



## R/V Kairei Cruise Report

KR09-07

Seismic study at the Izu-Ogasawara region

Jul. 5, 2009 – Jul 12, 2009

Japan Agency for Marine-Earth Science and Technology

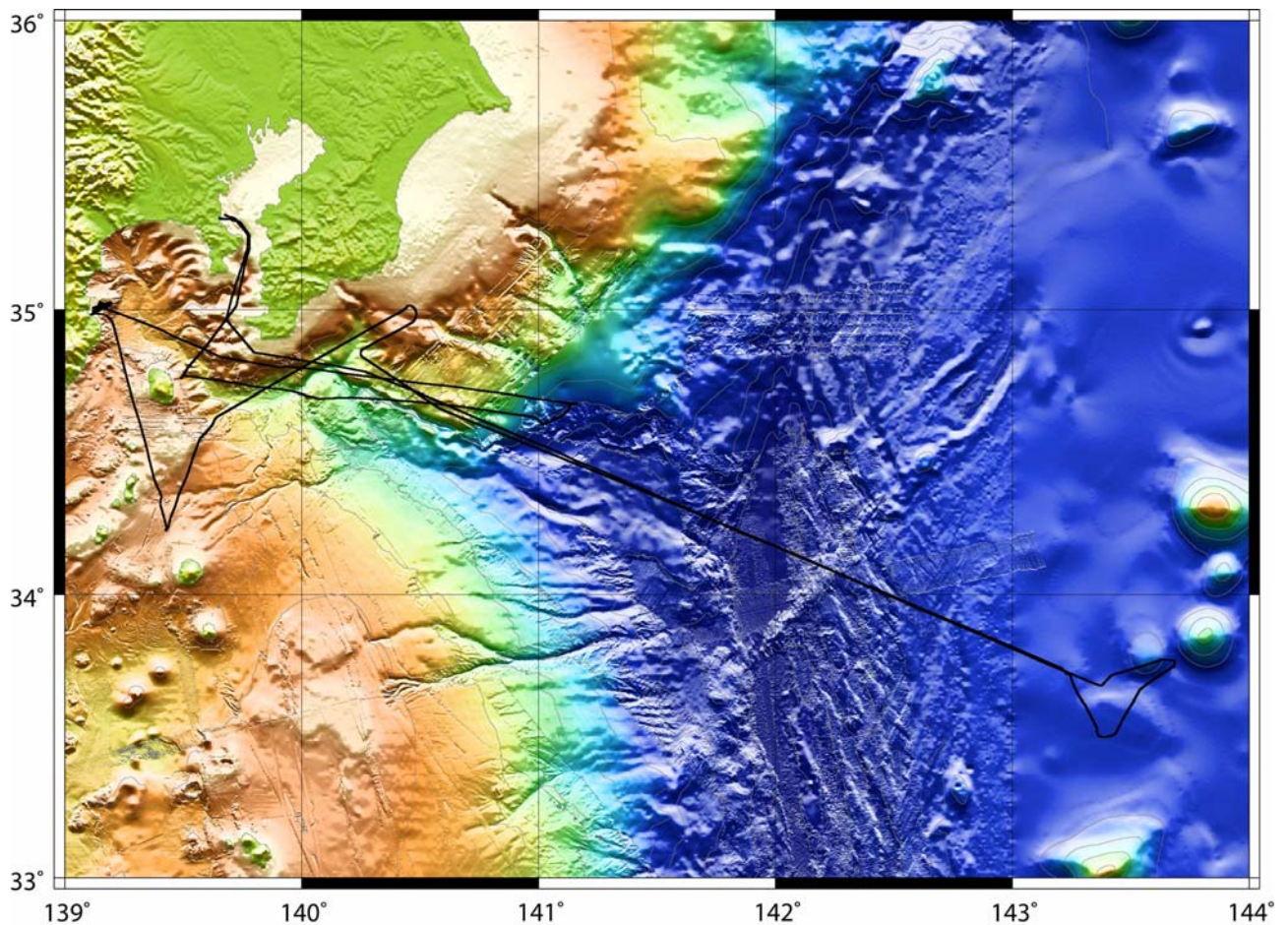
(JAMSTEC)

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1. Cruise Information :

