



R/V Kairei Cruise Report

KR08-E03

Seismic study in the Izu-Ogasawara region

Nov. 2, 2008 – Nov. 11, 2008

Japan Agency for Marine-Earth Science and Technology

(JAMSTEC)

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1 . Cruise Information :

(1) Cruise number, Ship name: KR08-E03, R/V Kairei

(2) Title of the cruise: 2008FY “Seismic study at the Izu-Ogasawara region”

(3) Title of proposal:

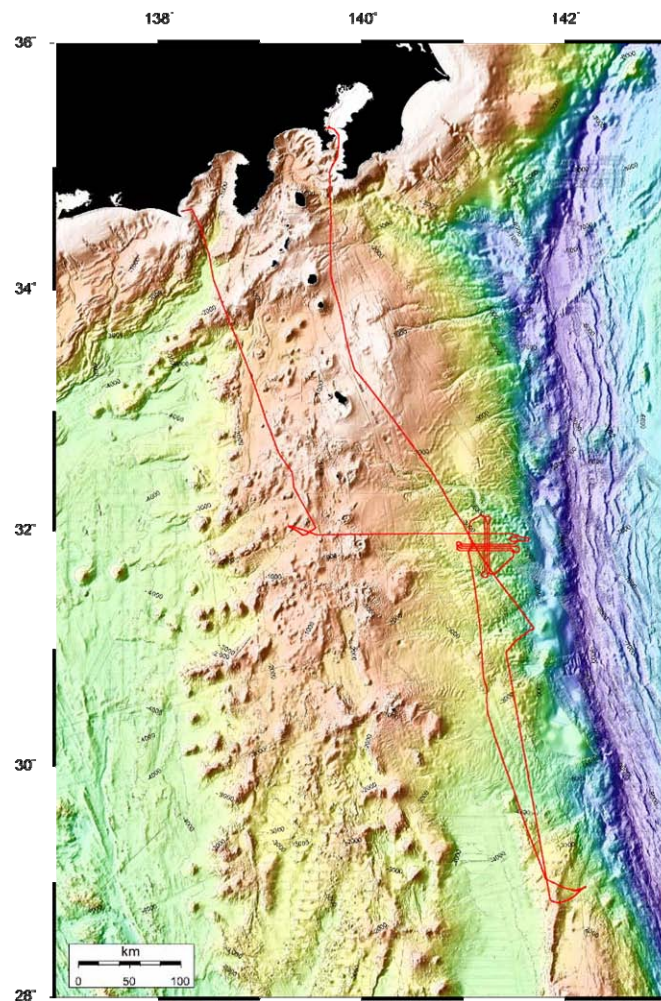
Crustal growth of the Izu-Ogasawara oceanic island arc -Seismic study for IODP Project IBM-

(4) Cruise period, Port call:

2008/11/2-11/11, Omaezaki Port (Shizuoka) to JAMSTEC (Yokosuka)

(5) Research Area: Izu-Ogasawara

(6) Research Map:



2. Researchers

- (1) Chief Scientist [Affiliation]: Mikiya YAMASHITA [JAMSTEC]
- (2) Representative of Science Party [Affiliation]: Yoshiyuki KANEDA [JAMSTEC],
- (3) Science part list:
 - Yoshiyuki KANEDA [JAMSTEC],
 - Shuichi KODAIRA [JAMSTEC],
 - Narumi TAKAHASHI [JAMSTEC],
 - Yuka KAIHO [JAMSTEC],
 - Seiichi MIURA [JAMSTEC],
 - Takeshi SATO [JAMSTEC],
 - Mikiya YAMASHITA [JAMSTEC],
 - Tetsuo NO [JAMSTEC],
 - Tsutomu TAKAHASHI [JAMSTEC],
 - Kaoru TAKIZAWA [JAMSTEC],
 - Yoshio FUKAO [JAMSTEC],
 - Yoshiyuki TATSUMI [JAMSTEC],
 - Yoshihiko TAMURA [JAMSTEC],
 - Osamu ISHIZUKA [JAMSTEC/Advanced Industrial Science and Technology],
 - Yasuhiko OBARA [JAMSTEC/Japan Coast Guard]

3. Overview of Observation :

(1) Objectives :

IFREE has conducted seismic surveys intensively in the Izu-Ogasawara area to understand crustal evolution of oceanic arcs since 2004. The objectives of this cruise are to reveal the distribution of the arc middle crust in the forearc area and the site characterizations of drilling points of Project IBM sites by multi-channel seismic reflection surveys conducted in the southeast off Aoga-shima in the Izu-Ogasawara area.

(2) List of observation instruments :

1) Multi-channel seismic reflection (MCS) survey

Multi-channel seismic reflection surveys were carried out in the southeast off Aoga-shima (lines EW3a, EW8, EW9, EW10, EW11, NS7, NS8 and NS9) and line KT04, the Izu-Ogasawara area, using the airgun array of 7,800 cu. inch and a 444 channel hydrophone streamer.

2) Bathymetry observation

During this cruise, bathymetry data have been recorded continuously by SEABEAM2112.

3) Temperature and Conductivity observation for the correction of sonic speed

We have conducted two expendable-Bathy Thermographs (XBT) to correct the sonic speed for the bathymetry survey.

