

YOKOSUKA YK14-21 Bathymetry (MBES)

Last Modified: 2019-05-15

[ReadMe](#) [Observation Data](#) [Data Format](#)

Cruise ID: **YK14-21**

Bathymetry (MBES): Processed (DMO)-Basic

Data Policy: [JAMSTEC](#)

Observation Items: Depth

Science Keywords:

OCEANS > BATHYMETRY/SEAFLOOR TOPOGRAPHY > BATHYMETRY
SOLID EARTH > GEOMORPHOLOGY

Cruise Report

http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/YK14-21_all.pdf

For Using Data

Principal Investigator

Data Management Office

Use Constraints

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

Data Citation

See [Terms and Conditions](#) about data citation.

Instrument

Instrument:

Multi-narrow beam echo sounder

(YK14-02 -)



Overview

The data provided here are the bathymetric data obtained from the multibeam echo sounder system (MBES) . The system transmits the shape echo sounder beam from the transmitter and receives the beam reflected from the seabed using the hydrophone. The water depth is calculated from the travel time of the beam between the transmitter and the receiver. Having many transmitters make fan beams across the keel, this system can obtain a lot of bathymetric data on a wide angle at once.

The travel time of the beam (from the transmitter to the seabed and from the seabed to the receiver) is corrected using the vertical profile of the sound velocity obtained from the in-situ observations (see section Sound velocity profile correction) . The raw data with the low reliability such as the noise are removed using the software (see section Processed data) .

Measurement System

Manufacturer: Kongsberg Maritime
Type : EM122
Frequency : 12kHz
Swath angle: Max 150°
Beam angle: 2 * 2°
Beam number: 288 (Soundings: Max 432)
Range: 20m - 11,000m
Accuracy (Depth) :Depth (m) * 0.2%

Sound velocity profile correction

In the survey area, the sound velocity profile correction is made using the XBT data acquired during the cruise. On the other hand, in the transit area, e.g., from the survey area to the port, where we do not conduct the XBT observations, the data are corrected using the historical XBT and XCTD data or the Argo float data.

Processed Data

Following raw data with the low reliability are removed using the processing software "CARIS HIPS and SIPS Version 9.1" of Teledyne Technologies Inc. Processed data is interpolated onto 100m grid data, and output as ascii data.

- Navigation error data
- The Data exceeded the "Range" in the Measurement system section
- The Data with swath angle exceeded 60 degrees
- Spike noise data (If both of slopes calculated from the evaluated beam and prior/post one on the same swath are exceeded 15 degrees.)
- The Bottom lost data due to the sea state etc.
- The data which came off from the sea bottom(Surface Cleaning with CARIS : Cleaning parameter=threshold 2σ(95.44%), Surface parameter=tilted plane, threshold 2σ(95.44%))

The data quality is different in the survey and transit area because of the difference of the temperature data for the sound velocity profile correction. Therefore, we open the survey and transit area data separately. The rule of the file name is as follows.

File name :

- Survey area data : XXXX.dat
- Transit area data: XXXX_t.dat

XXXX indicates cruise ID.

"_t" indicates the transit area data.

Note

- Geodetic system: WGS84
- The tide is not corrected.
- If you would like the raw data set, please contact us from "Contact Us" above.

Related Information

YK14-21

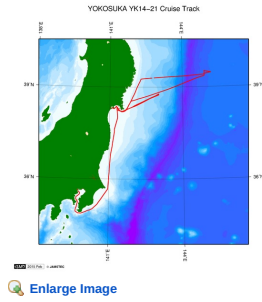
Ship Name: YOKOSUKA

Period: 2014-12-15 - 2014-12-24

Chief Scientist: Makoto Yamano (The University of Tokyo)

Proposal: Studies of fracturing and pore fluid circulation in the oceanic crust subducting along the Japan

Title: Trench through heat flow and electromagnetic surveys



[Enlarge Image](#)

Update History

2019-05-15	An observation data was registered.
2019-03-25	An observation data was registered.

JAMSTEC

[Site Policy](#)
[Privacy Policy](#)
[Application for Data and Samples](#)
[Data Policy](#)

What's New

[Update History](#)
[Feeds](#)

Lists

[Publication List](#)
[Amount of Public Info.](#)

Data

[Map Search](#)
[Data Tree](#)
[Detailed Search](#)

Information of the Ships

[NATSUSHIMA](#)
[KAIYO](#)
[YOKOSUKA](#)
[MIRAI](#)
[KAIREI](#)
[CHIKYU](#)
[KAIMEI](#)
[SHINSEI MARU](#)
[HAKUHO MARU](#)

Information of the Submersibles

[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

Cruise ID:

Go to a Dive Information

Dive ID:

Copyright 2011 Japan Agency for Marine-Earth Science and Technology

 **JAMSTEC** 国立研究開発法人
海洋研究開発機構
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

YOKOSUKA YK14-21 Bathymetry (MBES)

Last Modified: 2019-05-15

[ReadMe](#) [Observation Data](#) [Data Format](#)

Cruise ID: [YK14-21](#)

Bathymetry (MBES): Processed (DMO)-Basic

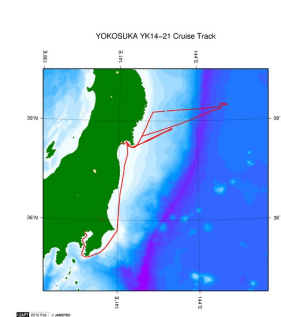
Data Policy: [JAMSTEC](#)

Bathymetry XYZ

The one record length of the Processed Data file is 33 bytes.

