



R/V Kaiyo Cruise Report

KY14-05

Seismicity observation from trench axis to outer rise area and
IODP study for Kanto Asperity Project

Apr. 2, 2014 – Apr. 14, 2014

Japan Agency for Marine-Earth Science and Technology
(JAMSTEC)

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1. Cruise Information :

- (1) Cruise number, Ship name: KY14-07, R/V Kaiyo
- (2) Title of the cruise: 2014FY “Seismicity observation from trench axis to outer rise area and IODP study for Kanto Asperity Project”
- (3) Chief Scientist [Affiliation]: Seiichi MIURA [JAMSTEC]
- (4) Representative of Science Party [Affiliation]:
 Proposal1: Shuichi Kodaira [JAMSTEC]
 Proposal2: Saneatsu Saito [JAMSTEC]
- (5) Title of proposal:
 Proposal1: Geological and geophysical study for great earthquake and tsunami at subduction zone: seismic observation from trench axis to outer rise area
 Proposal2: IODP study for Kanto Asperity Project
- (6) Cruise period, Port call: 2014/04/02-04-14, Yokosuka to Yokosuka
- (7) Research Area: Japan Trench and Izu-Ogasawara
- (8) Research Map:

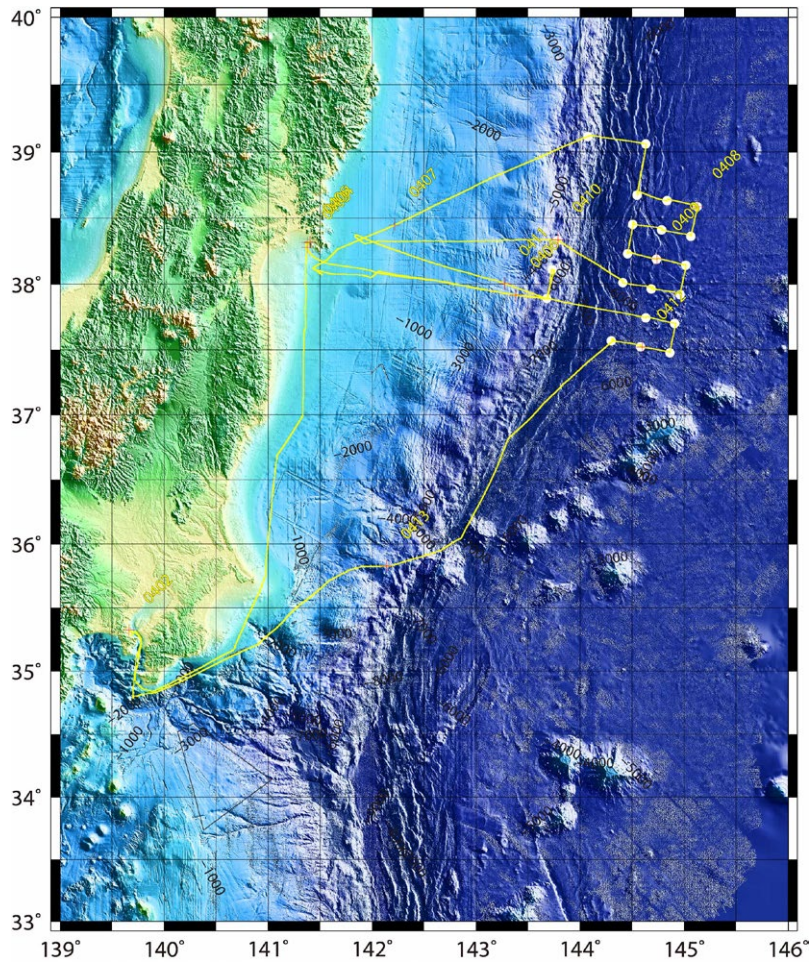


Figure 1 : Cruise track and OBS locations

2. Researchers

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

(2) Representative of Science Party [Affiliation]:

Proposal1: Shuichi Kodaira [JAMSTEC]

Proposal2: Saneatsu Saito [JAMSTEC]

(3) Science part list:

Proposal1:

Shuichi KODAIRA [JAMSTEC]

Koichiro OBANA [JAMSTEC]

Tsutomu TAKAHASHI [JAMSTEC]

Yojiro YAMAMOTO [JAMSTEC]

Seiichi MIURA [JAMSTEC]

Gou FUJIE [JAMSTEC]

Yuka KAIHO [JAMSTEC]

Takeshi SATO [JAMSTEC]

Ayako NAKANISHI [JAMSTEC]

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Tetsuo NO [JAMSTEC]

Mikiya YAMASHITA [JAMSTEC]

Yasuyuki NAKAMURA [JAMSTEC]

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Narumi TAKAHASHI [JAMSTEC]

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Yasuyuki NAKAMURA [JAMSTEC]

Takeshi SATO [JAMSTEC]

Mikiya YAMASHITA [JAMSTEC]

Hikaru IWAMARU [JAMSTEC]

Yuzuru YAMAMOTO [JAMSTEC]

Kenichiro TANI [JAMSTEC]

Takehiro HIROSE [JAMSTEC]

3. Overview of Observation :

(1) Objectives :

This cruise was planned for two proposals for OBS retrieval around the Japan Trench and multi-channel reflection seismic (MCS) survey around the Sagami Trough. The objective of the first proposal is to observe seismic activity in the vicinity of the Japan Trench axis where is distal area from land stations and difficult to observe small seismic events and determine the focal depths. The objective of the second proposal is to reveal shallow structure around the Sagami Trough associated with the subduction of the Philippine Sea Plate beneath the Kanto area where is historical damaged area of large earthquakes as 1703 Genroku and 1923 Kanto events, coexisting slow-slip events next to the large events. However, MCS survey was canceled for bad weather.

