Cruise summary

1. Cruise Information

(1) Cruise Number, Ship name : KR09-06, R/V Kairei

(2) Title of the Cruise
FY2009 Seismic structure survey in NW Pacific

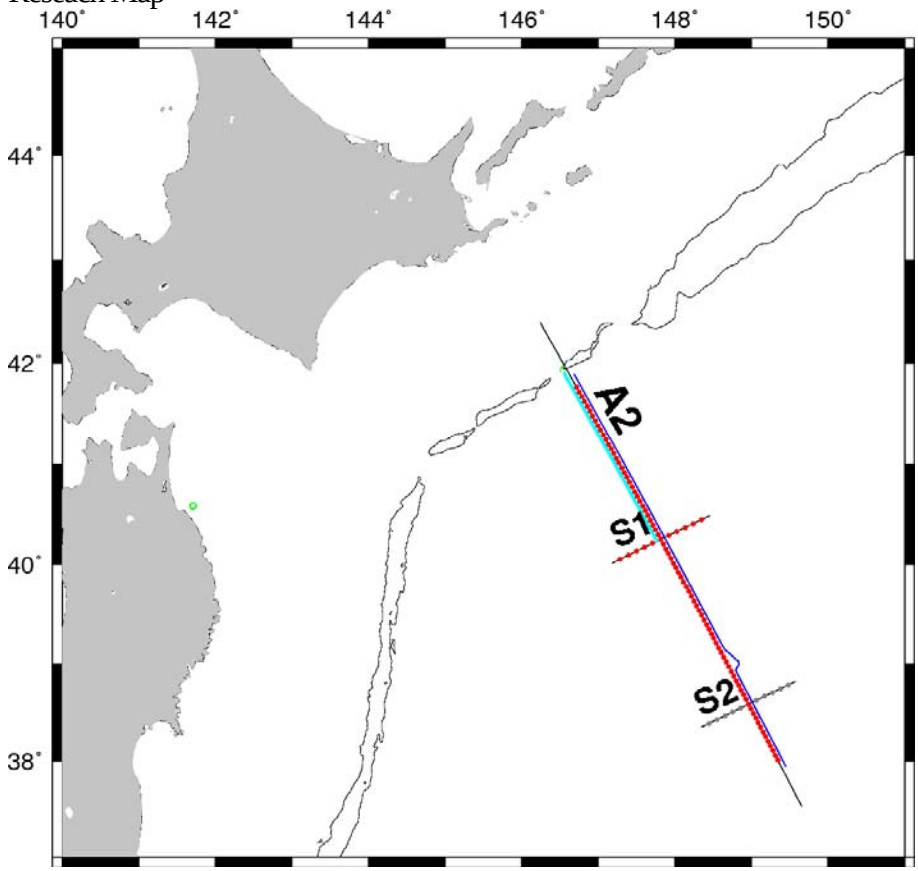
(3) Chief Scientist [Affiliation] : FUJIE Gou [JAMSTEC]

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

(5) Cruise period, Port call
2009/06/19 – 2009/07/05, Yokosuka-Yokosuka

(6) Reseach Area
NW Pacific

(7) Reseach Map



Red circles are OBSs, a blue line is air-gun line (200m spacing), and a cyan line is another air-gun line (50m spacing).

2. Overview of Observation

(1) Objectives

In the northwestern Pacific region, the old oceanic plate (Pacific plate) formed in the eastern Pacific ridge is subducting from the Japan and Kuril trenches. The subduction of the oceanic plate causes earthquakes and volcanoes in the island arc, and it is important to clarify the detailed structure of the oceanic plate.

The objectives of this cruse are, (1) to reveal the detailed crustal and mantle structure within the typical, old oceanic plate, and (2) to reveal the structural changes during the subduction process.

