



R/V Kaiyo Cruise Report

KY12-02

High resolution imaging of subducting sediments in Nankai

Trough using seismic reflection survey

Feb. 3, 2012 – Feb. 12, 2012

Japan Agency for Marine-Earth Science and Technology

(JAMSTEC)

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1. Cruise Information :

(1) Cruise number, Ship name: KY12-02, R/V Kaiyo

(2) Title of the cruise:

2011FY “High resolution imaging of subducting sediments in Nankai Trough using seismic reflection survey”

(3) Title of proposal:

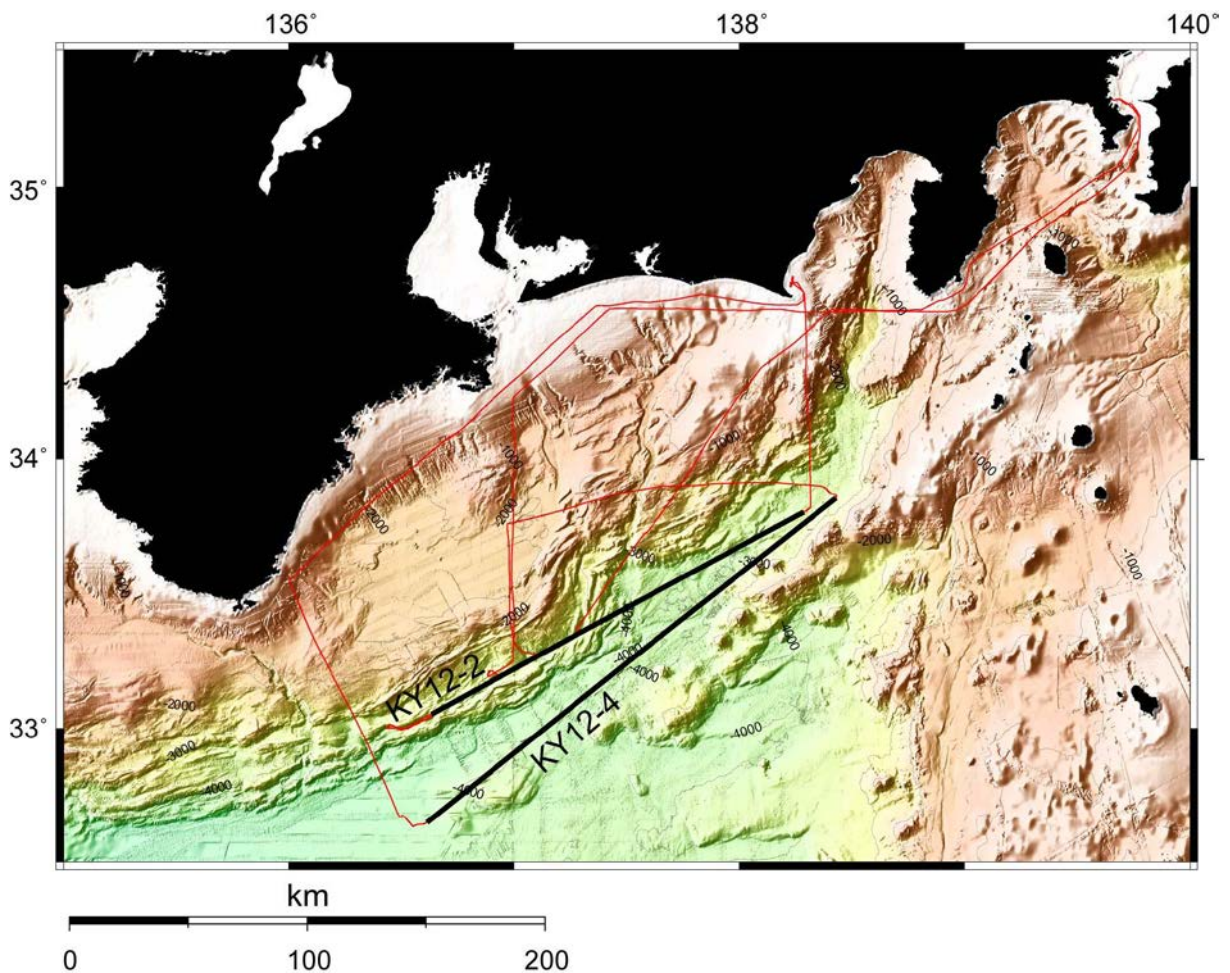
High resolution imaging of subducting sediments in Nankai Trough using seismic reflection survey