- (1) Cruise number, Ship name: KR09-07, R/V Kairei
- (2) Title of the cruise: 2009FY “Seismic study off Boso region”
- (3) Chief Scientist [Affiliation]: Seiichi MIURA [JAMSTEC]
- (4) Representative of Science Party [Affiliation]: Yoshio Fukao [JAMSTEC]
- (5) Title of proposal: High resolution deep seismic study in and around the Sagami Bay and off Boso Peninsula
- (6) Cruise period, Port call: 2009/7/5-7/12, Yokosuka to Yokosuka
- (7) Research Area: Off-Boso
- (8) Research Map:



## 2. Researchers

(1) Chief Scientist [Affiliation]: Seiichi MIURA [JAMSTEC]

(2) Representative of Science Party [Affiliation]:

Yoshio Fukao [JAMSTEC],

(3) Science part list:

Yoshio Fukao [JAMSTEC],

Reiji Kobayashi [Kagoshima Univ.]

Yujiro Ogawa []

Seiichi MIURA [JAMSTEC],

Takeshi SATO [JAMSTEC],

Shuichi KODAIRA [JAMSTEC],

Narumi TAKAHASHI [JAMSTEC],

Ayako Nakanishi [JAMSTEC]

Koichiro Obana [JAMSTEC]

Gou Fujie [JAMSTEC]

Mikiya YAMASHITA [JAMSTEC],

Tsutomu Takahashi [JAMSTEC]

Tetsuo No [JAMSTEC]

Kaoru Takizawa [JAMSTEC]

Katsunao Maeno [JAMSTEC]

Yousaku Maeda [JAMSTEC]

Hidetoshi Fujimori [JAMSTEC]

### 3. Overview of Observation :

#### (1) Objectives :

IFREE have conducted seismic surveys off Boso region since 2008, to understand complex tectonics associated with complicated plate geometries with subducting Pacific and Philippine Sea Plates beneath the Kanto region. Moreover, seismogenesis around Boso region is uniquely varied as great earthquakes and slow slip events (SSE). The subducting Philippine Sea Plate beneath Kanto region is not a typical oceanic crust but an island-arc crust.

The objectives of this cruise are to reveal the structural characteristics off-Boso region with multi-channel seismic system (MCS) contributing the site characterizations of drill points of Kanto Asperity Project (KAP).

#### (2) List of observation instruments :

##### 1) Multi-channel seismic (MCS) reflection system

MCS survey has been conducted off-Boso region using a tuned airgun array of 7800 cu. in. and a 444-ch hydrophone streamer with 12.5-m group interval.

