

## MIRAI MR98-01 Partial Pressure of CO2 (pCO2)

Last Modified: 2013-01-25

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

Cruise ID: [MR98-01](#)

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

### 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

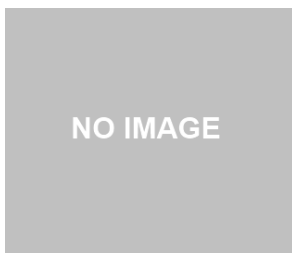
Precision : -

Reference Material/Calibration : MRI\_87 scale(\*)

(\*) The relationship between MRI\_87 scale and WMO 1985 mole fraction scale is given by:

$$xCO_2-WMO=5.451+0.9741 \times (xCO_2-MRI\_87)+2.7699 \times (xCO_2-MRI\_87)^2$$

### Related Information



#### [MR98-01](#)

Ship Name: MIRAI

Period: 1998-01-24 - 1998-02-26

### Update History

Update Date	Update Content
2013-01-25	An observation data was registered.

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#### Information of the Submersibles

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Cruise ID:

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Dive ID:

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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 <i>in-situ</i> 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



#### MR98-01

Ship Name: MIRAI

Period: 1998-01-24 - 1998-02-26

### Update History

2013-01-25 An observation data was registerd.

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POWER GRAB  
SAMPLER (SHELL)  
POWER GRAB  
SAMPLER (CLOW)  
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## MIRAI MR98-01 Partial Pressure of CO<sub>2</sub> (pCO<sub>2</sub>)

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Cruise ID: [MR98-01](#)

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

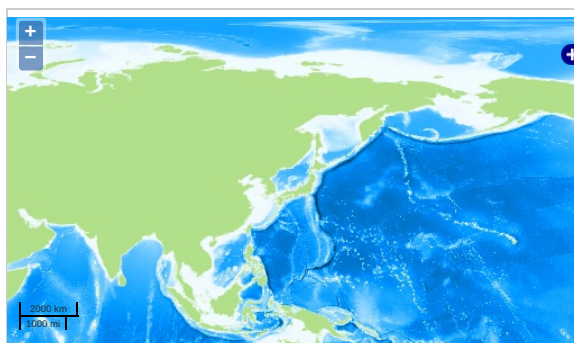
Data Policy: [JAMSTEC](#)

Observation Items: CO<sub>2</sub>, Air temperature, Atmospheric pressure, Wind direction, Wind speed, Sea surface temperature, Sea surface salinity

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### Observation Map



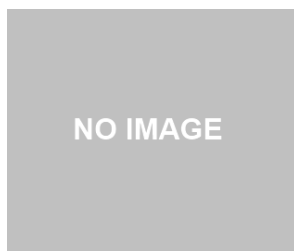
... Observation Line ... Navigation ... Observation, Dive Point, Hole

### Data List

File names

☐ MR98-01\_pco2.zip

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