



R/V Yokosuka Cruise Report

YK16-13

High resolution seismic reflection survey

-Research project for compound disaster mitigation on the great earthquakes and tsunamis around the Nankai trough region-

Sep. 25, 2016 – Oct. 7, 2016

Research area : from off Shikoku to off Kii Peninsula

Japan Agency for Marine-Earth Science and Technology

(JAMSTEC)

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1. Cruise Information :

(1) Cruise number, Ship name: YK16-13, R/V Yokosuka

(2) Title of the cruise: 2016FY “Research project for compound disaster mitigation on the great earthquakes and tsunamis around the Nankai trough region”

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

(4) Representative of Science Party [Affiliation]:

Shuichi Kodaira [JAMSTEC]

(5) Title of proposal:

Research project for compound disaster mitigation on the great earthquakes and tsunamis around the Nankai trough region

(6) Cruise period, Port call:

2016/9/25-10/7, Kagoshima Port to Kobe Port (Yokosuka)

(7) Research Area: from off Shikoku to off Kii Peninsula

(8) Research Map

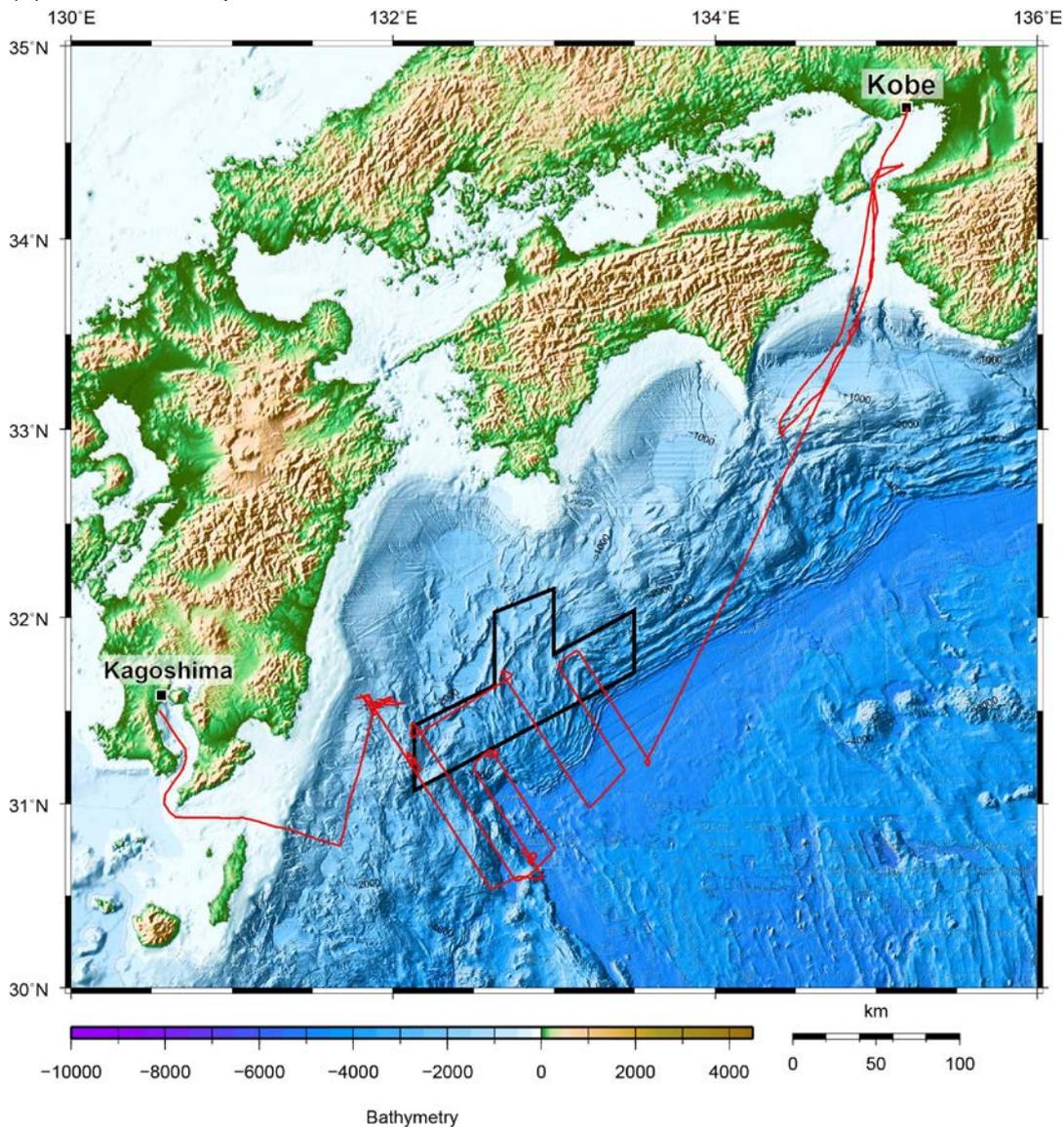


Figure shows the ship track during YK16-13 cruise.

2. Researchers

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

(2) Representative of Science Party [Affiliation]:

