



R/V Hakuho-maru Cruise Report  
KH-24-JE03

Quick response survey  
for the 2024 Noto Peninsula Earthquake



Off Noto Peninsula, Japan Sea

Jun. 15, 2024-Jun. 22, 2024

Japan Agency for Marine-Earth Science and Technology  
(JAMSTEC)

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### 1. Cruise Information

- Cruise ID:  
KH-24-JE03
- Name of vessel:  
R/V Hakuho-maru
- Title of project:  
Quick Response Survey for the 2024 Noto Peninsula Earthquake
- Title of cruise:  
Quick Response Survey for the 2024 Noto Peninsula Earthquake
- Chief Scientist [Affiliation]:  
Tsutomu Takahashi [JAMSTEC]
- Cruise period:  
Jun. 15, 2024-Jun. 22, 2024
- Ports of departure / call / arrival:  
Shimonoseki / - / Hachinohe
- Research area :  
Off Noto Peninsula, Japan Sea
- Research map

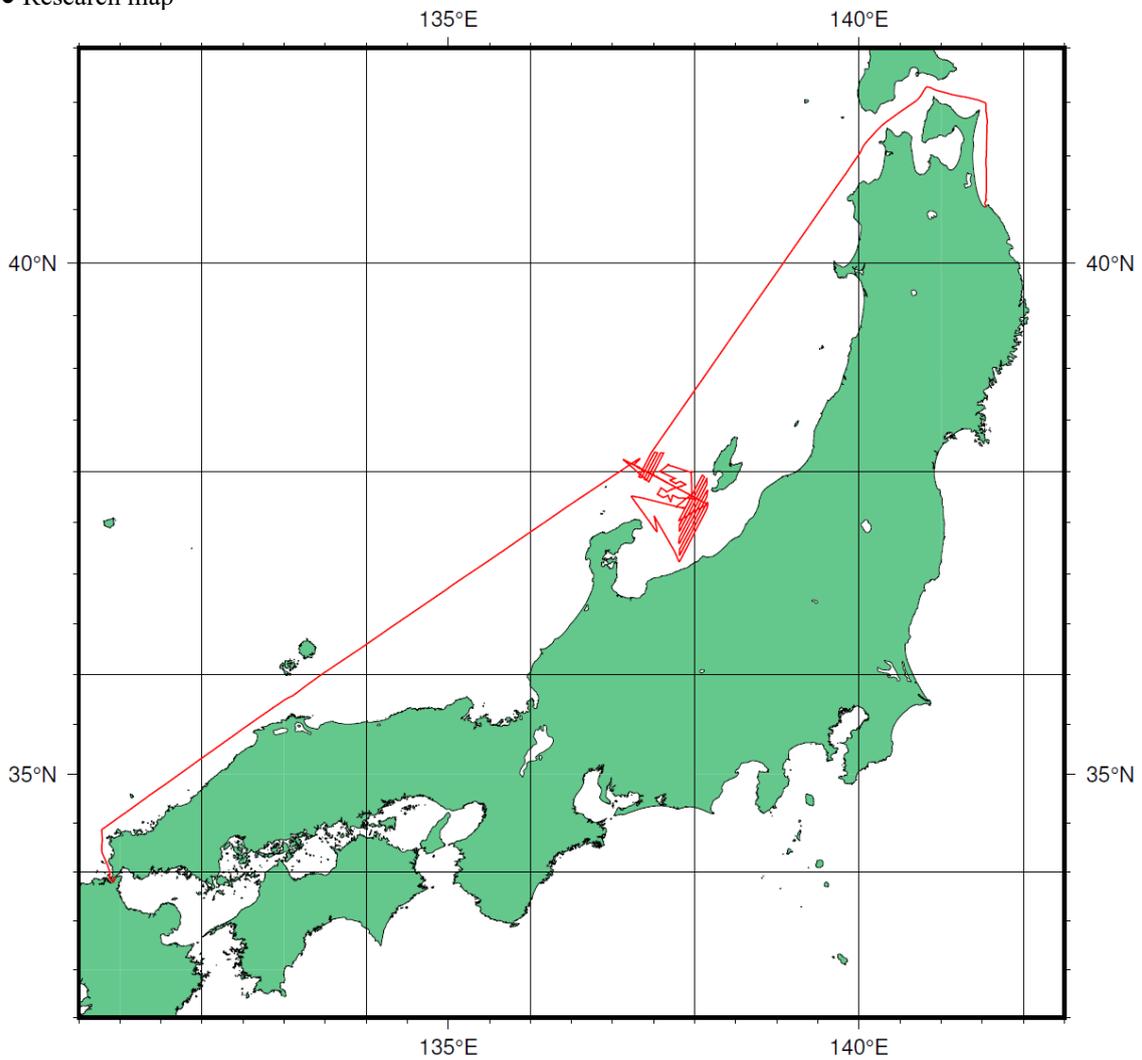


Fig 1. Ship track during KH-24-JE03 cruise

## 2. Research Proposal and Science Party

- Title of proposal:  
Quick Response Survey for the 2024 Noto Peninsula Earthquake
- Representative of Science Party [Affiliation]  
Gou Fujie [JAMSTEC]
- Science Party (List) [Affiliation, assignment etc.]

### Onboard Scientists and Technicians:

Tsutomu Takahashi	JAMSTEC
Tetsuo No	JAMSTEC
Ikumasa Terada	NME
Taro Shirai	NME
Masayuki Toizumi	NME
Yuki Ohwatari	NME
Yoshiki Horiuchi	NME
Kimiko Serizawa	NME
Norio Shimomura	NME
Masao Suzuki	NME
Tatsuya Sugiyama	NME
Nahoko Adachi	NME
Mako Nakao	MOLMEC