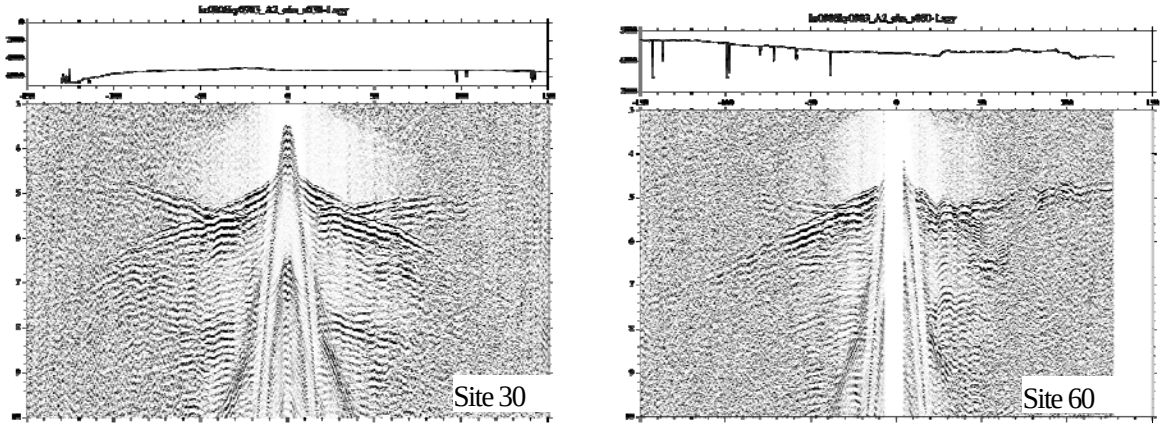
(2) Observations

1) OBS deployment
Ninety OBSs were successfully deployed along the profiles A2 and S1.

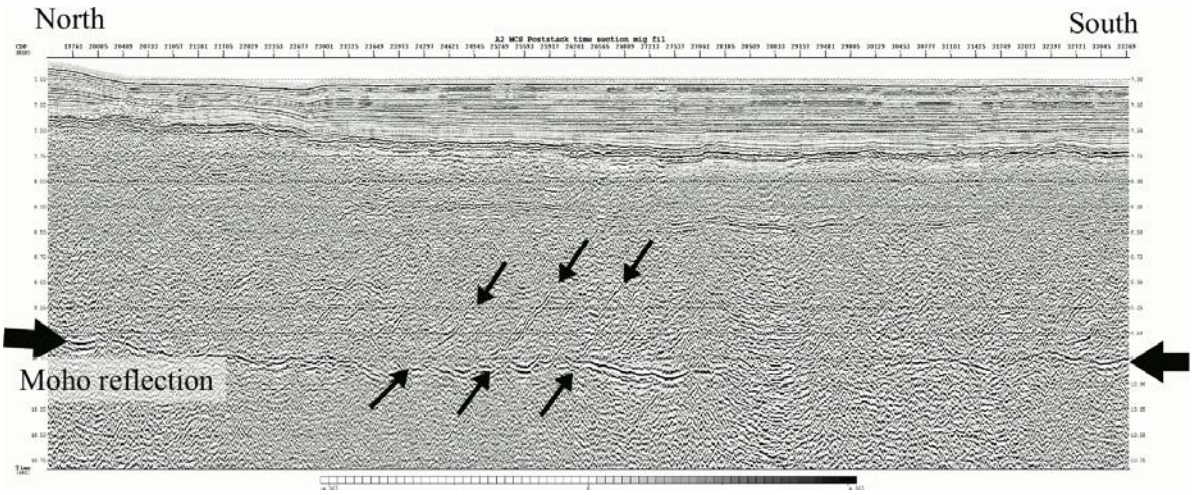
2) Airgun shooting
We shot the airgun array for OBSs along the profile A2 at a 200m and a 50 m interval.
A 444-ch hydrophone streamer was towed during the shooting.

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.

4) Results



Examples of OBS data (8km/sec reduction)



A MCS record obtained by the 444-ch hydrophone streamer.