Shuichi Kodaira [JAMSTEC]

(3) Science part list:

Ryuta ARAI [JAMSTEC]

Tetsuo NO [JAMSTEC]

Toshiya KANAMATSU [JAMSTEC]

Takafumi KASAYA [JAMSTEC]

Yasuyuki NAKAMURA [JAMSTEC]

Seiichi MIURA [JAMSTEC]

Yuka KAIHO [JAMSTEC]

Tsutomu TAKAHASHI [JAMSTEC]

Koichiro OBANA [JAMSTEC]

Narumi TAKAHASHI [JAMSTEC]

Gou FUJIE [JAMSTEC]

Yojiro YAMAMOTO [JAMSTEC]

Ayako NAKANISHI [JAMSTEC]

3. Overview of Observation :

(1) Objectives :

2011 Tohoku earthquake produced large disaster Tsunami by rupture from deep region to trench axis. Recently, drilling results suggests that there is large slip around trough axis in Nankai Trough. Therefore, high resolution multi-channel seismic reflection survey is carried out around the Nankai Trough in order to understand the distribution about the turbidite.

(2) List of observation instruments :

1) Seismic reflection surveys

Seismic reflection surveys were carried out on all survey lines from off Kochi to off Kii Peninsula using the airgun array of 380 cu. inch and a 192-ch. hydrophone streamer.

2) Bathymetry observation

During this cruise, bathymetry data have been recorded continuously by EM122.

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

We have conducted 1 XCTD (eXpendable Conductivity, Temperature and Depth).

