MIRAI MR06-05 Leg1 Bottle Sampling Water Chemical Analysis

Last Modified: 2017-07-28

ReadMe | Observation Data | Data Format | Quality Information

Cruise ID: MR06-05 Leg1

Bottle Sampling Water Chemical Analysis: Processed (PI)

Data Policy: JAMSTEC

Observation Items: Temperature, Salinity, Dissolved oxygen, Chlorophyll, Silicate, Nitrate, Nitrite, Phosphate, pH, Potential temperature, Density

Science Keywords:

OCEANS	> OCEAN CHEMISTRY	> NITRITE
OCEANS	> OCEAN CHEMISTRY	> NITRATE
OCEANS	> OCEAN CHEMISTRY	> NUTRIENTS
OCEANS	> OCEAN CHEMISTRY	> OXYGEN
OCEANS	> OCEAN CHEMISTRY	> pH
OCEANS	> OCEAN CHEMISTRY	> PHOSPHATE
OCEANS	> OCEAN CHEMISTRY	> SILICATE
OCEANS	> OCEAN CHEMISTRY	> SALINITY
OCEANS	> OCEAN CHEMISTRY	> CHLOROPHYLL
OCEANS	> OCEAN TEMPERATURE	> WATER TEMPERATURE
OCEANS	> SALINITY/DENSITY	> SALINITY
OCEANS	> OCEAN TEMPERATURE	> POTENTIAL TEMPERATURE

Cruise Report

http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR06-05_leg1_all.pdf

For Using Data

Principal Investigator

CTDTMP : Kunio Yoneyama (JAMSTEC)
CTDSAL : Kunio Yoneyama (JAMSTEC)
SALNTY : -
CTDOXY : Kunio Yoneyama (JAMSTEC)
OXYGEN : -
CHLORA : -
SILCAT : Kunio Yoneyama (JAMSTEC)
NITRAT : Kunio Yoneyama (JAMSTEC)
NITRIT : Kunio Yoneyama (JAMSTEC)
PHSPHT : Kunio Yoneyama (JAMSTEC)
PH : -

Use Constraints

See Terms and Conditions about constrain of use.

Data Citation

See Terms and Conditions about data citation.

Instrument

Instrument:
Salinity measurement system

Instrument:
Nutrient analyzer(4ch) (- MR09-01)

Instrument:
pH meter (MR02-K03 -)

Instrument:
Titrator for DO (- MR11-05 Leg2)

Instrument:
Fluorometer (TURNER DESIGNS)

Information on CTD data

(1) Temperature sensor
Model : SBE3, Sea-Bird Electronics,Inc.
Measurement range : -5.0 to +35degC
Accuracy : 0.001degC
Resolution : 0.0002degC
(2) Salinity sensor
Model : SBE4, Sea-Bird Electronics,Inc.
Measurement range : 0.0 to 7S/m
Accuracy : 0.0003S/m
Resolution : 0.00004S/m
(3) Pressure sensor

Model : SBE9plus, Sea-Bird Electronics,Inc.
Measurement range : up to 10500m
Accuracy : 0.015%F.S.
Resolution : 0.001%F.S.

(4) DO sensor
Model : SBE43, Sea-Bird Electronics,Inc.
Measurement range : 0-15ml/l(120% of surface saturation)
Accuracy : 0.1ml/l(2% of saturation)
Resolution : 0.01ml/l

Information on Chemical and Biological data

1. Dissolved Oxygen

(1) Instruments :Burette:APB-510 manufactured by Kyoto Electronic Co. Ltd. / 10 cm^3 of titration vessel
Detector and Software: Automatic photometric titrator manufactured by Kimoto Electronic Co. Ltd
(2) Methods :Winkler method/photometric methods
(3) Precision : 0.084 umol kg^{-1}
(4) Reference Material/Calibration:0.001667M KIO_3 solution

2. Salinity

(1) Instruments:Autosal salinometer model 8400B(Guildline Instruments Ltd.)
(2) Methods : -
(3) Precision : 0.00014 in PSU
(4) Reference Material/Calibration:IAPSO Standard Sea Water batch P147(Ocean Scientific International Ltd.)

3. Silicate

(1) Instruments:TRAACS800 (Bran+Luebbe)
(2) Methods :Molybdenum blue method
(3) Precision :C.V. 0.07% (3.6uM)
(4) Reference Material/Calibration:RMNS [Aoyama et al., 2007] and Silicate standard solution, the silicate primary standard, was obtained from Merck,Ltd.. This standard solution, traceable to SRM from NIST was 1000 mg per litter.

