MIRAI MR16-06 Green house gasses (Discrete flask sampling)

Last Modified: 2019-11-29

ReadMe | Observation Data

Cruise ID: MR16-06
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 MR16-06 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, 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/MR16-06_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 equiped with Flame Ionization Detector to measure CH4 concentration, ECD: gas chromatography equiped with Electron Capture Detector to measure N2O and SF6 concentration, RGA: gas chromatography equiped 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

Amient atomosphere filled in flasks

Data Format

Excel file

Related Information

Enlarge Image

MR16-06
Ship Name: MIRAI
Period: 2016-08-22 - 2016-10-05
Chief Scientist: Shigeto Nishino (JAMSTEC)
Project Name: [Arctic Ocean Climate System Reaserch]
Proposal Title: ▶ Predictability study on weather and sea-ice forecasts linked with user engagement

Update History

2019-11-29	An observation data was registerd.

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Observation Map

Imagery reproduced from ...

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

Data List

Add to Basket

File names
MR16-06whole_air_sampling.xlsx

Related Information

MIRAI MR16-06 Cruise Track

Enlarge Image

MR16-06
Ship Name: MIRAI
Period: 2016-08-22 - 2016-10-05
Chief Scientist: Shigeto Nishino (JAMSTEC)
Project Name: [Arctic Ocean Climate System Reaserch]
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