



# R/V Natsushima Cruise Report

NT11-E02

Sea Area Monitoring off Miyagi, Fukushima, and Ibaragi  
region

June 1, 2011 – June 10, 2011

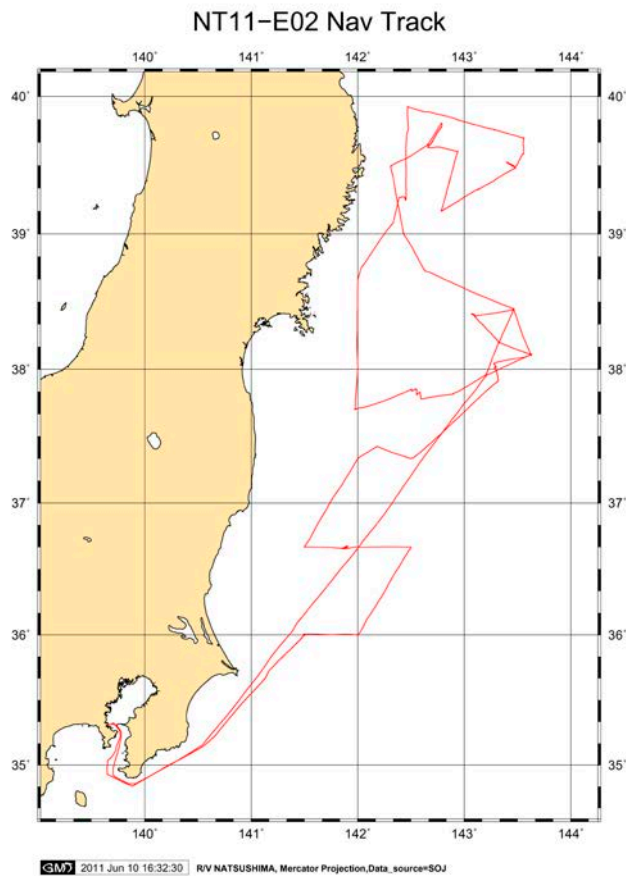
Japan Agency for Marine-Earth Science and Technology  
(JAMSTEC)

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1. Cruise Information :

- (1) Cruise number, Ship name: NT11-E02, R/V Natsushima
- (2) Title of the cruise: 2011FY “Sea Area Monitoring and seismic study off Miyagi, Fukushima, and Ibaragi region”
- (3) Title of proposal:  
Aftershocks of the 2011 Off the Pacific Coast of Tohoku Earthquake and low frequency events in the northeastern Japan subduction zone
- (4) Cruise period, Port call:  
2011/06/1-06/10, JAMSTEC (Yokosuka) to JAMSTEC (Yokosuka)
- (5) Research Area: off the northeastern Japan
- (6) Research Map:



## 2. Researchers

(1) Chief Scientist [Affiliation]: Aki ITO [JAMSTEC]

(2) Representative of Science Party [Affiliation]:

Shozo TASHIRO [JAMSTEC]

(3) Science party list:

Yoshiyuki KANEDA [JAMSTEC]

Mitsuhiro TORIUMI [JAMSTEC]

Shuichi KODAIRA [JAMSTEC]

Narumi TAKAHASHI [JAMSTEC]

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Koichiro OBANA [JAMSTEC]

Hiroko SUGIOKA [JAMSTEC]

### 3. Overview of Observation :

#### (1) Objectives :

The objectives of this cruise are to reveal seismic activity including low frequency events in the northeastern Japan subduction zone and after slip associated with the 2011 Off the Pacific Coast of Tohoku Earthquake in Japan.