No.	Column	Description	Format	Unit	Remarks
1	1 - 11	Longitude	f11.6	degree	+ : Eastern hemisphere - : Western hemisphere
2	13 - 22	Latitude	f10.6	degree	+ : Northern hemisphere - : Southern hemisphere
3	24 - 31	Depth	f9.3	m	
4	32 - 33	Terminator	a2		[CR][LF]

Related Information



[Enlarge Image](#)

YK14-21

Ship Name: YOKOSUKA

Period: 2014-12-15 - 2014-12-24

Chief Scientist: Makoto Yamano (The University of Tokyo)

Proposal: Studies of fracturing and pore fluid circulation in the oceanic crust subducting along the Japan Trench through heat flow and electromagnetic surveys

Update History

2019-05-15	An observation data was registered.
2019-03-25	An observation data was registered.

JAMSTEC
[Site Policy](#)
[Privacy Policy](#)
[Application for Data and Samples](#)
[Data Policy](#)
What's New
[Update History](#)
[Feeds](#)

Lists
[Publication List](#)
[Amount of Public Info.](#)
Data
[Map Search](#)
[Data Tree](#)
[Detailed Search](#)

Information of the Ships
NATSUSHIMA
KAIYO
YOKOSUKA
MIRAI
KAIREI
CHIKYU
KAIMEI
SHINSEI MARU
HAKUHO MARU

Information of the Submersibles
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
Cruise ID:

Go to a Dive Information
Dive ID:

JAMSTEC 国立研究開発法人
海洋研究開発機構
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

Copyright 2011 Japan Agency for Marine-Earth Science and Technology

YOKOSUKA YK14-21 Bathymetry (MBES)

Last Modified: 2019-05-15

[ReadMe](#) [Observation Data](#) [Data Format](#)

Cruise ID: [YK14-21](#)

Bathymetry (MBES): Processed (DMO)-Basic

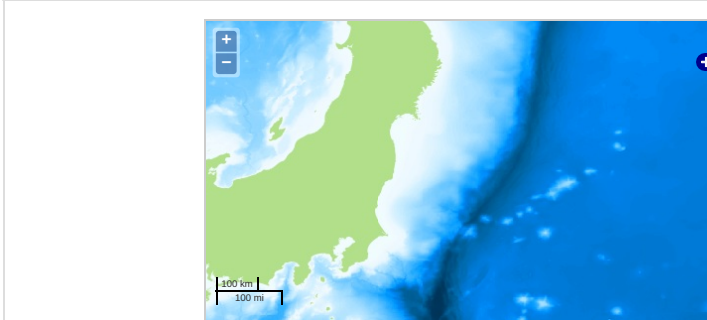
Data Policy: [JAMSTEC](#)

Observation Items: Depth

Science Keywords:

OCEANS > BATHYMETRY/SEAFLOOR > BATHYMETRY
TOPOGRAPHY
SOLID EARTH > GEOMORPHOLOGY

Observation Map



Imagery reproduced from ...

Data List

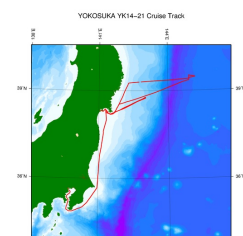
[Add to Basket](#)

☐ File names

☐ YK14-21.dat.zip

☐ YK14-21_t.dat.zip

Related Information



[Enlarge Image](#)

YK14-21

Ship Name: YOKOSUKA

Period: 2014-12-15 - 2014-12-24

Chief Scientist: Makoto Yamano (The University of Tokyo)

Proposal: Studies of fracturing and pore fluid circulation in the oceanic crust subducting along the Japan Trench through heat flow and electromagnetic surveys

Update History

2019-05-15	An observation data was registered.
2019-03-25	An observation data was registered.

JAMSTEC

[Site Policy](#)
[Privacy Policy](#)
[Application for Data and Samples](#)
[Data Policy](#)
[What's New](#)
[Update History](#)
[Feeds](#)

Lists

[Publication List](#)
[Amount of Public Info.](#)
[Data](#)
[Map Search](#)
[Data Tree](#)
[Detailed Search](#)

Information of the Ships

[NATSUSHIMA](#)
[KAIYO](#)
[YOKOSUKA](#)
[MIRAI](#)
[KAIREI](#)
[CHIKYU](#)
[KAIMEI](#)
[SHINSEI MARU](#)
[HAKUHO MARU](#)

Information of the Submersibles

[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

Cruise ID:

Go to a Dive Information

Dive ID: