MIRAI MR05-05 Leg1 Dissolved N2O concentration and stable isotope ratios (isotopocule ratios)

Last Modified: 2020-02-28

ReadMe | Observation Data

Cruise ID: MR05-05 Leg1

Dissolved N2O concentration and stable isotope ratios (isotopocule ratios): Processed (PI)

Data Policy: JAMSTEC

Observation Items:

Science Keywords:

Data Information

1) Amount of N2O (nmol) dissolved in 1 kg of seawater

2) Nitrogen isotope ratio (d15N, air N2 scale), oxygen isotope ratio (d18O, VSMOW scale), and intramolecular distribution of nitrogen isotope (SP, =d15Na-d15Nb, a and b respectively designate central and end N in N2O molecule)

Cruise Report

http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR05-05_leg1-3_all.pdf

For Using Data

Principal Investigator

Sakae Toyoda (Department of Chemical Science and Engineering, School of Materials and Chemical Technology, Tokyo Institute of Technology)

Use Constraints

See **Terms and Conditions** about constrain of use.

Data Citation

Toyoda, S., O. Yoshida, H. Yamagishi, A. Fujii, N. Yoshida, and S. Watanabe (2019), Identifying the origin of nitrous oxide dissolved in deep ocean by concentration and isotopocule analyses, Sci Rep, 9(1), 7790, doi:10.1038/s41598-019-44224-0.

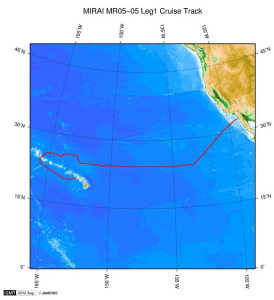
Instrument

Instrument:
Gas chromatograph-Isotope ratio mass spectrometer (GC-IRMS)
Instrument Information:
Gas chromatograph (GC6890, Agilent)
Isotope ratio mass spectrometer (MAT252, Thermofischer Scientific)
Dissolved N2O is extracted using a home-made sample preparation system, and is introduced into the GC-IRMS.

Sample

Seawater sample

Related Information



Enlarge Image

MR05-05 Leg1
Ship Name: MIRAI
Period: 2005-10-31 - 2005-11-24
Chief Scientist: Takeshi Kawano (JAMSTEC)
Project Name: [POST-WOCE Hydrography]

Update History

2020-02-28	An observation data was registerd.

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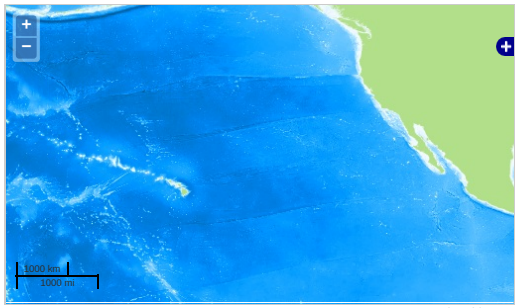
Observation Map



Imagery reproduced from ...

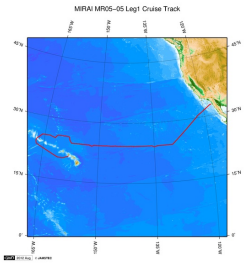
... Observation Line ... Navigation ... Observation, Dive Point, Hole

Data List

Add to Basket

File names
Repository_data (Final).xlsx

Related Information



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