##### 2) 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.

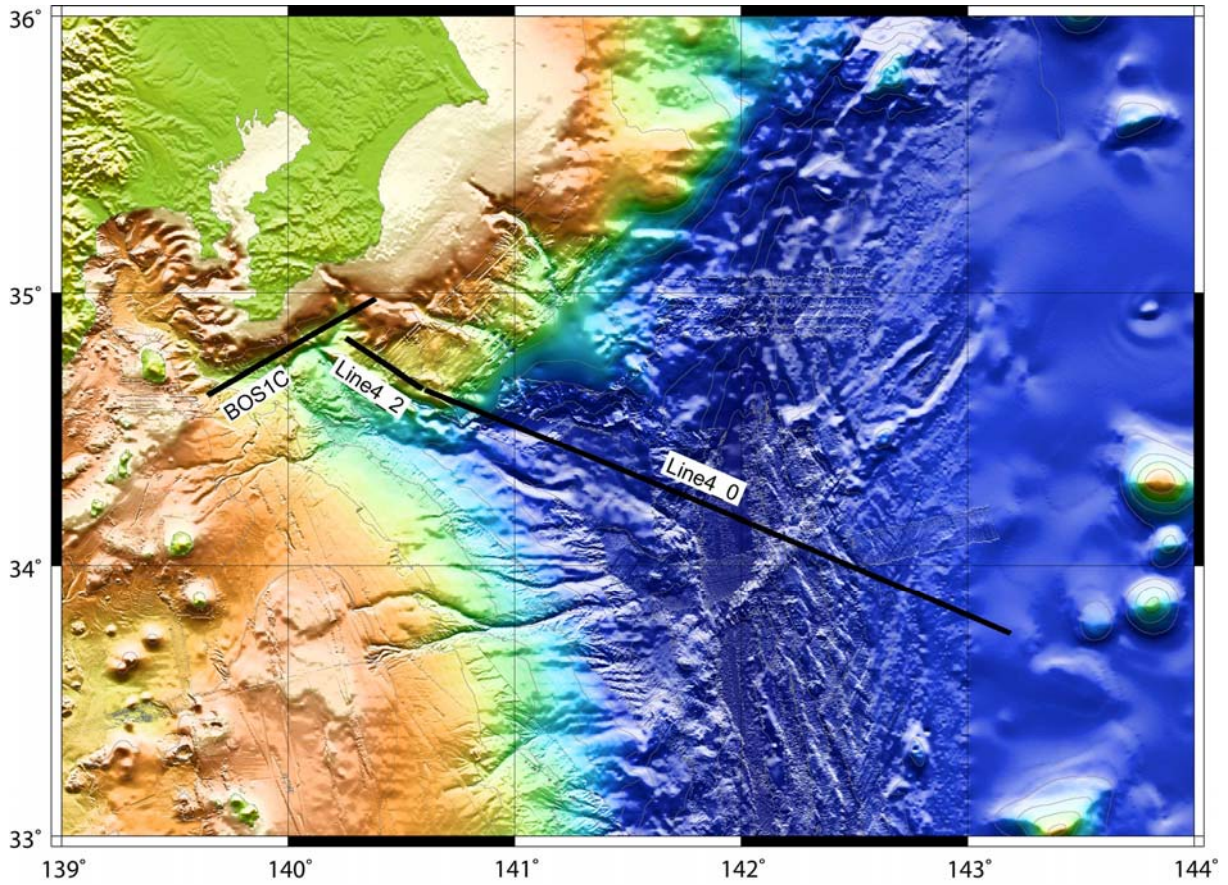
##### 3) XBT

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

#### (3) Cruise log:

Date		Remarks
2009/7/5	Sun	Departure from Yokosuka, transit to survey area
2009/7/6	Mon	MCS system maintenance, MCS survey in off-Boso area
2009/7/7	Tue	MCS survey in off-Boso area
2009/7/8	Wed	MCS survey in off-Boso area
2009/7/9	Thu	MCS survey in off-Boso area, shift to Ito-oki
2009/7/10	Fri	Stay at Ito-oki to escape rough weather
2009/7/11	Sat	MCS system maintenance in off-Boso area
2009/7/12	Sun	Arrival at Yokosuka

(4) Seismic lines



Black lines are seismic lines conducted in this cruise (Line4\_0, Line4\_2 and BOS1C).

(5) MCS line list

Line4_0	Time (UTC)	Latitude (N)	Longitude (E)	Depth (m)	SP
First shot	2009/7/6 14:39	33° 44.8127'	143° 11.2008'	5206	767
First good shot	2009/7/6 14:39	33° 44.8226'	143° 11.1707'	5211	768
Last good shot	2009/7/7 23:20	34° 38.6407'	140° 36.4792'	2179	5919
Last shot	2009/7/7 23:20	34° 38.6407'	140° 36.4792'	2179	5919

Line4_2	Time (UTC)	Latitude (N)	Longitude (E)	Depth (m)	SP
First shot	2009/7/7 23:35	34° 39.0287'	140° 35.4204'	2247	993
First good shot	2009/7/7 23:35	34° 39.0287'	140° 35.4204'	2247	993
Last good shot	2009/7/8 4:16	34° 49.8738'	140° 15.5443'	2169	1720

Last shot	2009/7/8 4:16	34° 49.8738'	140° 15.5443'	2169	1720
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BOS1C_0	Time (UTC)	Latitude (N)	Longitude (E)	Depth (m)	SP
First shot	2009/7/8 9:59	34° 58.5899'	140° 23.0345'	620	693
First good shot	2009/7/8 9:59	34° 58.5899'	140° 23.0345'	620	693
Last good shot	2009/7/8 20:22	34° 37.6008'	139° 38.8041'	1717	2249
Last shot	2009/7/8 20:22	34° 37.6008'	139° 38.8041'	1717	2249

#### 4. Notice on using:

This cruise report is a preliminary documentation as of the end of the cruise. It may not be corrected even if changes on content (i.e. taxonomic classifications) are found after publication. It may also be changed without notice. Data on the cruise report may be raw or not processed. Please ask the PI(s) for the latest information before using. Users of data or results of this cruise are requested to submit their results to Data Integration and Analysis Group (DIAG), JAMSTEC.