

## MIRAI MR01-K01 Partial Pressure of CO2 (pCO2)

Last Modified: 2018-08-25

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

Cruise ID: [MR01-K01](#)

Partial Pressure of CO2 (pCO2): Processed (PI)

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/MR01-K01\\_all.pdf](http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR01-K01_all.pdf)

### For Using Data

#### Principal Investigator

Masao Ishii (Meteorological Research Institute)

#### 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

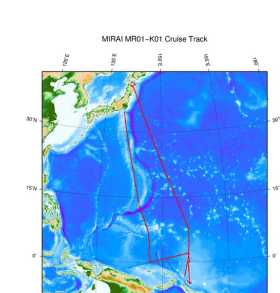
Precision : -

Reference Material/Calibration : MRI\_87 scale

Please refer to Ishii et al. (2004) for calculation of sea-surface CO<sub>2</sub> concentration and for relationship between MRI\_87 scale and WMO1985 mole fraction scale.

Ishii, M., S. Saito, T. Tokieda, T. Kawano, K. Matsumoto, and H. Y. Inoue (2004) Variability of Surface Layer CO<sub>2</sub> Parameters in the Western and Central Equatorial Pacific. Global Environmental Change in the Ocean and on Land, Eds., M. Shiyomi et al., pp. 59-94.

### Related Information



[Enlarge Image](#)

#### MR01-K01

Ship Name: MIRAI

Period: 2001-02-14 - 2001-03-22

Chief Scientist: Kentaro Ando (JAMSTEC)

Project Name: [Tropical Ocean Climate Study (TOCS)]

### Update History

2018-08-25	An observation data was registerd.
2012-12-25	An observation data was registerd.

#### Go to a Cruise Information

Cruise ID:

#### Go to a Dive Information

Dive ID:

6K Sonar DEEP TOW  
KM-ROV  
POWER GRAB SAMPLER  
(SHELL)  
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BMS

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## MIRAI MR01-K01 Partial Pressure of CO<sub>2</sub> (pCO<sub>2</sub>)

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Cruise ID: **MR01-K01**

Partial Pressure of CO<sub>2</sub> (pCO<sub>2</sub>): Processed (PI)

Data Policy: [JAMSTEC](#)

### pCO<sub>2</sub> 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.

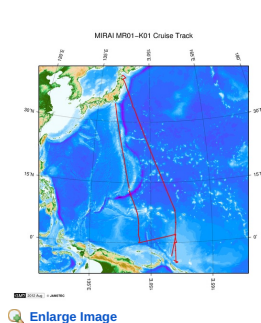
Column NO.	Column Heading	Comments
1	Ship	Ship name
2	Cruise	Cruise ID
3	Serial No.	Serial No.
4	Date	year (YYYY) in UTC
5		month (MM) in UTC
6		day (DD) in UTC
7	Time	hour (hh) in UTC
8		minute (mm) in UTC
9	Latitude	Latitude (degree) ; Positive in north
10	Longitude	Longitude (degree) ; degree in eastward (0 - 360)
11	xCO <sub>2</sub> _Air	CO <sub>2</sub> mixing ratio (ppm) in the air
12	F	Quality flag for xCO <sub>2</sub> _Air
13	xCO <sub>2</sub> _Sea	CO <sub>2</sub> mixing ratio (ppm) in the sea surface water (*)
14	F	Quality flag for xCO <sub>2</sub> _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	pH <sub>2</sub> O	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 pCO<sub>2</sub> data" shown in ReadMe tab for xCO<sub>2</sub>\_Sea data calculation.

### Related Information



#### MR01-K01

Ship Name: MIRAI  
Period: 2001-02-14 - 2001-03-22  
Chief Scientist: Kentaro Ando (JAMSTEC)  
Project Name: [Tropical Ocean Climate Study (TOCS)]

### Update History

2018-08-25	An observation data was registered.
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[URASHIMA](#)  
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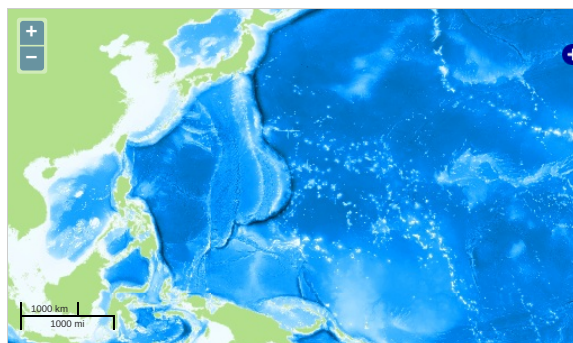
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Observation Items: CO2, Air temperature, Atmospheric pressure, Wind direction, Wind speed, Sea surface temperature, Sea surface salinity

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### Observation Map



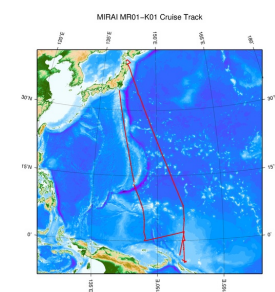
... Observation Line ... Navigation ... Observation, Dive Point, Hole

### Data List

File names

☐ MR01-K01\_pco2.zip

### Related Information



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Chief Scientist: Kentaro Ando (JAMSTEC)

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