

## HAKUHO MARU KH-18-J03C Bathymetry (MBES)

Last Modified: 2020-08-29

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

Cruise ID: [KH-18-J03C](#)

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/KH-18-J03C\\_all.pdf](http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/KH-18-J03C_all.pdf)

### For Using Data

**Principal Investigator**

**Use Constraints**

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

**Data Citation**

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

### Instrument

Instrument:

Multi 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: Elac  
Type : SeaBeam3020  
Frequency : 20kHz  
Swath angle: Max 140°  
Beam angle: 1° \* 1°  
Beam number: 301  
Range: 50m - 7,000m  
Accuracy (Depth): Depth (m) \* 1%

### 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

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

### Related Information



Ship Name: HAKUHO MARU  
Period: 2018-08-20 - 2018-08-29  
Chief Scientist: Shuichi Watanabe (JAMSTEC)  
Project Name: [Tohoku Ecosystem-Associated Marine Sciences (TEAMS)]  
Proposal Title: Researches on marine ecosystem dynamics in the Tsunami affected area off Sanriku

2020-08-29      An observation data was registerd.

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- [Application for Data and Samples](#)
- [Data Policy](#)

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Ships  
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KAIYO  
YOKOSUKA  
MIRAI  
KAIREI  
CHIKYU  
KAIMEI  
SHINSEI MARU  
HAKUHO MARU

Cruise ID:

Dive ID:



国立研究開発法人  
海洋研究開発機構  
SCIENCE AND TECHNOLOGY

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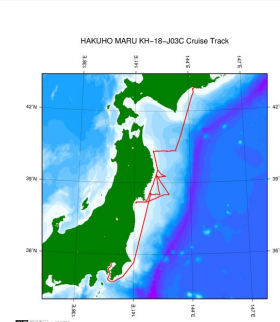
Data Policy: [JAMSTEC](#)

### 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



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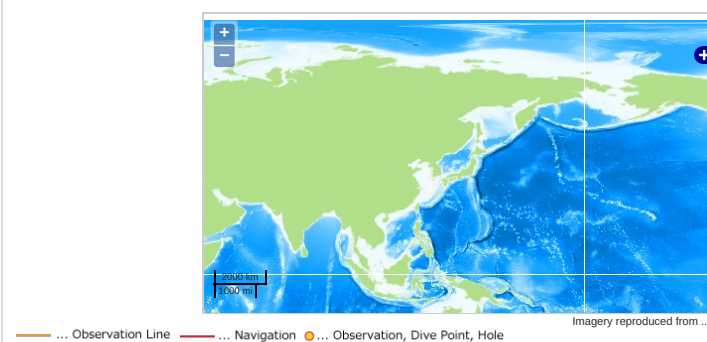
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### Observation Map



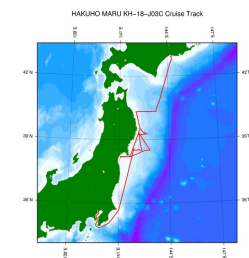
### Data List

[Add to Basket](#)

#### File names

☐ KH-18-J03C.dat.zip

### Related Information



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