Yu Suzuki	MOLMEC
Haruka Sato	MOLMEC

### Onshore Scientists:

Gou Fujie	JAMSTEC
Koichiro Obana	JAMSTEC
Yasuyuki Nakamura	JAMSTEC
Seiichi Miura	JAMSTEC

## 3. Research/Development Activities

### 1. Objective

The 2024 Noto Peninsula earthquake (M7.6) that occurred on Jan. 1, 2024 at Noto peninsula, Japan, and the accompanying tsunami caused extensive damage in the Noto Peninsula and surrounding areas.

As a part of the quick response survey for the 2024 Noto Peninsula Earthquake, we conducted a passive seismic observation with ocean bottom seismographs (OBS) to investigate the earthquake fault, the mechanisms of earthquake and tsunami generation, and the subsequent seismic activities. We also acquired bathymetry data and subsurface acoustic profiles to examine their temporal variations before and after the earthquake.

### 2. Activities

#### 2.1 OBS deployment

We deployed 60 OBSs off northeast of the Noto peninsula. Deployed OBS consist with a three-components geophone (4.5 Hz) and a hydrophone. Positions of deployed OBSs were calibrated using the acoustic navigation system of R/V Hakuho-maru. These OBSs will be recovered in Sep. or Oct. 2024.

#### 2.2 OBS recovery

We recovered 5 OBSs off northeast of the Noto peninsula. These OBSs were deployed during KH-24-JE02C cruise. Their deployed positions were calibrated using the acoustic transducer of R/V Hakuho-maru during KH-24-JE02C cruise.

