

MIRAI MR17-05C Green house gasses (Discrete flask sampling)

Last Modified: 2019-10-11

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

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 MR17-05C 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, H₂ concentrations were determined against Tohoku Univ. primary standard gases. The isotopic ratios of CO₂ were reported in per mil relative to vPDB scale. The isotopic ratios of CH₄ were reported in per mil relative to Tohoku Univ. scale. The O₂/N₂, Ar/N₂ and isotopic ratios of N₂, O₂ and Ar are reported in per meg relative to AIST scale. Please contact the investigator to know the details of the standard scales.

Cruise Report

http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR17-05C_all.pdf

For Using Data

Principal Investigator

Shigeyuki Ishidoya (AIST)

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

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

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:

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.

NO IMAGE

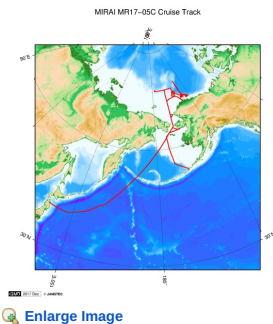
Sample

Ambient atmosphere filled in flasks

Data Format

Excel file

Related Information



MR17-05C

Ship Name: MIRAI
Period: 2017-08-24 - 2017-10-01
Chief Scientist: Shigeto Nishino (JAMSTEC)
Project Name: [Arctic Ocean Climate System Reaserch]
Proposal ▶ Arctic Challenge for Sustainability (ArCS)
Title:

Update History

2019-10-11	An observation data was registerd.
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YOKOSUKA
MIRAI
KAIREI
CHIKYU
KAIMEI
SHINSEI MARU
HAKUHO MARU

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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

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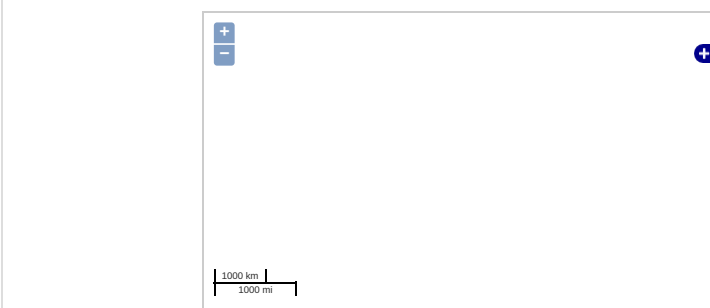
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Observation Map



Imagery reproduced from ...

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

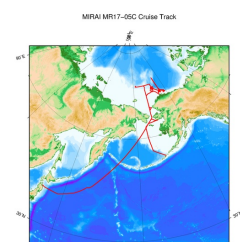
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File names

MR17-05Cwhole_air_sampling.xlsx

Related Information



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