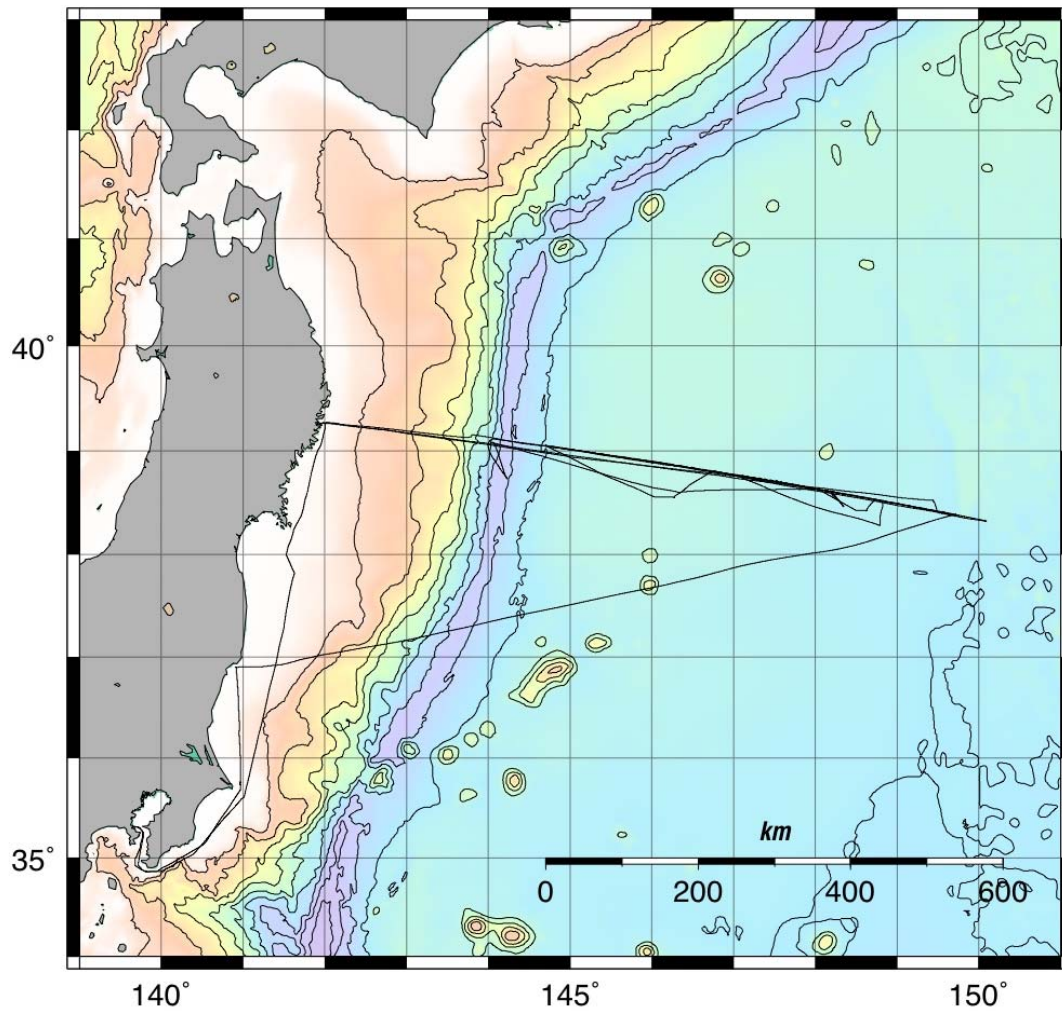


## Cruise summary

### 1. Cruise Information :

- (1) Cruise number, Ship name: KR09-17, R/V Kairei
- (2) Title of the cruise: 2009FY “Seismic study in the Northwestern Pacific region”
- (3) Chief Scientist[Affiliation] : Yuka KAIHO[JAMSTEC]
- (4) Representative of Science Party [Affiliation]: Yoshio FUKAO [JAMSTEC]
- (5) Title of proposal: High-resolution structure study in the northwestern Pacific region
- (6) Cruise period, Port call: 2009/11/17-12/13, JAMSTEC to JAMSTEC
- (7) Research Area: Northwestern Pacific region
- (8) Ship track:



## 2. Overview of Observation :

### (1) Objectives :

In the northwestern Pacific region, the old oceanic plate (Pacific plate) is subducting in the Japan and Kuril trenches. To advance the IODP proposal “Mohole project”, it is important to clarify the detailed crust and uppermost mantle structure of the old oceanic plate and the transitional process of the structure in the plate. The objectives of this cruise are to reveal the detailed crust and uppermost mantle structure of the old oceanic plate (Pacific plate) in the northwestern Pacific region and transition of this structure in the outer rise.

### (2) List of observation instruments :

#### 1) OBS deployment and recovery

Long survey line(A3) were set from Japan trench to off the outer rise of pacific plate. Seventy-five OBSs were successfully deployed and recovered along the profiles A3.

#### 2) Refraction/Reflection seismic survey

A Refraction/Reflection seismic survey on A3 line using tuned airgun array of 7800 cu. in., a 444-ch hydrophone streamer with 12.5-m group interval and 75 OBSs.

Because of the weather condition, towing of hydrophone streamer was canceled from OBS #61 to eastern end of survey line.

#### 3) Bathymetry, magnetic and gravity observation

During the cruise, bathymetry, magnetic and gravity data have been recorded continuously by SEABEAM2112.004, three component magnetometer and gravity meter, respectively.

#### 4) XBT

We have conducted three XBT to correct the sonic speed for the bathymetry survey.