

## MIRAI MR17-05C Atmospheric CO<sub>2</sub>, CH<sub>4</sub> and CO mixing ratios

Last Modified: 2019-09-17

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

Cruise ID: [MR17-05C](#)

Atmospheric CO<sub>2</sub>, CH<sub>4</sub> and CO mixing ratios : Processed (PI)

Data Policy: [JAMSTEC](#)

Observation Items:

Science Keywords:

### Data Information

Atmospheric CO<sub>2</sub>, CH<sub>4</sub> and CO mixing ratios observed during a R/V Mirai Arctic Ocean cruise (MR17-05C) in August-September 2016. The air sample, drawn from an air intake placed at the front of the starboard compass deck, was passed through a thermoelectric dehumidifier and a Nafion® tube dryer to reduce the water vapor, and then introduced in the analyzer. Three standard gases stored in 3 cylinders were sequentially introduced into the analyzer every 25 hours for the calibration. These CO<sub>2</sub>, CH<sub>4</sub>, and CO mixing ratios were determined against NIES's original standard scales.

### Cruise Report

[http://www.godac.jamstec.go.jp/catalog/data/doc\\_catalog/media/MR17-05C\\_all.pdf](http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR17-05C_all.pdf)

### For Using Data

#### Principal Investigator

Yasunori Tohjima (National Institute for Environmental Studies)

#### Use Constraints

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

#### Data Citation

There is no citation at the present. Please contact the data submitter (Yasunori Tohjima; tohjima@nies.go.jp) when the data are used for any publications.

Please mention that this cruise was conducted under the Arctic Challenge for Sustainability (ArCS) Project, which was funded by the Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT).

### Instrument

Instrument:

Cavity ring-down spectroscopy analyzer (CRDS)

Instrument Information:

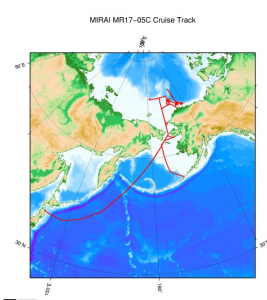
Atmospheric CO<sub>2</sub>, CH<sub>4</sub>, CO and H<sub>2</sub>O analyzer based on wavelength-scanned cavity ring-down spectroscopy technique. (Picarro Inc., CA, USA, Model G-2401)



### Data Format

Comma-delimited text data. Date (UTC), Latitude (deg. N), Longitude (deg. E), CO<sub>2</sub> mixing ratio (ppm), standard deviation, number, CH<sub>4</sub> mixing ratio (ppb), standard deviation, number, CO mixing ratio, standard deviation, and number. Each mixing ratio represents 1-hour average.

### Related Information



 [Enlarge Image](#)

#### MR17-05C

Ship Name: MIRAI

Period: 2017-08-24 - 2017-10-01

Chief Scientist: Shigeto Nishino (JAMSTEC)

Project Name: [Arctic Ocean Climate System Research]

Proposal ▶ Arctic Challenge for Sustainability (ArCS)

Title:

### Update History

2019-09-17

An observation data was registerd.

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YOKOSUKA  
MIRAI  
KAIREI  
CHIKYU  
KAIMEI  
SHINSEI MARU  
HAKUHO MARU

Information of the Submersibles  
KAIKO  
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 (CLOW)  
BMS

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国立研究開発法人  
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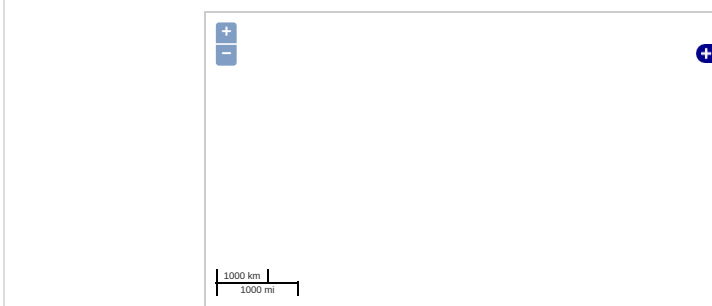
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Science Keywords:

### Observation Map



Imagery reproduced from ...

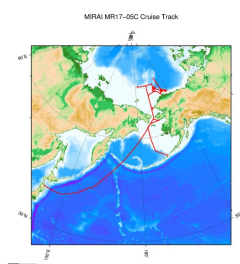
### Data List

[Add to Basket](#)

#### File names

MR17-05C\_CO2-CH4-CO\_hourly.TXT

### Related Information



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