

MIRAI MR17-05C absorption coefficient spectra of colored dissolved organic matter, CDOM (aCDOM)

Last Modified: 2019-09-17

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

absorption coefficient spectra of colored dissolved organic matter, CDOM (aCDOM) : Processed (PI)

Data Policy: [JAMSTEC](#)

Observation Items:

Science Keywords:

Data Information

Discrete water samples were filtered through 0.2µm pore-sized polycarbonate filter (Whatman nuclepore membrane) with gentle vacuum (< 100mmHg). Filtered samples were kept in a refrigerator until analysis on board.

Filtered water sample was placed into 10-cm quartz cell and optical density (OD) was measured using a multibeam spectrophotometer (UV2600, Shimadzu) scanning with 0.5 nm increment from 250 to 800 nm. A baseline correction was conducted by subtracting the OD of Milli-Q water from OD of the sample, and subtracting 5 nm average value around 685 nm, where aCDOM can be assumed to be 0.

OD values were then converted to an absorption using following equation

$$aCDOM = 2.303 OD / 0.1$$

where 2.303 is a factor for converting base e to base 10 logarithms and 0.1 is the optical path length (m).

More detailed description of the measurement is presented in Babin et al (2003, doi:10.1029/2001JC000882).

Cruise Report

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

For Using Data

Principal Investigator

Toru Hirawake (Hokkaido University)

Use Constraints

See [Terms and Conditions](#) about constrain of use.

Data Citation

Nishino, S., 2017, R/V Mirai Cruise Report MR17-05C, 209pp., JAMSTEC, Yokosuka, Japan.

Upon consultation in advance with the chief of investigation and the person(s) in charge of research issues who gathered that data, we request that the text of the results material contain a statement to the effect that it was obtained during the R/V Mirai cruise of MR17-05C, the Chief Scientist, Shigeto Nishino (JAMSTEC), and the following Principal Investigators (PIs) for gathering the data.

Chief Scientist

Shigeto Nishino

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PI

Toru Hirawake (Hokkaido University)

Please also mention that this cruise was supported by the Arctic Challenge for Sustainability (ArCS) Project, which was funded by the Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT), and the Global Change Observation Mission-Climate (GCOM-C) mission of Japan Aerospace Exploration Agency (JAXA).

Instrument

Instrument:

UV2600 (Shimadzu)

Instrument Information:

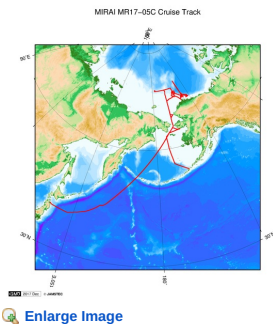


Data Format

Tab separated text format.

Filename conventions for aCDOM include a 3 digit code representing an internal water sample number. The file "SampleLog_aCDOM_MR1705C.xlsx" lists corresponding stations and depths for these samples.

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

2019-09-17	An observation data was registerd.
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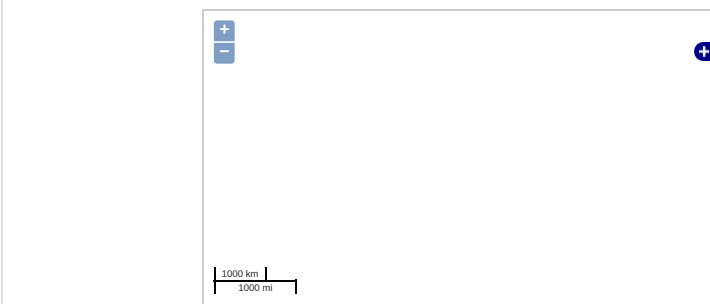
absorption coefficient spectrta of colored dissolved organic matter, CDOM (aCDOM) Processed (PI)

Data Policy: [JAMSTEC](#)

Observation Items:

Science Keywords:

Observation Map



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

Data List

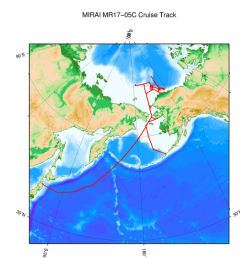
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☐ File names

☐ MR17-05C_CDOM_UV2600.zip

☐ SampleLog_aCDOM_MR1705C.xlsx

Related Information



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MR17-05C

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Period: 2017-08-24 - 2017-10-01

Chief Scientist: Shigeto Nishino (JAMSTEC)

Project Name: [Arctic Ocean Climate System Reaserch]

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