

MIRAI MR02-K02 Partial Pressure of CO₂ (pCO₂)

Last Modified: 2018-08-25

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Cruise ID: [MR02-K02](#)

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.

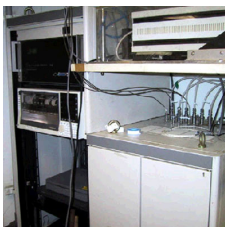
Data Citation

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

Instrument

Instrument:

pCO₂ measurement system (- MR10-06)



Information on pCO₂ measurement

Instrument : pCO₂ measuring system ; Nippon ANS Ltd.

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

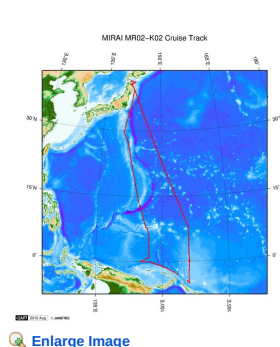
Precision : -

Reference Material/Calibration : MRI_87 scale

Please refer to Ishii et al. (2004) for calculation of sea-surface CO₂ 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 CO₂ 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](#)

MR02-K02

Ship Name: MIRAI

Period: 2002-02-21 - 2002-03-30

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.

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

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(CLOW)
BMS

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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.

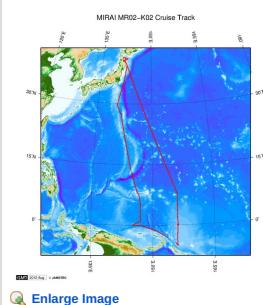
Column NO.	Column Heading	Comments
1	Ship	Ship name
2	Cruise	Cruise ID
3	Serial No.	Serial No.
4	Date	year (YYYY) in UTC
5		month (MM) in UTC
6		day (DD) in UTC
7	Time	hour (hh) in UTC
8		minute (mm) in UTC
9	Latitude	Latitude (degree) ; Positive in north
10	Longitude	Longitude (degree) ; degree in eastward (0 - 360)
11	xCO ₂ _Air	CO ₂ mixing ratio (ppm) in the air
12	F	Quality flag for xCO ₂ _Air
13	xCO ₂ _Sea	CO ₂ mixing ratio (ppm) in the sea surface water (*)
14	F	Quality flag for xCO ₂ _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 ₂ 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 pCO₂ data" shown in ReadMe tab for xCO₂_Sea data calculation.

Related Information



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MIRAI MR02-K02 Partial Pressure of CO2 (pCO2)

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

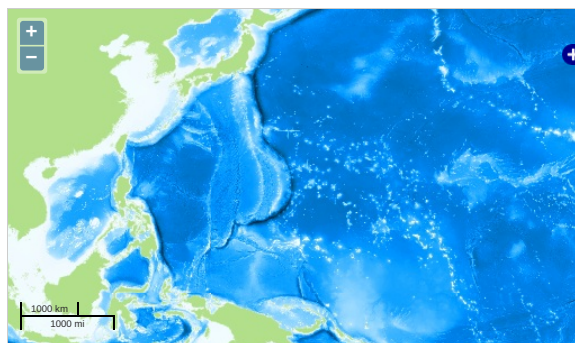
Data Policy: [JAMSTEC](#)

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

Science Keywords:

OCEANS > OCEAN CHEMISTRY > CARBON DIOXIDE

Observation Map



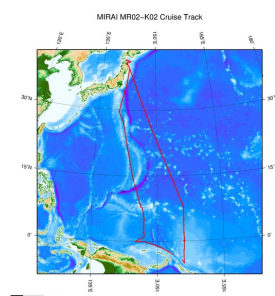
... Observation Line ... Navigation ... Observation, Dive Point, Hole

Data List

File names

☐ MR02-K02_pco2.zip

Related Information



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