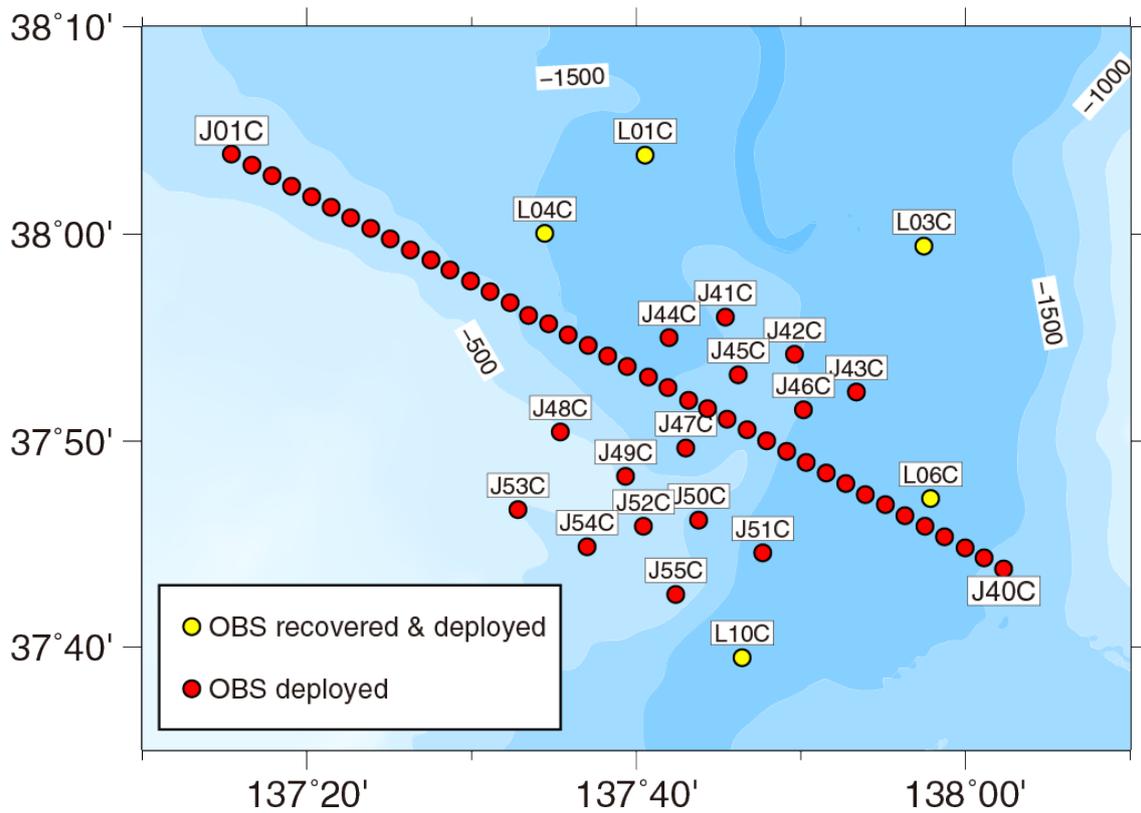


Fig. 2. Positions of deployed and recovered OBSs. OBS deployment was conducted at every site (i.e., red and yellow circles), and OBS recovery was conducted at 5 sites shown with yellow.

### 2.3 Bathymetry and sub bottom surveys

Bathymetry data and subsurface acoustic profiles were acquired using the Multi beam echo sounder (MBES) and sub bottom profiler (SBP) throughout the cruise except during acoustic communication with OBS. We also conducted grid surveys of MBES and SBP off east of the Noto peninsula.