(4) Cruise period, Port call:

2012/02/03-02/12, JAMSTEC (Yokosuka) to JAMSTEC (Yokosuka)

(5) Research Area: Off Kii Peninsula, Off Tokai

(6) Research Map:



2. Researchers

(1) Chief Scientist [Affiliation]: Mikiya YAMASHITA [JAMSTEC]

(2) Representative of Science Party [Affiliation]:

Yoshiyuki TATSUMI [JAMSTEC]

(3) Science part list:

Shuichi KODAIRA [JAMSTEC]

Jin-Oh PARK [JAMSTEC]

Masataka KINOSHITA [JAMSTEC]

Tetsuo NO [JAMSTEC]

Ryota HINO [Tohoku Univ.]

Yoshinori SANADA [JAMSTEC]

Saneatsu SAITO [JAMSTEC]

Yasuyuki NAKAMURA [JAMSTEC]

Seiichi MIURA [JAMSTEC]

Ayako NAKANISHI [JAMSTEC]

Kazuya NAITO [AORI]

Yoshihiro ITO [Tohoku Univ.]

Takeshi TSUJI [Kyoto Univ.]

Nathan Bangs [UTIG]

Greg MOORE [Hawaii Univ.]

3. Overview of Observation :

(1) Objectives:

High resolution multi-channel seismic reflection survey is carried out along the Nankai Trough in order to understand the mechanism about the creation of decollement zone. Obtained data will be expected to illuminate the origin and carrier channel of volcanic sediments which recognized in the core obtained by IODP No.322 cruise.

(2) List of observation instruments:

1) Seismic reflection survey

Seismic reflection surveys were carried out on lines KY12-2 and KY12-4 from off Kii Peninsula to off Tokai, using the airgun array of 320 cu. inch and a 192-ch. hydrophone streamer.

2) Bathymetry observation

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

3) Temperature, Conductivity and Depth observation for oceanic fine imaging in reflection experiment

