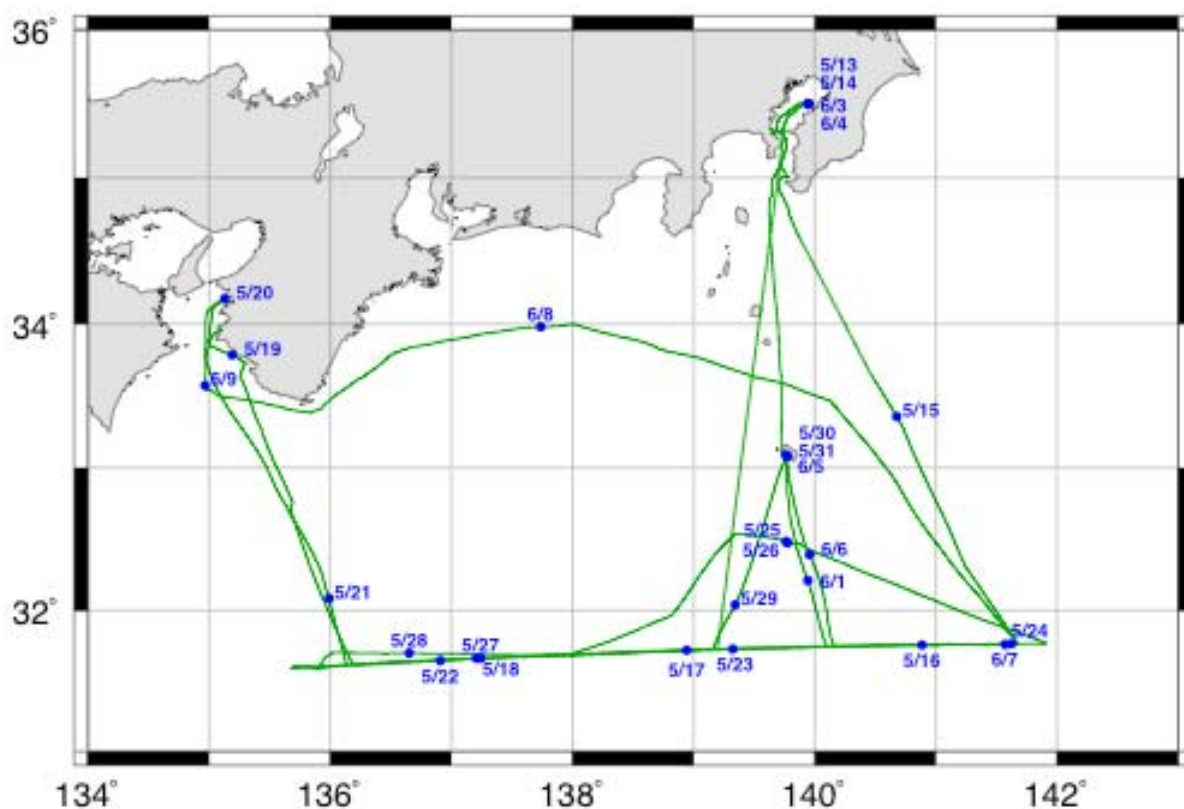


## Cruise summary

### 1. Cruise information :

- (1) Cruise ID・vessel : KY08-04・R/V Kaiyo
- (2) Cruise name : FY2008 seismic experiments in Izu-Ogasawara area
- (3) Chief Scientist[Affiliation] : Yuka Kaiho[JAMSTEC]
- (4) Representative of Science Party[Affiliation] : Yoshiyuki Kaneda[JAMSTEC]
- (5) Proposal ID and title : **J18-23**・Crustal growth of the Izu-Ogasawara oceanic island arc –Seismic study for IODP Project IBM-
- (6) Cruise period and port call : 2008.5.14~2008.6.9・Yokosuka~Yokosuka~Yura
- (7) Survey area : Izu-Ogasawara
- (8) Ship track :



## 2. Overview of the experiment

### (1) Purpose

To investigate the crustal growth of oceanic island arc, IFREE focus on Izu-Ogasawara seismic structure until FY2004. In this experiment, OBSs are laid out across the northern Ogasawara island arc to overlook deep crustal structure. These cruise data contribute the site characterization around the proposed drilling holes of IODP proposal "Project IBM".

### (2) Approach

#### 1) Refraction and reflection survey using OBS and Airgun

We deployed 110 OBSs of 5 km spacing on the survey line, which go across the Izu-Ogasawara arc- backarc at north of Sumisu Island. Airgun shooting was carried out by 200m spacing. During the airgun survey, relative airgun-water speed were about 3.5 ~ 4.5 knot. Reflection wave were recorded on board by 16ch MCS system. After the airgun shooting, all OBSs were retrieved.

#### 2) High density airgun shooting(canceled by bad weather)

High density airgun shooting using G-gun array and 16ch MCS cable were planned after the OBS survey, but it was canceled by stormy condition.

#### 3) Bathymetry mapping

During the cruise, bathymetry mapping are carried out along the survey line by SEABEAM system.

#### 4) XBT(eXpendable Bathy Thermograph)

For the water-wave velocity correction of bathymetry mapping, the vertical distribution of water temperature is observed by free fall observation of XBT system, at both end and center of OBS survey line.