



R/V Kairei Cruise Report

KR17-10

Marine Geological and Geophysical surveys to investigate
the nature of subduction zone mega earthquakes and
tsunamis 3. Seismicity observation in the outer rise and
trench axis region

Japan Trench

July 12, 2017-July 20, 2017

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

●Contents

1. Cruise Information

2. Researchers

3. Observation

4. Notice on Using

1. Cruise Information

- Cruise ID: KR17-10
- Name of vessel: R/V Kairei
- Title of the cruise:

Marine Geological and Geophysical surveys to investigate the nature of subduction zone mega earthquakes and tsunamis

3. Seismicity observation in the outer rise and trench axis region

- Title of proposal:

Marine Geological and Geophysical surveys to investigate the nature of subduction zone mega earthquakes and tsunamis

3. Seismicity observation in the outer rise and trench axis region

- Cruise period:

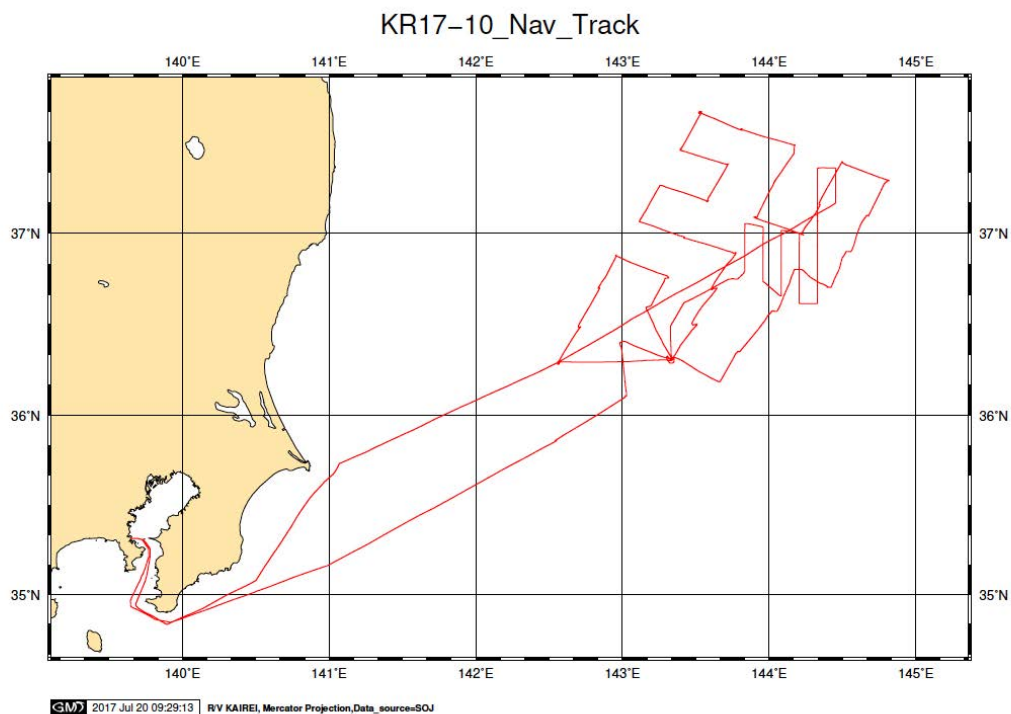
July 12, 2017 – July 20, 2017

- Ports of departure / call / arrival:

Yokosuka (JAMSTEC) –Yokosuka (JAMSTC)

- Research area: Japan Trench

- Research Map



2. Researchers

- Chief scientist [Affiliation]:
Koichiro Obana [JAMSTEC]
- Representative of the science party: Shuichi Kodaira [JAMSTEC]
- Science party:
Shuichi Kodaira [JAMSTEC]
Seiichi Miura [JAMSTEC]
Yasuyuki Nakamura [JAMSTEC]
Gou Fujie [JAMSTEC]
Koichiro Obana [JAMSTEC]
Tsutomu Takahashi [JAMSTEC]
Yojiro Yamamoto [JAMSTEC]
Yasushi Ishihara [JAMSTEC]
Takashi Tonegawa [JAMSTEC]

3. Observation

(1) Objectives:

On 11 March 2011, the great 2011 Tohoku-oki earthquake (Mw 9.0) was occurred in the Japan Trench region. This was the greatest earthquake that has been observed in Japan, and it caused devastating damages in the eastern Japan. To evaluate the hazard of the large interplate and outer rise earthquakes next to the rupture zones of the 2011 Tohoku-oki earthquake, we conducted seismicity observations in the Japan Trench region as described below.

(2) List of observations:

1) OBS recovery for seismicity observations

We recovered 34 OBSs, for seismicity observations in trench-outer rise region. These OBSs were deployed during the KR17-04 cruise by R/V Kairei in March 2017.