(2) Observations :

1) Retrieval of OBS:

OBS were retrieved by anchor release with acoustic communications and pick-up at sea surface. Twenty OBS were successfully retrieved, although two OBS (W01 and W10) were not retrieved since there was no acoustic response.

2) Bathymetry observation:

During the cruise, bathymetry data has been recorded continuously by SEABEAM2100.

3) XBT:

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

(3) Cruise log:

Date		Remarks
2014/4/2	Wed	Departure from Yokosuka, transit to survey area
2014/4/3	Thu	Stay at Ishinomaki-oki to escape rough weather
2014/4/4	Fri	Stay at Ishinomaki-oki to escape rough weather
2014/4/5	Sat	Stay at Ishinomaki-oki to escape rough weather
2014/4/6	Sun	OBS retrieval and transit to Ishinomaki-oki
2014/4/7	Mon	Stay at Ishinomaki-oki and transit to OBS area
2014/4/8	Tue	OBS retrieval
2014/4/9	Wed	OBS retrieval
2014/4/10	Thu	OBS retrieval and transit to Ishinomaki-oki
2014/4/11	Fri	Stay at Ishinomaki-oki and transit to OBS area
2014/4/12	Sat	OBS retrieval and transit to PMCS area
2014/4/13	Sun	Transit to PMCS area but abandon the PMCS in this cruise for shortage of shiptime
2014/4/14	Mon	Arrival at Yokosuka

(4) OBS information

OBS No.	Lat.		Lon.		Depth(m)
	Deg.	Min.	Deg.	Min.	
JMLA	38	20.0311	143	46.9429	5558
JMLB	38	6.7282	143	43.8661	5543
JMLC	37	53.4886	143	40.9191	5792
JOR01C	38	13.8355	144	27.3592	5871
JOR02C	38	0.6981	144	24.6555	5968
JOR03C	37	34.1884	144	18.0795	5921
JOR05C	38	11.2962	144	44.048	5560
JOR06C	37	57.9055	144	41.0758	5659
JOR07C	37	44.6046	144	37.8938	5863
JOR08C	37	31.3441	144	34.9845	5947
JOR11C	38	8.649	145	0.9427	5260
JOR12C	37	55.4143	144	57.8866	5484
JOR13C	37	42.0983	144	54.619	5609
JOR14C	37	28.6723	144	51.865	5651
JOR21C	38	40.5466	144	32.9893	5887
JOR22C	38	27.2787	144	30.4792	5896
JOR23C	38	37.9199	144	50.278	5522
JOR24C	38	24.6158	144	47.1286	5492
JOR25C	38	35.3453	145	7.494	5392
JOR26C	38	21.8616	145	4.0208	5327
W01	39	3.4991	144	37.8177	6086
W10	39	6.8819	144	4.6655	6261

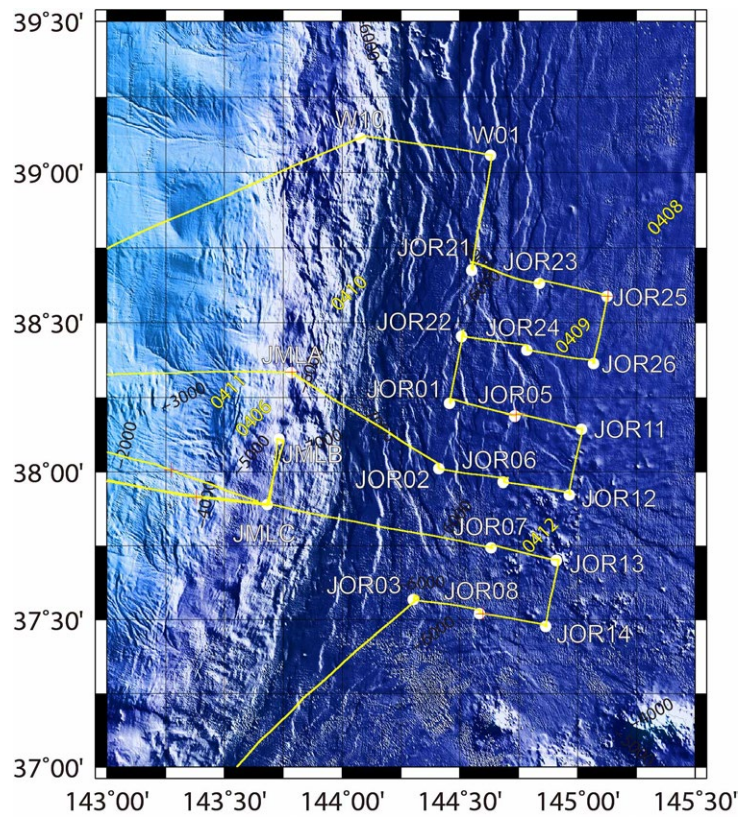


Figure 2: OBS positions with site names and cruise track

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 (DMG), JAMSTEC.