

NATSUSHIMA NT13-02 Bathymetry (MBES)

Last Modified: 2015-02-08

ReadMe Observation Data Data Format

Cruise ID: **NT13-02**

Bathymetry (MBES): Processed (DMO)-Basic

Data Policy: **JAMSTEC**

Observation Items: Depth

Science Keywords:

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

Cruise Report

http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/NT13-02_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



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: Reson Inc.
Type: SeaBat 8160
Frequency: 50kHz
Swath angle: Max 130°
Beam angle: 1.5 * 1.5°
Beam number: 126
Range: 10m - 3,000m
Resolution (Depth) :1.4cm/2.9cm/8.6cm (It depends on depth.)

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 data or the Argo float data.

Processed Data

Following raw data with the low reliability are removed using the processing software "HIPS and SIPS" of CARIS Inc:

- Navigation error data.
- Data more than manufacturer specification (see section Measurement System)
- Spike noise data (If both of slopes calculated from the evaluated beam and prior/post one on the same swath are less than 5 degrees.)
- Side beam (Beam No.1-20,107-126 : Starboard is No.1 beam.)

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 : YYYYMMDD.dat
- Transit area data : TYYYYMMDD.dat

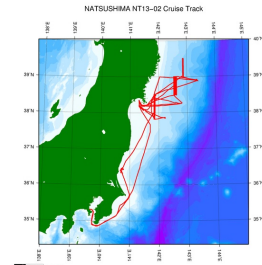
YYYY: year, MM: month, DD: day

"T" of the header indicates the transit area data.

Note

- (1) Geodetic system: WGS84
- (2) The tide is not corrected.
- (3) These data are compressed in zip format, please use that after unpacking.
- (4) If you would like the raw data set, please contact us from "Contact Us" above.

Related Information



[Enlarge Image](#)

NT13-02

Ship Name: NATSUSHIMA
 Period: 2013-01-21 - 2013-02-08
 Chief Scientist: Toshiya Kanamatsu (JAMSTEC)
 Proposal Title: Tsunami Prediction system: Research Cruise in Japan Trench

Update History

2015-02-08 An observation data was registerd.

<p>JAMSTEC Site Policy Privacy Policy Application for Data and Samples Data Policy What's New Update History Feeds</p>	<p>Lists Publication List Amount of Public Info. Data Map Search Data Tree Detailed Search</p>	<p>Information of the Ships NATSUSHIMA KAIYO YOKOSUKA MIRAI KAIREI CHIKYU KAIMEI SHINSEI MARU HAKUHO MARU</p>	<p>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</p>	<p>Go to a Cruise Information Cruise ID: <input type="text"/> <input type="button" value="Go"/></p> <p>Go to a Dive Information Dive ID: <input type="text"/> <input type="button" value="Go"/></p>
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[ReadMe](#) [Observation Data](#) [Data Format](#)

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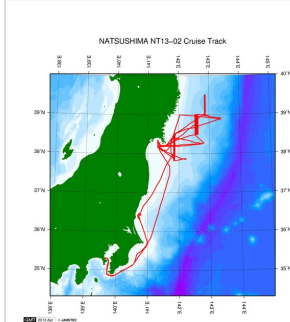
Data Policy: [JAMSTEC](#)

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](#)

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Proposal: Tsunami Prediction system: Research Cruise in Japan Trench

Title:

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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

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Go to a Dive Information

Dive ID:

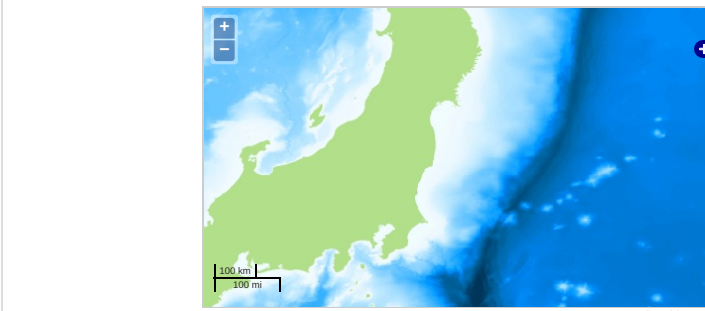
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Observation Map



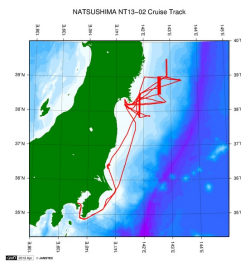
... Observation Line ... Navigation ... Observation, Dive Point, Hole

Data List

File names

- 20130123.dat
- 20130124.dat
- 20130128.dat
- 20130129.dat
- 20130130.dat
- 20130131.dat
- 20130206.dat

Related Information



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