4. Nitrate

(1) Instruments:TRAACS800 (Bran+Luebbe)
(2) Methods :Diazotization method
(3) Precision : C.V. 0.05% (35uM)
(4) Reference Material/Calibration:KNO_3 solution and RMNS [Aoyama et al., 2007]

5. Nitrite

(1) Instruments:TRAACS800 (Bran+Luebbe)
(2) Methods :Diazotization method (reduced to nitrite by Cd - Cu tube)
(3) Precision : C.V. 0.05% (1.9uM)
(4) Reference Material/Calibration:$NaNO_2$ solution and RMNS [Aoyama et al., 2007]

6. Phosphate

(1) Instruments:TRAACS800 (Bran+Luebbe)
(2) Methods :Molybdenum blue method
(3) Precision :C.V. 0.07% (3.0uM)
(4) Reference Material/Calibration:KH_2PO_4 solution and RMNS [Aoyama et al., 2007]

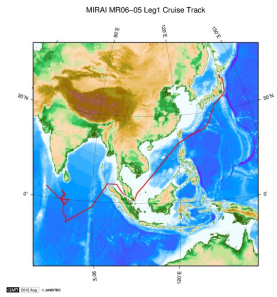
7. pH

(1) Instruments: a glass(Radiometer pHG201) / reference(Radiometer REF201) electrode with a pH / Ion meter (Radiometer PHM240)
(2) Methods :potentiometric methods at 25deg-C
(3) Precision :0.001 pH unit
(4) Reference Material/Calibration:total hydrogen ion scale

8. Chlorophyll-a

(1) Instruments:Fluorophotometer model 10-AU-005 (Turner design)
(2) Methods :extract in N,N-dimethylformamide/fluorometric determination (acidification method)
(3) Precision :-
(4) Reference Material/Calibration:-

Related Information



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MR06-05 Leg1
Ship Name: MIRAI
Period: 2006-10-03 - 2006-11-27
Chief Scientist: Kunio Yoneyama (JAMSTEC)
Project Name: [Mirai Indian ocean cruise for the Study of the MJO convection Onset,MJO Research]

Update History

2017-07-28	An observation data was registerd.
2015-05-29	An observation data was registerd.
2013-08-28	An observation data was registerd.
2012-11-25	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
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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

Go to a Cruise Information
Cruise ID: Go

Go to a Dive Information
Dive ID: ---- Go

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JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

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Cruise ID: MR06-05 Leg1

Bottle Sampling Water Chemical Analysis: Processed (PI)

Data Policy: JAMSTEC

Exchange Format

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

Format Information

Column No.	Column Heading Mnemonic	Units Mnemonic	Reporting Precision FORTRAN Format	Comments
1	EXPOCODE		A14	Expedition code
2	SECT		A6	For WOCE data the WHP section identifier
3	STNNBR		A18	Station number
4	CASTNO		I3	Cast number
5	SAMPNO		A7	Sample number
6	BTLNBR		A7	Bottle identification number
7	BTLNBR_FLAG_W		I1	Bottle quality flag
8	DATE		I8	Cast date(UTC)
9	TIME	UTC	I4	Cast time (UTC)
10	LATITUDE	DEG	F8.4	LATITUDE
11	LONGITUDE	DEG	F9.4	LONGITUDE
12	DEPTH	M	I5	Reported depth to bottom.
13	CTDDPT	M	F9.1	Depth
14	CTDDPT_FLAG_W		I1	Quality flag for CTD data
15	CTDPRS	DBAR	F9.1	Pressure
16	CTDPRS_FLAG_W		I1	Quality flag for CTD data
17	CTDTMP	ITS-90	F9.4	Temperature
18	CTDTMP_FLAG_W		I1	Quality flag for CTD data
19	CTDSAL	PSS-78	F9.4	CTD Salinity sensor
20	CTDSAL_FLAG_W		I1	Quality flag for CTD data
21	SALNTY	PSS-78	F9.4	Salinity
22	SALNTY_FLAG_W		I1	Quality flags for water samples
23	CTDOXY	UMOL/KG	F9.2	CTD Oxygen sensor
24	CTDOXY_FLAG_W		I1	Quality flag for CTD data
25	OXYGEN	UMOL/KG	F9.2	Oxygen
26	OXYGEN_FLAG_W		I1	Quality flags for water samples
27	CHLORA	MG/CUM	F9.2	Chlorophyll a
28	CHLORA_FLAG_W		I1	Quality flags for water samples
29	SILCAT	UMOL/KG	F9.2	Silicate
30	SILCAT_FLAG_W		I1	Quality flags for water samples
31	NITRAT	UMOL/KG	F9.2	Nitrate
32	NITRAT_FLAG_W		I1	Quality flags for water samples
33	NITRIT	UMOL/KG	F9.2	Nitrite
34	NITRIT_FLAG_W		I1	Quality flags for water samples
35	PHSPHT	UMOL/KG	F9.3	Phosphate
36	PHSPHT_FLAG_W		I1	Quality flags for water samples
37	PH	-	F9.3	pH
38	PH_FLAG_W		I1	Quality flags for water samples
39	THETA	DEG C	F9.4	Potential temperature
40	SIG0	KG/CUM	F9.4	Density