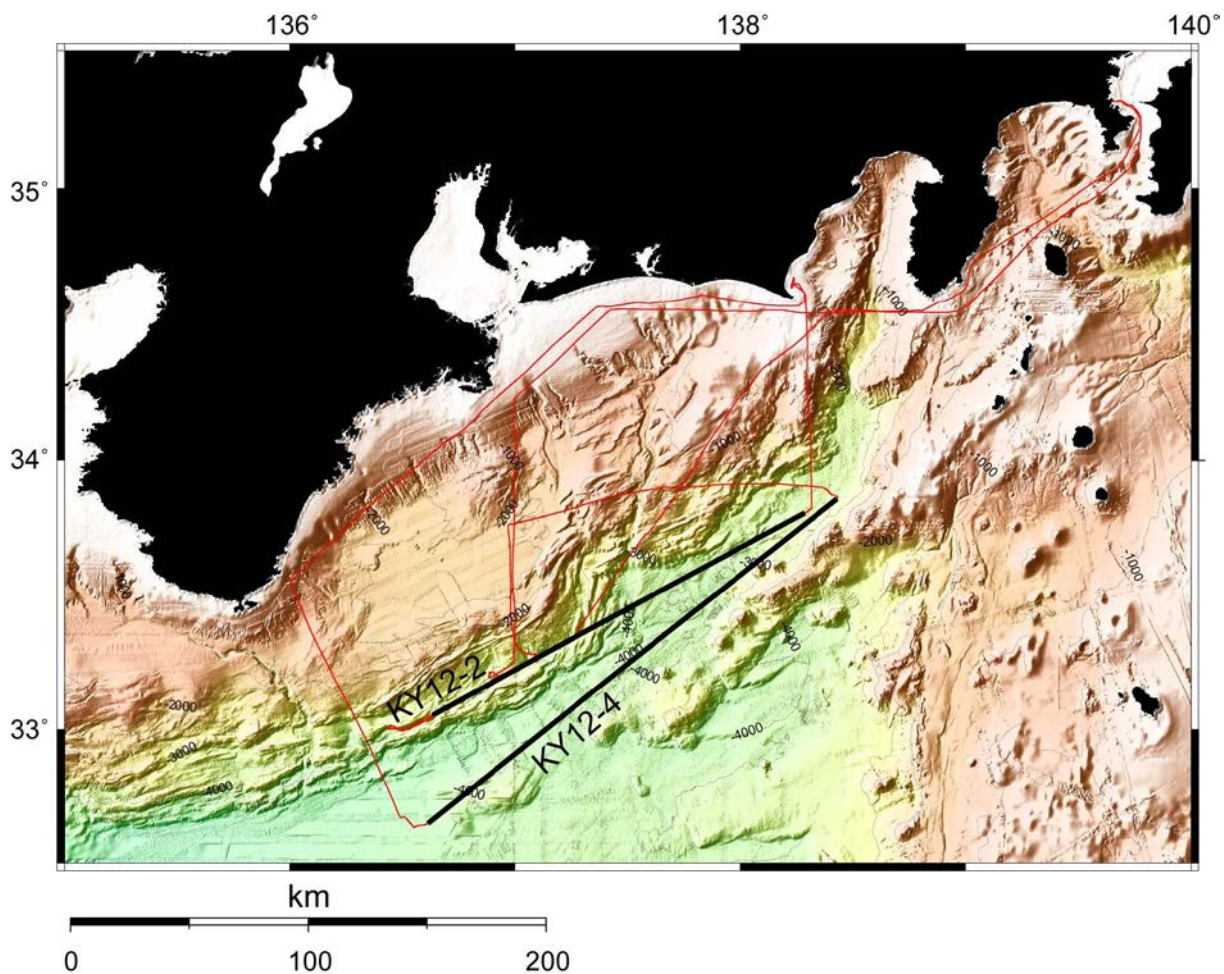
We have conducted 5 XCTDs (eXpendable Conductivity, Temperature and Depth) and 3 XBTs (eXpendable-Bathy Thermographs).

(3) Cruise log:

Date		Remarks
2012/02/03	Fri	Departure from JAMSTEC (Yokosuka), and transit to survey area
2012/02/04	Sat	Preparation of portable MCS system
2012/02/05	Sun	MCS survey on line KY12-2
2012/02/06	Mon	MCS survey on line KY12-2 and standby due to weather condition
2012/02/07	Tue	Standby due to weather condition (off Omaezaki)
2012/02/08	Wed	Standby due to weather condition (off Omaezaki)
2012/02/09	Thu	MCS survey on line KY12-4
2012/02/10	Fri	MCS survey on line KY12-4
2012/02/11	Sat	MCS survey on line KY12-2
2012/02/12	Sun	Transit and arrive at JAMSTEC (Yokosuka)

(4) Multi-channel seismic reflection survey

a) Map of survey line



Black lines show the MCS survey line. Red line shows the ship track of KY12-2 cruise.

b) Shooting coordinates

Line name	Latitude (N)	Longitude (E)
KY12-2	31_59.75558'	135_55.95465'
	33_05.50418'	135_28.98896'
KY12-4	33_09.96767'	135_48.59256'
	32_48.94858'	135_57.12616'

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.