4) Sub-bottom profiler survey

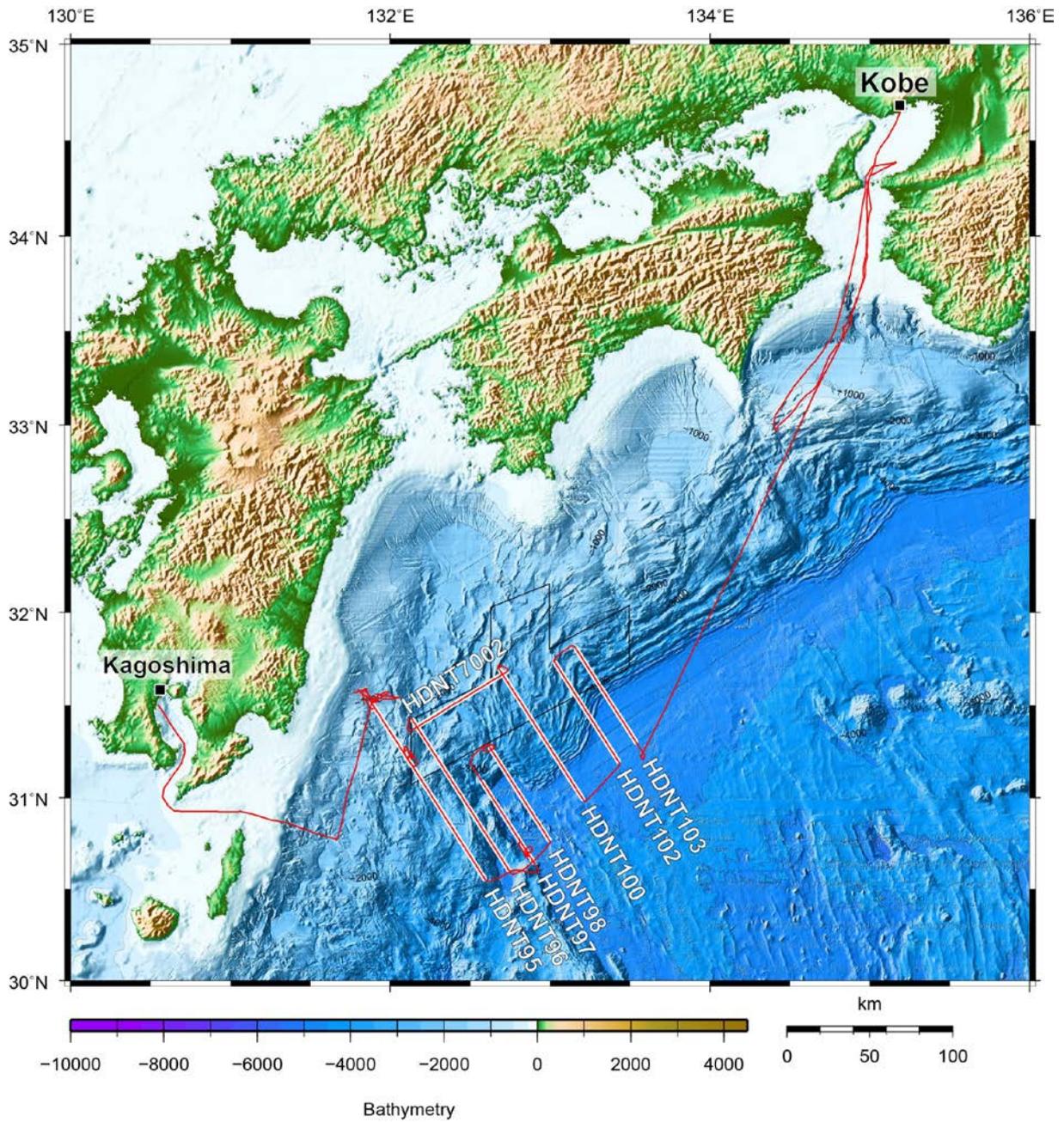
We have carried out sub-bottom profiler survey using EdgeTech 3300-HM (beam angle 30°) during this cruise.

(3) Cruise log:

Date	Remarks
2016/09/25 Sun	Departure from Kagoshima Port, and transit to survey area
2016/09/26 Mon	MCS survey on line HDNT95
2016/09/27 Tue	MCS survey on line HDNT95
2016/09/28 Wed	MCS survey on line HDNT97
2016/09/29 Thu	MCS survey on line HDNT98
2016/09/30 Fri	MCS survey on line HDNT96
2016/10/01 Sat	MCS survey on lines HDNT7002 and HDNT100
2016/10/02 Sun	MCS survey on lines HDNT100 and HDNT102
2016/10/03 Mon	MCS survey on line HDNT103
2016/10/04 Tue	Standby due to bad weather condition by typhoon (Osaka Bay)
2016/10/05 Wed	Standby due to bad weather condition by typhoon (Osaka Bay)
2016/10/06 Thu	Repair of airgun and streamer

(4) Multi-channel seismic reflection survey

a) Map of survey line



White lines show the MCS survey line of YK16-13 cruise.

b) Shooting coordinates

Line name	Latitude (N)	Longitude (E)
HDNT95	31_30.91500'N	131_52.78383'E
	30_33.01033'N	132_35.77167'E
HDNT96	30_36.30933'N	132_44.52550'E
	31_25.39867'N	132_08.14517'E
HDNT97	30_39.14383'N	132_53.62017'E
	31_05.64850'N	132_34.07680'E
HDNT98	31_16.12833'N	132_37.50383'E
	30_45.85233'N	132_59.89500'E
HDNT100	31_41.32933'N	132_41.10950'E
	30_58.94133'N	133_12.66817'E
HDNT102	31_11.84767'N	133_25.57967'E
	31_43.96833'N	133_01.64967'E
HDNT103	31_48.21617'N	133_09.50900'E
	31_17.77550'N	133_32.42433'E
HDNT7002	31_22.53283'N	132_09.15600'E
	31_40.85617'N	132_43.82483'E

