

## MIRAI MR09-03 Leg3 Partial Pressure of CO2 (pCO2)

Last Modified: 2017-07-27

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

Cruise ID: [MR09-03 Leg3](#)

Partial Pressure of CO2 (pCO2): Processed (DMO)-QCed

Data Policy: [JAMSTEC](#)

Observation Items: CO2, Air temperature, Atmospheric pressure, Wind direction, Wind speed, Sea surface temperature, Sea surface salinity

Science Keywords:

OCEANS > OCEAN CHEMISTRY > CARBON DIOXIDE

Cruise Report

[http://www.godac.jamstec.go.jp/catalog/data/doc\\_catalog/media/MR09-03\\_leg1-3\\_all.pdf](http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR09-03_leg1-3_all.pdf)

### For Using Data

#### Principal Investigator

Shigeto Nishino (JAMSTEC)

#### Use Constraints

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

#### Data Citation

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

### Instrument

Instrument:

pCO2 measurement system ( - MR10-06)



### Information on pCO2 measurement

Instrument : pCO<sub>2</sub> measuring system ; Nippon ANS Ltd.

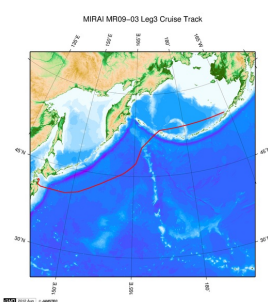
Method : Non-dispersive infrared gas analyzer (NDIR) / Equilibrator : showerhead-type

Precision : -

Reference Material/Calibration : The CO<sub>2</sub> standard gas was calibrated at Prof. Keeling's laboratory in the Scripps Institution of Oceanography

[About data processing method](#)

### Related Information



 [Enlarge Image](#)

#### MR09-03 Leg3

Ship Name: MIRAI

Period: 2009-10-16 - 2009-10-25

Chief Scientist: Shigeto Nishino (JAMSTEC)

Project Name: [Arctic Ocean Climate System Reaserch]

Proposal ▶ Multi-disciplinary observation cruise for the Arctic Ocean

Title:

### Update History

2017-07-27	An observation data was registerd.
2012-09-28	An observation data was registerd.

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[KAIYO](#)

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[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](#)

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### pCO2 FORMAT\_M

#### Data Format

The file is in variable length, comma separated text file (csv) format.

The line starts with "#" is a comment line which contains version information and so on.

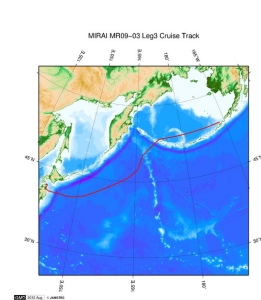
Column NO.	Column Heading	Comments
1	Ship	Ship name
2	Cruise	Cruise ID
3	Serial No.	Serial No.
4	Date	year (YYYY) in UTC
5		month (MM) in UTC
6		day (DD) in UTC
7	Time	hour (hh) in UTC
8		minute (mm) in UTC
9	Latitude	Latitude (degree) ; Positive in north
10	Longitude	Longitude (degree) ; degree in eastward (0 - 360)
11	xCO2_Air	CO <sub>2</sub> mixing ratio (ppm) in the air
12	F	Quality flag for xCO2_Air
13	xCO2_Sea	CO <sub>2</sub> mixing ratio (ppm) in the sea surface water (*)
14	F	Quality flag for xCO2_Sea
15	Wind_Dir	Wind direction (degree) ; Positive in clockwise from the north
16	Wind_Spd	Wind speed (m/s)
17	Atm_Prs	Barometric pressure (hPa)
18	Atm_Tmp.	Air temperature (degree-C)
19	SST	Sea surface temperature (degree-C)
20	F	Quality flag for SST
21	SSS	Sea surface salinity (PSU)
22	F	Quality flag for SSS
23	pH2O	Vapor pressure of in-situ sea water (hPa)

#### Definition of Quality Control Flags

- 2 - Good
- 3 - Questionable
- 4 - Bad
- 5 - Not reported
- 9 - No data

\*: Please refer to "Information on pCO2 data" shown in ReadMe tab for xCO2\_Sea data calculation.

#### Related Information



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Project Name: [Arctic Ocean Climate System Research]  
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POWER GRAB  
SAMPLER (SHELL)  
POWER GRAB  
SAMPLER (CLOW)  
BMS

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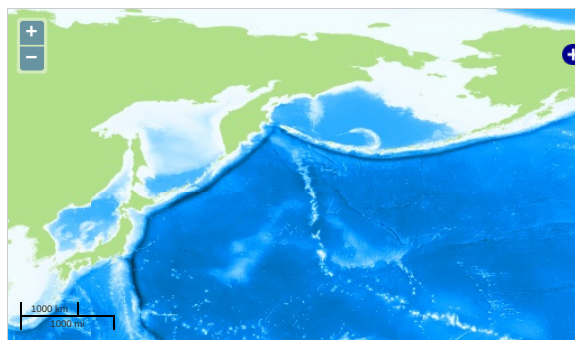
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### Observation Map



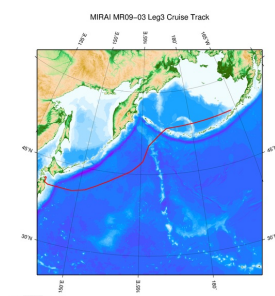
... Observation Line ... Navigation ... Observation, Dive Point, Hole

### Data List

File names

☐ MR09-03\_leg3\_pco2.zip

### Related Information



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