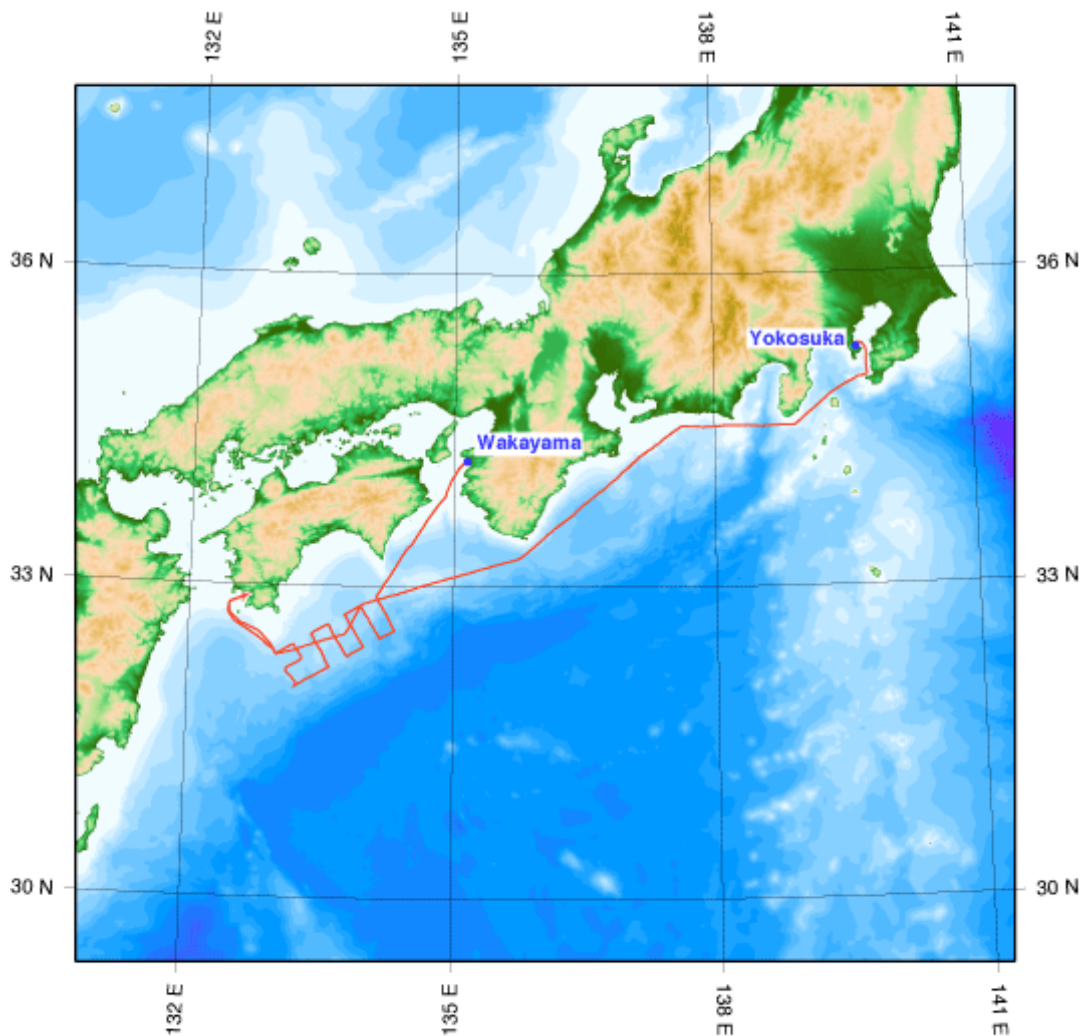


Cruise summary

1. Cruise Information :

- (1) Cruise number, Ship name: KY10-08 Leg.2 , R/V Kaiyo
- (2) Title of the cruise: 2010FY “Seismic study and earthquake observation study off Shikoku and off Kii Peninsula areas”
- (3) Chief Scientist [Affiliation]: Hidetoshi FUJIMORI [JAMSTEC]
- (4) Representative of Science Party [Affiliation]:
Yoshiyuki KANEDA [JAMSTEC]
- (5) Title of proposal:
Seismic survey and observation study of evaluation for large earthquake synchronization in the Nankai Trough
- (6) Cruise period, Port call:
2010/6/16-6/22, WAKAYAMA Shimozu Port to JAMSTEC (Yokosuka)
- (7) Research Area: off Shikoku areas
- (8) Research Map:

R/V KAIYO Cruise Trackline in KY10-08 Leg2



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.

In the Nankai Trough seismic subduction zone, a number of great earthquakes ($M > 8$), well known as toukai, tounankai and nankai earthquakes, have been repeatedly occurred from 100yr at 150yr cycles. Notable features in this region are the segmentation of the rupture zones and synchronization of these segments and cause super-great earthquakes. To understand the structure factors controlling the segmentation and the synchronization of rupture zones, it is necessary to reveal the detailed structure variations and seismic activities in this subduction zone. The possibility that Hyuga-Nada region is included to the segments of super-great earthquakes is pointed out, The information of structure and earthquakes activity of Hyuga-nada region are important to concern the seismic-linkage to around Nankai Trough.

A research, which is objected to understand of the structure and earthquakes for Hyuga-Nada was carried out in FY2008. In this year, the objectives are to reveal detailed seismic structure and seismic activity from Hyuga-Nada to off Shikoku and to understand the activity of the low frequency tremors off Kii Peninsula.

To this purpose, 201 OBSs were deployed to off Shikoku by KAIREI KR09-14 and seismic refraction and reflection surveys were done. 180 OBSs were recovered in KAIYO KY10-02. The other 21 OBSs which were recorded long-term seismic data observed continuously are recovered in this KAIYO cruise (KY10-08 Leg. 2). During this cruise Bathymetry, Gravity and Geomagnetic data record continuously.

(2) List of observation instruments :

1) Recovery of ocean bottom seismometers (OBSs)

21 OBSs were recovered on 7 survey Lines (SK01-07) off Shikoku.

2) Bathymetry, Gravity and Geomagnetic observation

During this cruise, bathymetry data have been recorded continuously by SEABEAM2100.

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

Expendable-Bathy Thermograph (XBT) has been conducted to correct the sonic speed for the bathymetry survey.