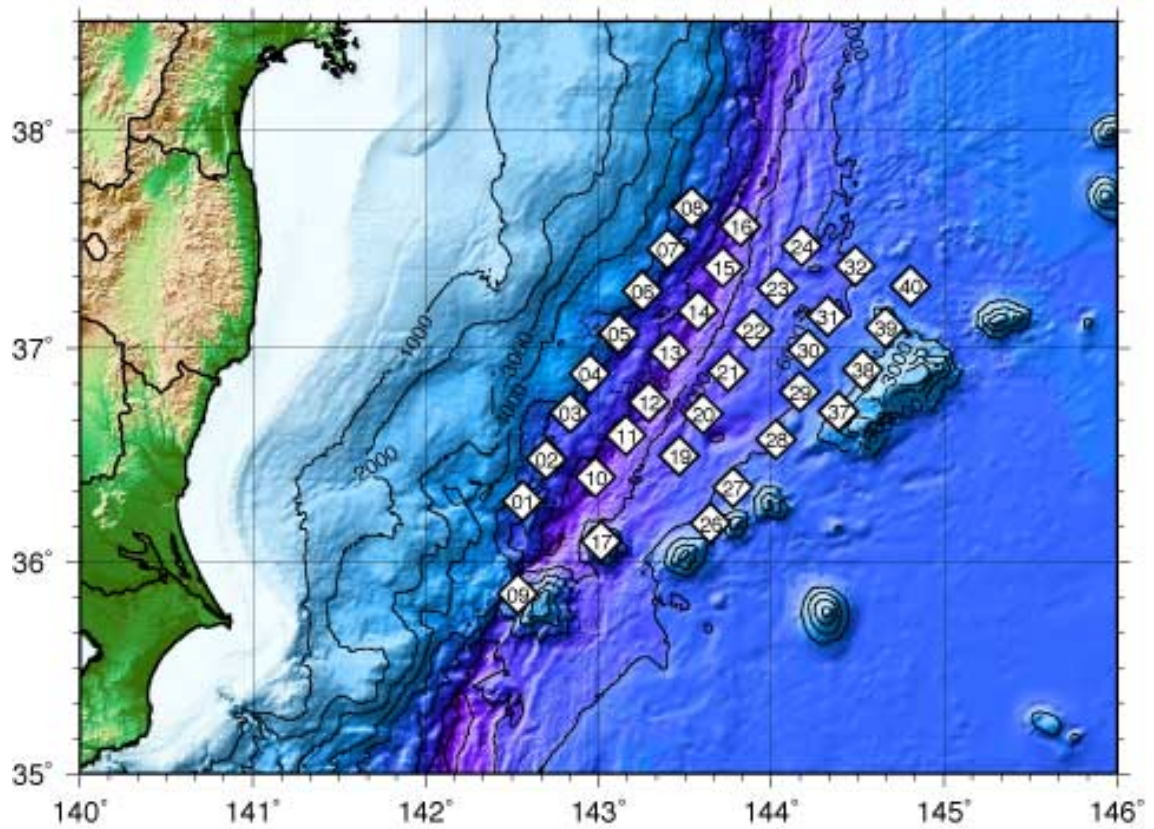


Figure 1. OBS locations for the seismicity observations

Table 1: OBS positions for seismicity observations (Calibrated positions on the seafloor)

Site	Lat. (N)		Lon. (E)		Depth(m)
JJB01A	36°	17.25'	142°	33.58'	5642
JJB02A	36°	29.02'	142°	41.77'	5700
JJB03A	36°	41.92'	142°	50.06'	5683
JJB04A	36°	52.91'	142°	57.04'	5629
JJB05A	37°	4.13'	143°	6.96'	5723
JJB06A	37°	15.76'	143°	15.36'	5474
JJB07A	37°	27.51'	143°	23.92'	5586
JJB08A	37°	39.23'	143°	32.52'	5326
JJB09A	35°	51.12'	142°	32.15'	5188
JJB10A	36°	23.89'	142°	58.94'	7956
JJB11A	36°	35.52'	143°	9.57'	7671
JJB12A	36°	45.16'	143°	17.52'	7659

JJB13A	36°	58.66'	143°	24.88'	7591
JJB14A	37°	10.52'	143°	34.55'	7411
JJB15A	37°	22.42'	143°	43.09'	7832
JJB16A	37°	33.94'	143°	49.06'	7582
JJB17A	36°	6.01'	143°	1.20'	4269
JJB18A	–		–		–
JJB19A	36°	29.77'	143°	28.64'	6560
JJB20A	36°	41.57'	143°	36.74'	6701
JJB21A	36°	53.34'	143°	45.33'	6712
JJB22A	37°	5.18'	143°	53.79'	6435
JJB23A	37°	16.92'	144°	2.18'	6363
JJB24A	37°	28.67'	144°	10.71'	6179
JJB26A	36°	10.96'	143°	39.12'	5898
JJB27A	36°	20.83'	143°	47.41'	5610
JJB28A	36°	34.26'	144°	2.12'	5458
JJB29A	36°	47.80'	144°	10.21'	5755
JJB30A	36°	59.55'	144°	12.93'	5900
JJB31A	37°	9.21'	144°	20.38'	5857
JJB32A	37°	23.01'	144°	29.83'	5957
JJB37A	36°	42.26'	144°	23.48'	5137
JJB38A	36°	53.88'	144°	31.88'	5276
JJB39A	37°	5.67'	144°	40.28'	5375
JJB40A	37°	17.24'	144°	48.80'	5715

2) Bathymetry, magnetics and gravity observation

During the cruise, bathymetry, magnetics and gravity data have been recorded continuously by multi-beam echo sounder (MBES), three-component magnetometer and gravity meter, respectively.

(3) Cruise Log

Date	Remarks
2017/7/12	Departure from Yokosuka
2017/7/13	OBS recovery (JJB09A, 10A, 17A, 26A, 27A, 28A)
2017/7/14	OBS recovery (JJB29A, 30A, 31A, 32A, 37A, 38A, 39A, 40A)
2017/7/15	OBS recovery (JJB07A, 08A, 15A, 16A, 22A, 23A, 24A)
2017/7/16	OBS recovery (JJB05A, 06A, 13A, 14A, 19A, 20A, 21A)
2017/7/17	OBS recovery (JJB03A, 04A, 11A, 12A)
2017/7/18	OBS recovery (JJB01A, 02A), Bathymetry survey
2017/7/19	Bathymetry survey, Transit to Yokosuka
2017/7/20	Arrival at Yokosuka

● 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.