

MIRAI MR12-E02 Leg1 Bathymetry (MBES)

Last Modified: 2014-03-31

ReadMe Observation Data Data Format

Cruise ID: [MR12-E02 Leg1](#)

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/MR12-E02_leg1_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 (- MR12-E01)



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: SEABEAM INSTRUMENTS
Type: SEABEAM 2112.004
Frequency: 12kHz
Swath angle: Max 150°
Beam angle: 2 * 2°
Beam number: 151
Range: 50m - 11,000m
Resolution (Depth): Center beam [Depth (m) * 0.2%], Side beam [Depth (m) * 0.5%]

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.1-21,131-151 : 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

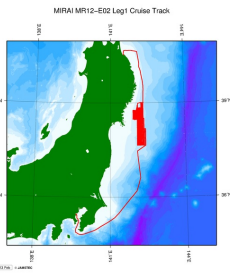
YYYY: year, MM: month, DD: day

"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.

[Cruise Data](#) [Dive Data](#)



[Enlarge Image](#)

MR12-E02 Leg1

Ship Name: MIRAI

Period: 2012-03-05 - 2012-03-15

Chief Scientist: Takafumi Kasaya (JAMSTEC)

Project Name: [Tohoku Ecosystem-Associated Marine Sciences (TEAMS)]

Proposal: Marine Ecosystems Investigation, Impact by the mega-earthquake (the 2011 Earthquake of the

Title: Pacific coast of Tohoku) and Tsunami:For Recover and Rebuild of Sanriku Fisheries Activities

Update History

2014-03-31	An observation data was registerd.
2013-07-18	An observation data was registerd.

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:



MIRAI MR12-E02 Leg1 Bathymetry (MBES)

Last Modified: 2014-03-31

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

Cruise ID: [MR12-E02 Leg1](#)

Bathymetry (MBES): Processed (DMO)-Basic

Data Policy: [JAMSTEC](#)

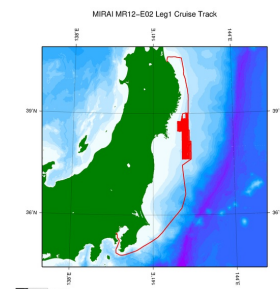
Bathymetry XYZ

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

Cruise Data Dive Data



[Enlarge Image](#)

MR12-E02 Leg1

Ship Name: MIRAI

Period: 2012-03-05 - 2012-03-15

Chief Scientist: Takafumi Kasaya (JAMSTEC)

Project Name: [Tohoku Ecosystem-Associated Marine Sciences (TEAMS)]

Proposal Title: Marine Ecosystems Investigation, Impact by the mega-earthquake (the 2011 Earthquake of the Pacific coast of Tohoku) and Tsunami: For Recover and Rebuild of Sanriku Fisheries Activities

Update History

2014-03-31	An observation data was registered.
2013-07-18	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:

MIRAI MR12-E02 Leg1 Bathymetry (MBES)

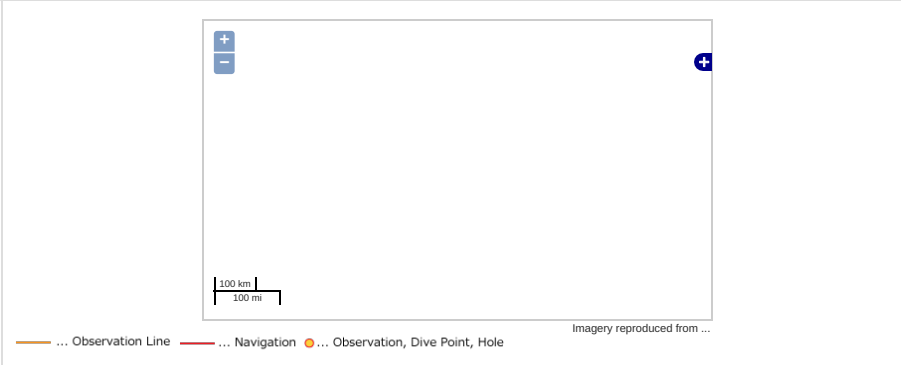
Last Modified: 2014-03-31

ReadMe **Observation Data** Data Format

Cruise ID: [MR12-E02 Leg1](#)
 Bathymetry (MBES): Processed (DMO)-Basic
 Data Policy: [JAMSTEC](#)
 Observation Items: Depth
 Science Keywords:

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

Observation Map

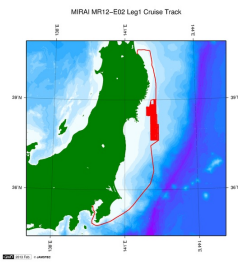


Data List

File names
<input type="checkbox"/> 20120306.dat
<input type="checkbox"/> 20120307.dat
<input type="checkbox"/> 20120308.dat
<input type="checkbox"/> 20120309.dat
<input type="checkbox"/> 20120310.dat
<input type="checkbox"/> 20120311.dat
<input type="checkbox"/> 20120312.dat
<input type="checkbox"/> 20120313.dat
<input type="checkbox"/> 20120314.dat

Related Information

Cruise Data Dive Data



MR12-E02 Leg1
 Ship Name: MIRAI
 Period: 2012-03-05 - 2012-03-15
 Chief Scientist: Takafumi Kasaya (JAMSTEC)
 Project Name: [Tohoku Ecosystem-Associated Marine Sciences (TEAMS)]
 Proposal: Marine Ecosystems Investigation, Impact by the mega-earthquake (the 2011 Earthquake of the Pacific coast of Tohoku) and Tsunami:For Recover and Rebuild of Sanriku Fisheries Activities

Update History

2014-03-31	An observation data was registered.
2013-07-18	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: