange Format. Please see the site of each cruise for format.

MR02-K05 Leg1

MR04-05

Format Description for the QCed Data

Each data file contains one line header (meta data) followed by data lines for each cast.

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	CTD
3	8 - 22	Cruise ID	a15	MYYY-(K)XX(_legx)
4	24 - 31	Cast name	a8	
5	33 - 40	Date	i8	YYYYMMDD (UTC)
6	42 - 45	Time	i4	hhmm (UTC)
7	47 - 55	Latitude	i2,a1,f5.2,a1	dd-mm.mmN(S)
8	57 - 66	Longitude	i3,a1,f5.2,a1	ddd-mm.mmE(W)
9	68 - 71	Number of data lines	i4	
10	72 - 73	Terminator	-	CR+LF

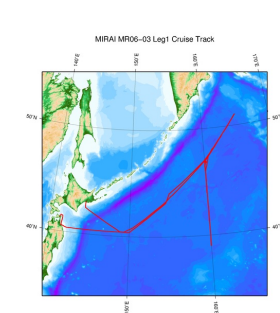
Data part

No.	Column	Content	Unit	Format	Remarks
1	1 - 11	Pressure	dbar	f11.3	
2	12 - 22	Temperature	deg-C	f11.4	ITS-90
3	23 - 33	Salinity	PSU	f11.4	PSS-78
4	34 - 44	Dissolved oxygen	umol/kg	f11.3	
5	45 - 55	Flag	-	i11	1 - 7 : space 8 : flag of pressure 9 : flag of temperature 10 : flag of salinity 11 : flag of dissolved oxygen * reference : Definition of Quality Control Flags
6	56 - 57	Terminator	-	-	CR+LF

Each contents of the data part is stored in 11 bytes.

Missing value is presented by '-5', and error value is presented by '-9'.

Related Information



[Enlarge Image](#)

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POWER GRAB SAMPLER
(SHELL)
POWER GRAB SAMPLER
(CLOW)
BMS

Dive ID:

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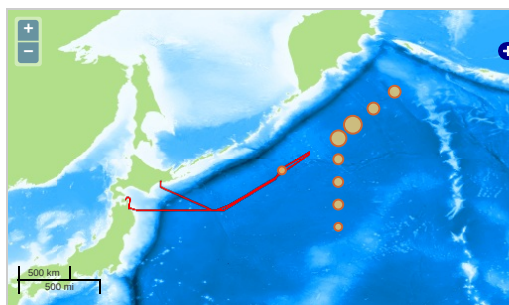
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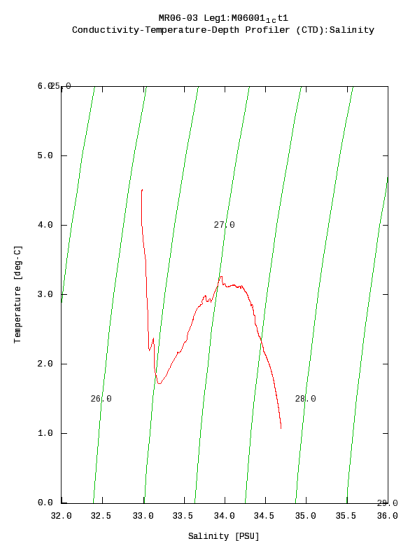
Observation Map

1. Clicking the icon displays a balloon with observation information.
2. Then click the observation name, figures will be displayed.



Figures

M06001_1_ct1















Data List

[Add to Basket](#)

File names

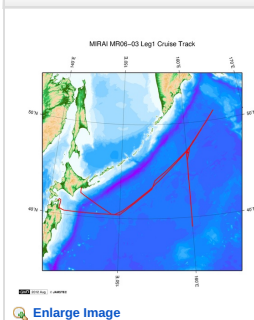
<input type="checkbox"/>	M06001_1_ct1.csv
<input type="checkbox"/>	M06002_1_ct1.csv
<input type="checkbox"/>	M06002_2_ct1.csv
<input type="checkbox"/>	M06002_3_ct1.csv
<input type="checkbox"/>	M06002_4_ct1.csv
<input type="checkbox"/>	M06003_1_ct1.csv
<input type="checkbox"/>	M06004_1_ct1.csv
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<input type="checkbox"/>	M06007_1_ct1.csv
<input type="checkbox"/>	M06008_1_ct1.csv
<input type="checkbox"/>	M06009_1_ct1.csv
<input type="checkbox"/>	M06010_1_ct1.csv

 M06014_1_ct1.csv
 M06012_1_ct1.csv
 M06013_1_ct1.csv
 M06014_1_ct1.csv
 M06015_1_ct1.csv
 M06016_1_ct1.csv
 M06017_1_ct1.csv
 M06018_1_ct1.csv
 M06019_1_ct1.csv
 M06019_2_ct1.csv
 M06019_3_ct1.csv
 M06019_4_ct1.csv

- Observation List
The list of observation is shown as follows.

Observation	Time and Date	Lat. [°]	Lon. [°]
M06001_1_ct1	2006-05-29 08:53	44.0132	154.9962
M06002_1_ct1	2006-06-03 00:55	46.8580	160.0175
M06002_2_ct1	2006-06-03 04:16	46.8582	160.0598
M06002_3_ct1	2006-06-03 14:55	46.8727	159.9848
M06002_4_ct1	2006-06-03 21:52	46.8708	159.9860
M06003_1_ct1	2006-06-07 12:49	46.0103	160.0035
M06004_1_ct1	2006-06-07 22:20	45.0012	160.0013
M06005_1_ct1	2006-06-11 13:55	43.9863	159.9998
M06006_1_ct1	2006-06-11 05:59	42.9885	159.9932
M06007_1_ct1	2006-06-10 21:54	41.9932	159.9973
M06008_1_ct1	2006-06-10 13:54	40.9800	159.9990
M06009_1_ct1	2006-06-10 06:06	39.9887	159.9973
M06010_1_ct1	2006-06-09 20:50	39.0015	159.9982
M06011_1_ct1	2006-05-31 21:01	50.9998	165.0038
M06012_1_ct1	2006-06-01 05:56	50.5248	164.3840
M06013_1_ct1	2006-06-01 13:05	50.0135	163.7652
M06014_1_ct1	2006-06-01 20:41	49.5022	163.1235
M06015_1_ct1	2006-06-02 04:13	49.0075	162.5077
M06016_1_ct1	2006-06-06 12:07	48.4902	161.8627
M06017_1_ct1	2006-06-06 18:47	48.0672	161.2950
M06018_1_ct1	2006-06-07 02:21	47.5013	160.6402
M06019_1_ct1	2006-06-08 10:06	46.9800	159.9987
M06019_2_ct1	2006-06-12 15:26	46.8657	160.1372
M06019_3_ct1	2006-06-12 23:15	46.9457	160.0912
M06019_4_ct1	2006-06-13 21:28	46.9207	160.0583

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POWER GRAB SAMPLER

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