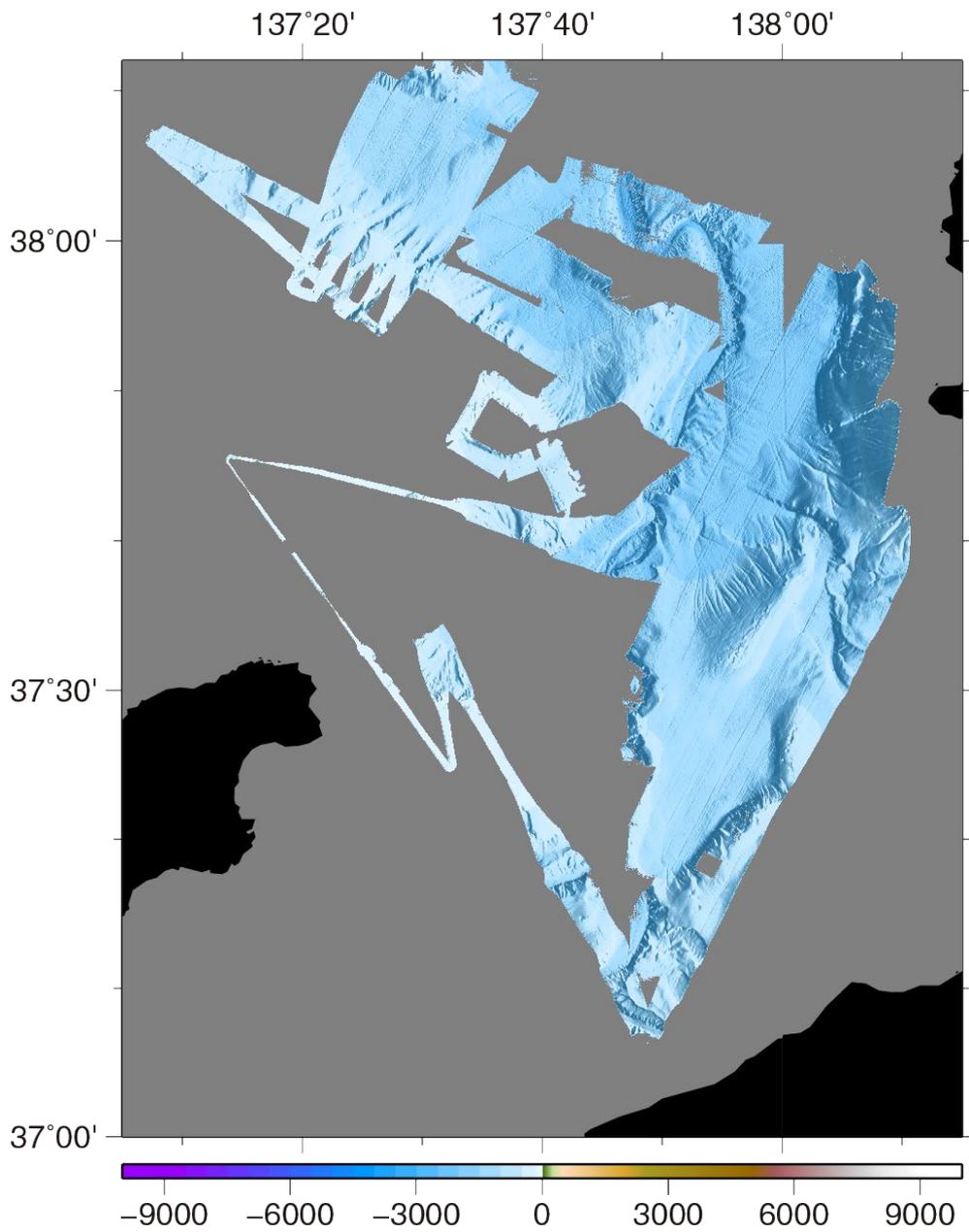


Fig 3. Bathymetry data acquired during KH-24-JE03 cruise.

#### 4. Cruise Log

2024/6/15	Departure from Shimonoseki. Transit to the survey area.
2024/6/16	Transit to the survey area. OBS deployment (J01C – J08C).
2024/6/17	OBS deployment (J09C – J40C, J51C, J50C).
2024/6/18	OBS deployment (J55C, J52C, J54C, J53C, J48C, J49C, J47C, J46C, J43C, J42C, J45C, J44C, J41C, L04C, L01C, L03C, L06C, L10C). OBS recovery (L04B, L01B, L03B, L06B, L10B)
2024/6/19	MBES and SBP survey.

2024/6/20	MBES and SBP survey.
2024/6/21	MBES and SBP survey. Transit to Hachinohe.
2024/6/22	Transit to Hachinohe. Arrival at Hachinohe.

## 5. Notice on Using

This cruise report is a preliminary documentation as of the end of cruise.  
This report is not necessarily corrected even if there is any inaccurate description (i.e. taxonomic classifications). This report is subject to be revised without notice. Some data on this report may be raw or unprocessed. If you are going to use or refer the data on this report, it is recommended to ask the Chief Scientist for latest status.  
Users of information on this report are requested to submit Publication Report to JAMSTEC.

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