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

##### 1) Recovery of ocean bottom seismometers (OBSs)

16 OBSs deployed by KR11-E03 cruise were recovered.

##### 2) Deployment of broad band ocean bottom seismometers (BBOBSs)

4 BBOBSs were deployed.

##### 3) Bathymetry observation

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

##### 4) Temperature observation for the correction of sonic speed

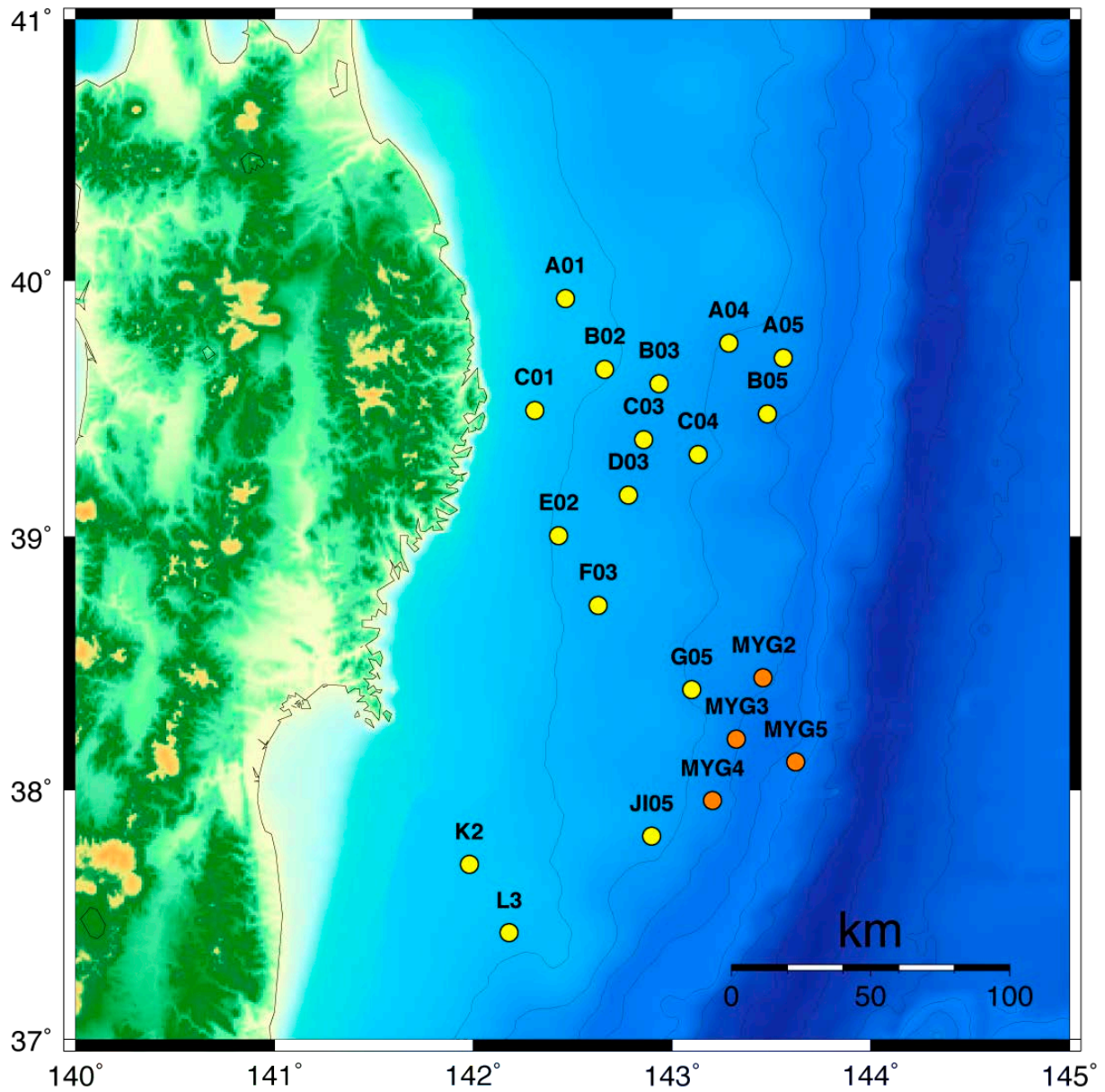
Expendable-Bathy Thermograph (XBT) was conducted to correct the sonic speed for the bathymetry survey.

#### (3) Cruise log:

Date		Remarks
2011/06/01	Wed	Departure from JAMSTEC (Yokosuka) and transit to survey area
2011/06/02	Thu	Sea area monitoring (site8, 7, 5, 6)
2011/06/03	Fri	Sea area monitoring (site9, 3, 4) and recovery of OBS (L3)
2011/06/04	Sat	Deployment of BBOBSs(MYG2, MYG3, MYG4,MYG5) and Recovery of OBS (JI05)
2011/06/05	Sun	Recovery of OBS (K2) and sea area monitoring (site2, 1)
2011/06/06	Mon	Recovery of OBSs (A01, A04, A05)
2011/06/07	Tue	Recovery of OBSs (B05, C04, D03, C03, B03)
2011/06/08	Wed	Recovery of OBSs (B02, C01, E02, F03) and calibration for MYG2
2011/06/09	Thu	Recovery of OBS (G05) and calibration for MYG3, MYG4 and MYG5
2011/06/10	Fri	Transit to JAMSTEC (Yokosuka) and arrive at there

(4) Study area

1) OBSs and BBOBSs locations



Orange and yellow circles show locations of BBOBSs and OBSs, respectively.

(1) OBS and BBOBS list

Site	Position		Remarks
	Latitude(N)	Longitude(E)	
L3	37_25.6538	142_10.9251	Recovery
K2	37_42.1566	141_58.854	Recovery
JI05	37_48.9012	142_53.874	Recovery, 1
A01	39_55.6613	142_27.9518	Recovery

A04	39_45.3592	143_17.2204	Recovery, 1
A05	39_41.8492	143_33.5916	Recovery, 1, 2
B05	39_28.8478	143_28.9238	Recovery, 1
C04	39_19.3535	143_7.9053	Recovery
D03	39_9.8183	142_46.8815	Recovery
C03	39_22.8257	142_51.4998	Recovery
B03	39_35.83	142_56.1469	Recovery, 1
B02	39_39.2642	142_39.7198	Recovery
C01	39_29.656	142_18.612	Recovery
E02	39_0.2422	142_25.8524	Recovery
F03	38_43.7945	142_37.7296	Recovery, 1
G05	38_23.7955	143_6.0119	Recovery, 1
MYG2	38_26.6509	143_27.6087	Deployment, 1, 3
MYG3	38_12.0882	143_19.5036	Deployment, 1, 3
MYG4	37_57.3525	143_12.2761	Deployment, 1, 3
MYG5	38_6.6048	143_37.3672	Deployment, 1, 3

Remarks:

- 1: OBS deployment location because of no OBS calibration.
- 2: OBS could not be recovered in this cruise.
- 3: BBOBS is also equipped with a differential pressure gauge.

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.