Cruise summary

1. Cruise Information

(1) Cruise Number, Ship name : KR11-E03, R/V Kairei

(2) Title of the Cruise
FY2011 Seismic survey and observations in Japan Trench region

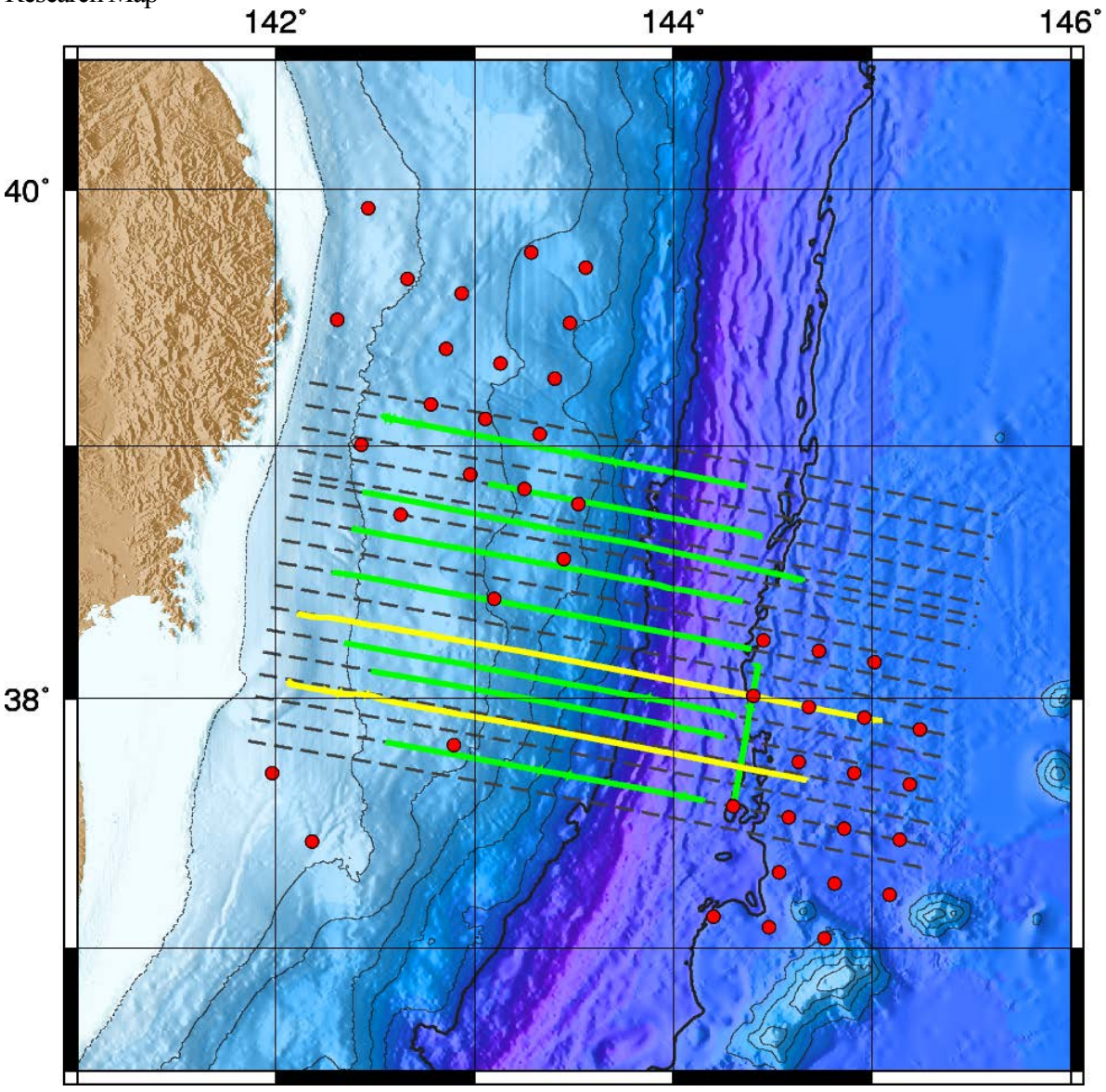
(3) Chief Scientist [Affiliation] : FUJIE Gou [JAMSTEC]

(4) Representative of Science Party [Affiliation]
Yoshiyuki Kaneda [JAMSTEC]

(5) Cruise period, Port call
2011/04/28 – 2011/05/21, Yokosuka-Yokosuka

(6) Research Area
Japan Trench region

(7) Research Map



2. Overview of Observation

(1) Objectives

On 11 March 2011, the great 2011 Tohoku-oki earthquake (Mw 9.0) was occurred in the Japan trench region. This was the greatest earthquake that has been observed in Japan, and it caused devastating damages in the eastern Japan. To reveal the precise distribution of aftershocks in the main shock region and outer rise region, we deployed 43 OBSs, 23 OBSs in the main shock region and 20 OBSs in the outer rise region. In addition, to reveal the detailed crustal structure around the center of the repture zone, we conducted multi-channel reflection seismic survey.

(2) Observations

1) OBS deployment.
Forty-three OBSs were deployed to observe aftershocks.

2) Airgun shooting.
We shot the airgun array of R/V Kairei along 9 lines (green lines in the figure). A 444-ch hydrophone streamer was towed during the shooting.

3) Bathymetry, magnetics and gravity observation.
During the cruise, bathymetry, magnetics and gravity data have been recorded continuously by SEABEAM2112.004, three component magnetometer and gravity meter, respectively. However, the SEABEAM system was broken down and we could not obtain the bathymetry data along the last two lines.

3. Data

We successfully deployed all the planed 43 OBSs and conducted MCS seismic survey along 9 profiles (green lines in the figure).