ODV Format

Please see the following link for details of ODV Format and ODV Software.

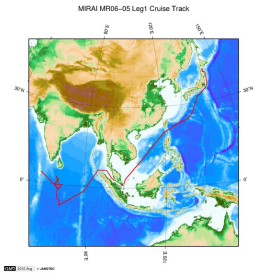
Ocean Data View (ODV)

Format Information

Column No.	Column Heading	Comments
1	Cruise	Cruise Label
2	Station	Station number_Cast number
3	Type	Station type
4	mon/day/yr	Cast date(UTC)
5	hh:mm	Cast time (UTC)
6	Latitude [degrees_north]	LATITUDE
7	Longitude [degrees_east]	LONGITUDE
8	Bot. Depth [m]	Reported depth to bottom.
9	CTDDPT[M]	Depth
10	QF	Quality flag for CTD data
11	CTDPRS[DBAR]	Pressure
12	QF	Quality flag for CTD data
13	CTDTMP[ITS-90]	Temperature
14	QF	Quality flag for CTD data
15	CTDSAL[PSS-78]	CTD Salinity sensor
16	QF	Quality flag for CTD data
17	SALNTY[PSS-78]	Salinity
18	QF	Quality flags for water samples
19	CTDOXY[UMOL/KG]	CTD Oxygen sensor

Column No.	Column Heading	Comments
20	QF	Quality flag for CTD data
21	OXYGEN[UMOL/KG]	Oxygen
22	QF	Quality flags for water samples
23	CHLORA[MG/CUM]	Chlorophyll a
24	QF	Quality flags for water samples
25	SILCAT[UMOL/KG]	Silicate
26	QF	Quality flags for water samples
27	NITRAT[UMOL/KG]	Nitrate
28	QF	Quality flags for water samples
29	NITRIT[UMOL/KG]	Nitrite
30	QF	Quality flags for water samples
31	PHSPHT[UMOL/KG]	Phosphate
32	QF	Quality flags for water samples
33	PH	pH
34	QF	Quality flags for water samples
35	THETA[DEG C]	Potential temperature
36	QF	Quality flag for CTD data
37	SIG0[KG/CUM]	Density
38	QF	Quality flag for CTD data
39	SAMPNO	Sample number
40	QF	Bottle quality flag

Related Information



Enlarge Image

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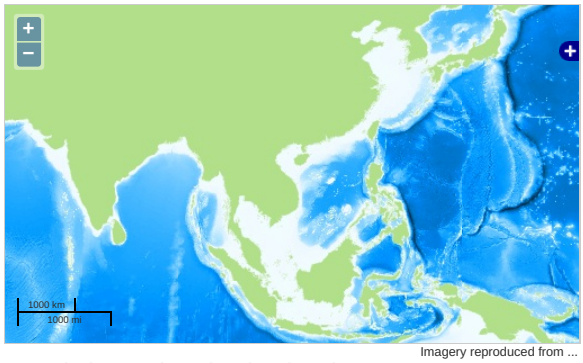
OCEANS	> OCEAN CHEMISTRY	> CHLOROPHYLL
OCEANS	> OCEAN TEMPERATURE	> WATER TEMPERATURE
OCEANS	> SALINITY/DENSITY	> SALINITY
OCEANS	> OCEAN TEMPERATURE	> POTENTIAL TEMPERATURE

Observation Map



Imagery reproduced from ...

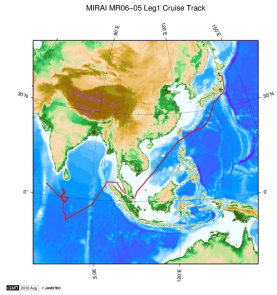
... Observation Line ... Navigation ... Observation, Dive Point, Hole

Data List

Add to Basket

	File names
☐	MR060501_ex_bot.csv
☐	MR060501_odv_bot.txt

Related Information



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