c) Preliminary results

(1) Sub-bottom profiler

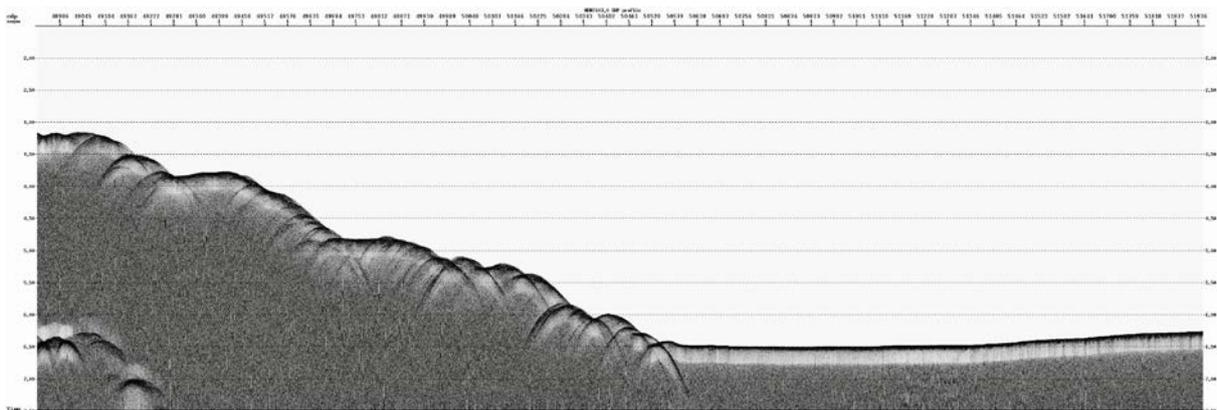


Figure shows sub-bottom profile of line HDNT103

(2) Seismic reflection survey

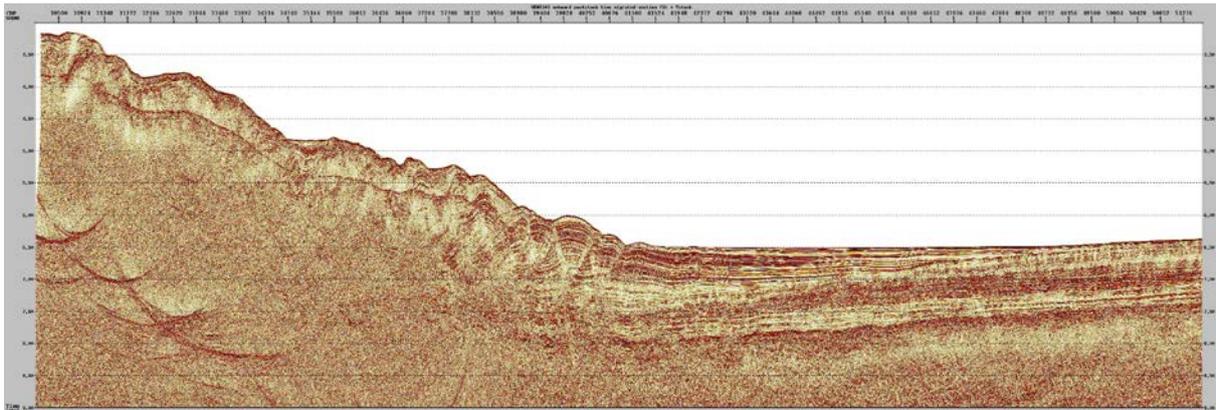


Figure shows onboard seismic reflection section of line HDNT103

4. Notice on Using

Notice on using: Insert the following notice to users regarding the data and samples obtained.

This cruise report is a preliminary documentation as of the end of the cruise.

This report may not be corrected even if changes on contents (i.e. taxonomic classifications) may be found after its publication. This report may also be changed without notice. Data on this cruise report may be raw or unprocessed. If you are going to use or refer to the data written on this report, please ask the Chief Scientist for latest information.

Users of data or results on this cruise report are requested to submit their results to the Data Management Group of JAMSTEC.