(3) Cruise log:

Date		Remarks
2008/11/2	Sun	Departure from Omaezaki Port, Shizuoka and transit to survey area
2008/11/3	Mon	MCS survey in line EW3a
2008/11/4	Tue	MCS survey in lines EW3a and EW8
2008/11/5	Wed	MCS survey in lines EW8, EW10, EW9 and EW11
2008/11/6	Thu	MCS survey in lines EW11, NS9, NS7 and NS8
2008/11/7	Fri	MCS survey in line NS8 and transit to line KT04
2008/11/8	Sat	MCS survey in line KT04
2008/11/9	Sun	MCS survey in line KT04 and transit to JAMSTEC
2008/11/10	Mon	Transit to JAMSTEC
2008/11/11	Tue	Arrive at JAMSTEC

(4) MCS line list

IBM2-EW3a_0	Time (UTC)	Latitude (N)	Longitude (E)	Shot Point No.
First shot	2008/11/03 05:29	31° 57.8259'	139° 34.8914'	881
First good shot	2008/11/03 05:55	31° 57.8627'	139° 37.2081'	954
Last good shot	2008/11/04 03:12	31° 58.4642'	141° 28.1057'	4447
Last shot	2008/11/04 03:12	31° 58.4642'	141° 28.1057'	4447

IBM2-EW8_0	Time (UTC)	Latitude (N)	Longitude (E)	Shot Point No.
First shot	2008/11/04 11:36	31° 53.0658'	141° 27.8960'	881
First good shot	2008/11/04 11:42	31° 53.0634'	141° 27.4200'	896
Last good shot	2008/11/04 16:56	31° 53.0716'	140° 59.9180'	1763
Last shot	2008/11/04 16:56	31° 53.0716'	140° 59.9180'	1763

IBM2-EW10_0	Time (UTC)	Latitude (N)	Longitude (E)	Shot Point No.
First shot	2008/11/04 18:58	31° 50.8931'	141° 00.1392'	881
First good shot	2008/11/04 19:28	31° 50.9102'	141° 02.7393'	963
Last good shot	2008/11/05 00:18	31° 50.9050'	141° 28.1062'	1763
Last shot	2008/11/05 00:18	31° 50.9050'	141° 28.1062'	1763

IBM2-EW9_0	Time (UTC)	Latitude (N)	Longitude (E)	Shot Point No.
First shot	2008/11/05 02:29	31° 51.9954'	141° 29.8279'	820
First good shot	2008/11/05 02:41	31° 51.9864'	141° 28.7811'	853
Last good shot	2008/11/05 08:10	31° 51.9880'	141° 00.0306'	1763
Last shot	2008/11/05 08:10	31° 51.9880'	141° 00.0306'	1763

IBM2-EW11_0	Time (UTC)	Latitude (N)	Longitude (E)	Shot Point No.
First shot	2008/11/05 09:56	31° 49.8285'	141° 00.1418'	881
First good shot	2008/11/05 10:16	31° 49.8359'	141° 01.9171'	937
Last good shot	2008/11/05 15:42	31° 49.8283'	141° 28.1035'	1763
Last shot	2008/11/05 15:42	31° 49.8283'	141° 28.1035'	1763

IBM2-NS9_0	Time (UTC)	Latitude (N)	Longitude (E)	Shot Point No.
First shot	2008/11/05 20:39	31° 40.2094'	141° 15.2795'	881
First good shot	2008/11/05 21:02	31° 42.0771'	141° 15.2664'	950
Last good shot	2008/11/06 01:09	32° 03.9732'	141° 15.2675'	1759
Last shot	2008/11/06 01:09	32° 03.9732'	141° 15.2675'	1759

IBM2-NS7_0	Time (UTC)	Latitude (N)	Longitude (E)	Shot Point No.
First shot	2008/11/06 02:51	32° 04.3575'	141° 12.7246'	860

First good shot	2008/11/06 02:52	32° 04.3034'	141° 12.7245'	862
Last good shot	2008/11/06 03:15	32° 02.8690'	141° 12.7365'	915
Last shot	2008/11/06 03:29	32° 02.0033'	141° 12.0710'	947

IBM2-NS7_1	Time (UTC)	Latitude (N)	Longitude (E)	Shot Point No.
First shot	2008/11/06 03:42	32° 01.3802'	141° 12.7098'	970
First good shot	2008/11/06 03:43	32° 01.3264'	141° 12.7111'	972
Last good shot	2008/11/06 08:52	31° 40.0253'	141° 12.7282'	1759
Last shot	2008/11/06 08:52	31° 40.0253'	141° 12.7282'	1759

IBM2-NS8_0	Time (UTC)	Latitude (N)	Longitude (E)	Shot Point No.
First shot	2008/11/06 11:11	31° 40.2096'	141° 14.0055'	881
First good shot	2008/11/06 11:32	31° 41.6982'	141° 14.0034'	936
Last good shot	2008/11/06 16:17	32° 03.9733'	141° 14.0005'	1759
Last shot	2008/11/06 16:17	32° 03.9733'	141° 14.0005'	1759

KT04_0	Time (UTC)	Latitude (N)	Longitude (E)	Shot Point No.
First shot	2008/11/08 05:19	28° 53.5377'	141° 50.8470'	681
First good shot	2008/11/08 05:19	28° 53.5911'	141° 50.8365'	683
Last good shot	2008/11/09 07:10	30° 57.9292'	141° 25.4104'	5348
Last shot	2008/11/09 07:10	30° 57.9292'	141° 25.4104'	5348

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.