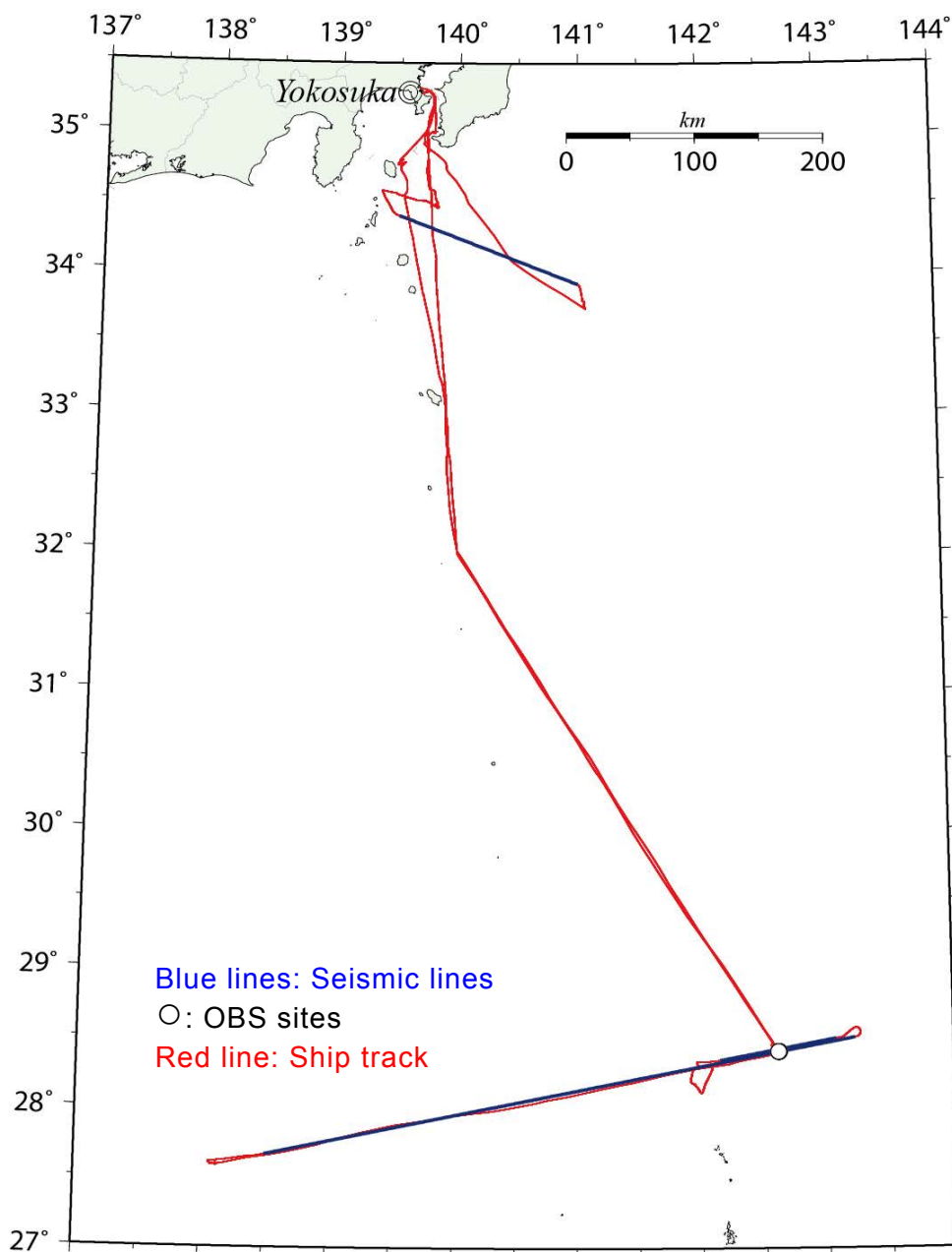


Cruise summary

1. Cruise Information :

- (1) **Cruise ID, ship name:** KR13-07, R/V KAIREI
- (2) **Cruise title:** 2013FY “Seismic study off the Boso Peninsula and in the Ogasawara region”
- (3) **Chief Scientist [Affiliation]:** Tetsuo NO [JAMSTEC]
- (4) **Representative of Science Party [Affiliation]:** Shuichi Kodaira [JAMSTEC],
- (5) **Proposal title:** Seismic study related to the site surveys of the IODP proposal
- (6) **Cruise period, port call:** 2013/4/4–4/17, Yokosuka port (Yokosuka shinko) to Yokosuka port (JAMSTEC)
- (7) **Research Area:** Off the Boso Peninsula and the Ogasawara regions
- (8) **Research Map:**



2. Overview of Observation :

(1) Objectives :

As part of the site surveys of the IODP proposal, we conducted a multichannel seismic reflection survey using the R/V KAIREI around areas off the Boso Peninsula and in the Ogasawara region.

The seismic survey off the Boso Peninsula was part of the site survey of the “Kanto Asperity Project (KAP),” which concerns the understanding of three types of great earthquakes (e.g., the 1923 Great Kanto earthquake, the 1703 Genroku earthquake) near the Sagami trough. This trough is located along the boundary between the Philippine Sea Plate and the Northeast Honshu arc. Because of the heterogeneous structure of the Philippine Sea Plate, it is important to understand how this affects the seismogenic zone around the Sagami trough.

Moreover, the survey in the Ogasawara region acquired seismic reflection data for site characterization around the proposed drilling sites (IBM-2) for “Project IBM.” Because the drilling schedule of IBM-2 is already decided, seismic data acquisition is required for the site evaluation. In addition, we would like to study the whole crustal structure of the island arc and basin in the survey area. In the vicinity of IBM-2, we deployed four OBSs, including a new type of OBS for performance comparison testing, and performed a refraction survey using an airgun array with a spacing of 200 m.

(2) List of observation instruments :

1) Multichannel seismic reflection survey (MCS):

We conducted the MCS survey around the areas off the Boso Peninsula and the Ogasawara region using the R/V KAIREI. The MCS data were acquired along three lines (Line 6, IBr11, and IBr11n) with a total length of approximately 719 km.

2) Seismic refraction survey and performance comparison test of OBS:

In the vicinity of IBM-2, we deployed four OBSs including the new type of OBS for performance comparison testing, and performed a refraction survey using an airgun array with a spacing of 200 m.

3) Bathymetry, magnetic, and gravity observations:

Bathymetry, magnetic, and gravity data were recorded continuously during the survey.