

MIRAI MR12-E03 Green house gasses (Discrete flask sampling)

Last Modified: 2014-12-26

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

Cruise ID: [MR12-E03](#)

Green house gasses (Discrete flask sampling): Processed (PI)

Data Policy: [JAMSTEC](#)

Observation Items:

Science Keywords:

Data Information

Air samples were corrected into 40 stainless-steel flasks on MR12-E03 cruise. The collected air samples were analyzed for the concentrations of CO₂, O₂ (O₂/N₂), Ar (Ar/N₂), CH₄, CO, N₂O, SF₆ and H₂ and the isotopic ratios of CO₂, CH₄, N₂, O₂ and Ar. The CO₂, CH₄, CO, N₂O, SF₆ and H₂ concentrations were determined against Tohoku Univ. primary standard gases, the isotopic ratios of CO₂ are reported in per mil relative to vPDB, and the O₂/N₂, Ar/N₂ and isotopic ratios of N₂, O₂ and Ar are reported in per meg relative to AIST primary standard gas (please contact the investigator to know the details of the standards). It is noted that the data of isotopic ratios of CH₄ will be submitted after a verification of the standard gas.

Cruise Report

http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR12-E03_all.pdf

For Using Data

Principal Investigator

Shigeyuki Ishidoya (AIST, s-ishidoya@aist.go.jp)

Use Constraints

The person who hopes to use the data in a paper or a conference presentation must contact the investigator to consult about co-authorship.

Data Citation

Please refer to above "Use Constraints".

Instrument

Instrument:

NDIR, FID, ECD, RGA, IR-MS,
GC-MS

Instrument Information:

NDIR : non-dispersive infrared
analyzer to measure CO₂

concentration, FID : gas

chromatography equipped with Flame

Ionization Detector to measure CH₄

concentration, ECD : gas

chromatography equipped with Electron

Capture Detector to measure N₂O and

SF₆ concentration, RGA : gas

chromatography equipped with a HgO

reduction detector to measure CO and

H₂ concentration, IR-MS : a mass

spectrometer to measure the isotopic

ratios of CO₂ and another mass

spectrometer to measure O₂/N₂,

Ar/N₂, stable isotopic ratios of N₂, O₂

and Ar, GC-MS : gas chromatography

mass spectrometry to measure

isotopic ratios of CH₄.



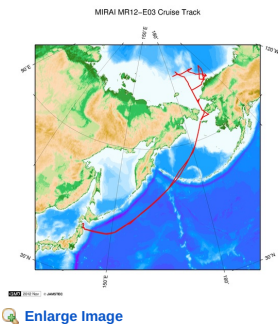
Sample

Amient atomosphere filled in flasks

Data Format

Text file

Related Information



MR12-E03

Ship Name: MIRAI

Period: 2012-09-03 - 2012-10-17

Chief Scientist: Takashi Kikuchi (JAMSTEC)

Project Name: [Arctic Ocean Climate System Research]

Proposal ▶ Ecosystem studies on the Arctic Ocean declining sea ice

Title:

Update History

| | |
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| 2014-12-26 | An observation data was registered. |
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Samples

Data Policy

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NATSUSHIMA

KAIYO

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

Go to a Cruise Information

Cruise ID:

Go to a Dive Information

Dive ID:

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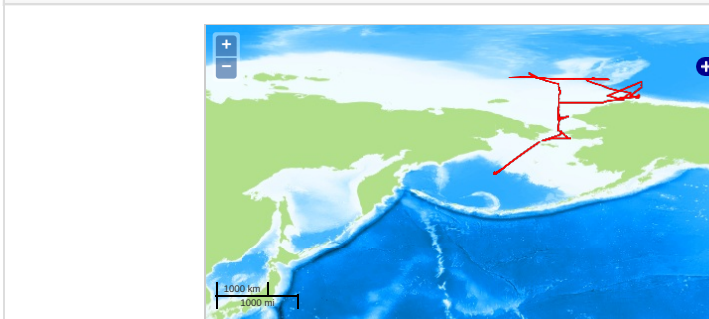
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Data Policy: [JAMSTEC](#)

Observation Items:

Science Keywords:

Observation Map



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

Imagery reproduced from ...

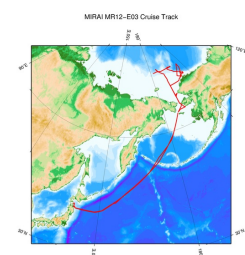
Data List

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File names

☐ MR12-E03whole_air_sampling.xlsx

Related Information



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