

MIRAI MR13-06 Leg1 Green house gasses (Discrete flask sampling)

Last Modified: 2015-11-30

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Cruise ID: [MR13-06 Leg1](#)

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 MR13-06 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/MR13-06_leg1-2_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

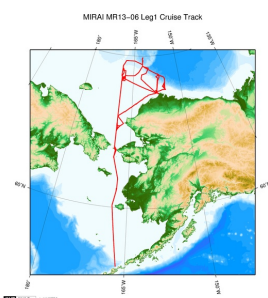
isotopic ratios of CH₄.



Data Format

Text file

Related Information



MR13-06 Leg1

Ship Name: MIRAI

Period: 2013-08-28 - 2013-10-07

Chief Scientist: Shigeto Nishino (JAMSTEC)

Project Name: [Arctic Ocean Climate System Research]

Proposal ▶ Study on environmental changes in the sea-ice reduction regions of the Arctic Ocean

Title:

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Update History

2015-11-30	An observation data was registerd.
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[Data Tree](#)
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Go to a Cruise Information

Cruise ID:

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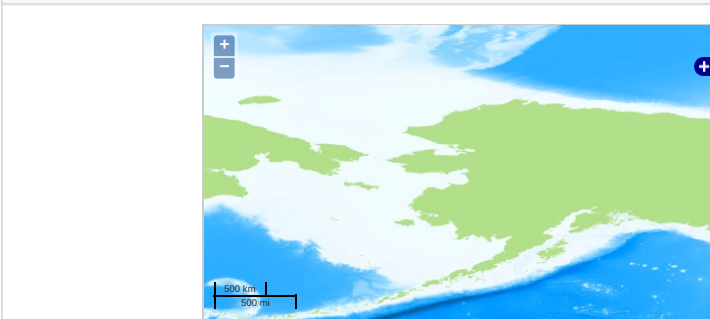
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Observation Items:

Science Keywords:

Observation Map



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

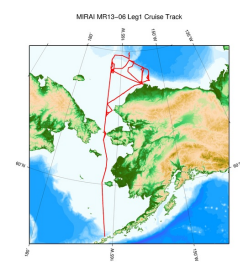
Data List

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File names

MR13-06whole_air_sampling.xlsx

Related Information



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[Update History](#)

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