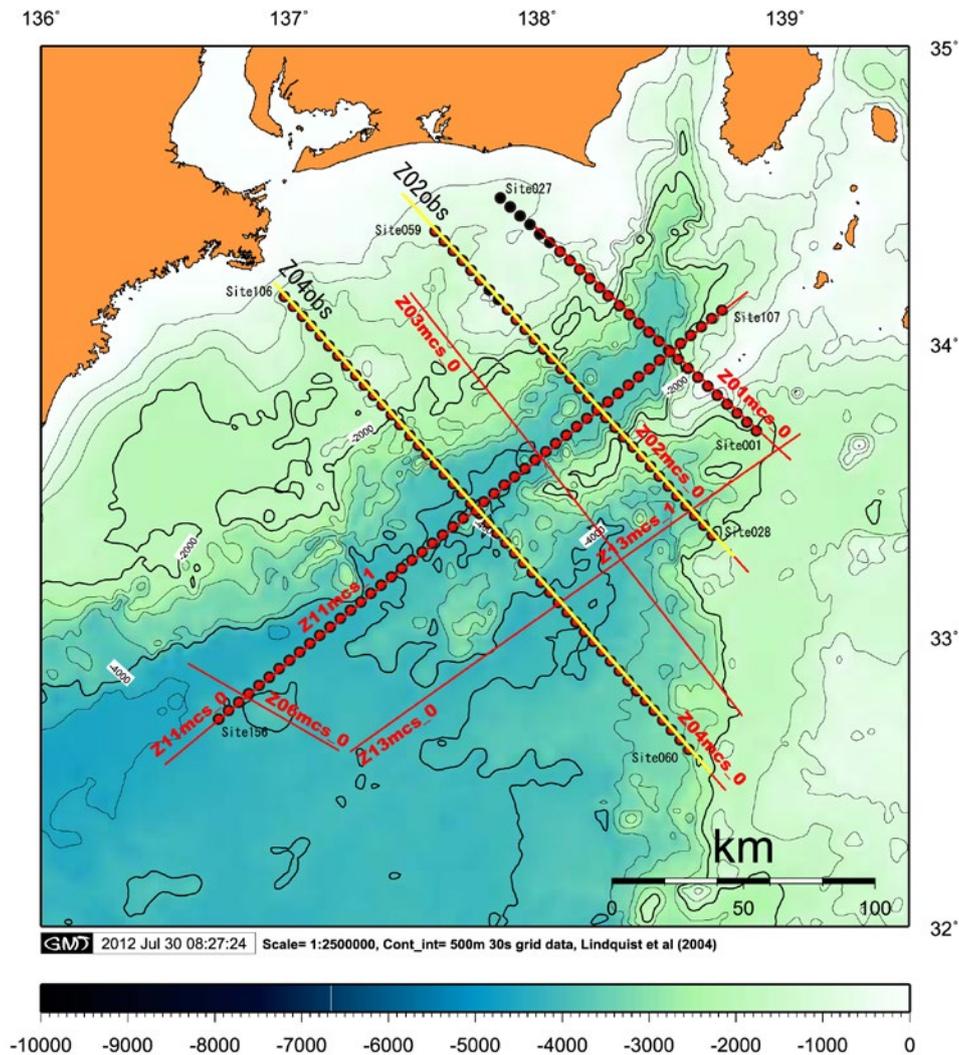


Cruise summary

1. Cruise Information:

- (1) Cruise number, Ship name: KR12-12_Leg1&Leg2, R/V Kairei
- (2) Title of the cruise: 2012FY “Seismic survey and seismicity study in off Kii Peninsula and Tokai”
- (3) Chief Scientist [Affiliation]: Koichiro OBANA [JAMSTEC] (Leg1)
Norio SHIMOMURA [JAMSTEC] (Leg2)
- (4) Representative of Science Party [Affiliation]: Yoshiyuki KANEDA [JAMSTEC],
- (5) Title of proposal:
Research for Interaction between the Tokai, Tonankai and Nankai Earthquakes
- Seismic survey and seismicity study in off Kii Peninsula ~ off Tokai -
- (6) Cruise period, Port call:
2012/6/29-7/20, from JAMSTEC (Yokosuka) to Onomichi port (Onomichi) (Leg1)
2012/7/23-8/6, from Onomichi port (Onomichi) to JAMSTEC (Yokosuka) (Leg2)
- (7) Research Area: from off Kii Peninsula to off Tokai
- (8) Research Area Map:



Black circles are the OBSs deployed and recovered during the cruise KR12-12. Red circles are deployed OBSs. Red lines are MCS survey lines, yellow lines are OBS survey lines.

2. Overview of Observation:

(1) Objectives:

This research cruise was conducted as a part of the study of “Research program concerning interaction between the Tokai, Tonankai, and Nankai Earthquakes” funded by the Ministry of Education, Culture, Sports, Science, and Technology of Japan. The objectives of this cruise to reveal seismic structure and seismic activity in off Kii peninsula and Tokai, Nankai trough.

During the cruise of KR12-12, 162 ocean bottom seismographs (OBSs) have been deployed. These OBSs will be recovered during the cruise by R/V Natsushima in November 2012.

(2) Observations:

1) Deployment of ocean bottom seismometers (OBSs).

162 OBSs were deployed off Kii Peninsula and Tokai.

2) Recovery of ocean bottom seismograph (OBS)

During the cruise, 14 OBSs have been retrieved at shallow area.

3) Seismic refraction/wide-angle reflection survey

A seismic refraction/reflection survey using a tuned air-gun array of 7,800 cubic inch and OBSs was conducted in 2 survey lines (Z02 and Z04) off Kii Peninsula and Tokai.

4) Multi-channel seismic (MCS) reflection survey

Multi-channel seismic reflection surveys were conducted in 7 lines (Z01~Z04, Z06, Z11 and Z13) using the 444 channel hydrophone streamer with a 12.5 m group interval.

5) Bathymetry, Gravity and Geomagnetic observation

During this cruise, bathymetry, gravity and geomagnetic data have been recorded continuously by SEABEAM2112, gravity meter (KSS-31) and three-component magnetometer (SFG1214), respectively.

6) Temperature and Conductivity observation for the correction of sonic speed

Expendable-Bathy Thermograph (XBT) and Expendable-Conductivity Temperature Depth profiler (XCTD) have been conducted to correct the sonic speed for the bathymetry survey.