



R/V Kairei Cruise Report

KR14-05

Research project for compound disaster mitigation on the great  
earthquakes and tsunamis around the Nankai Trough region  
Off Shikoku and off Kii Peninsula

May 01, 2014 - May 15, 2014

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

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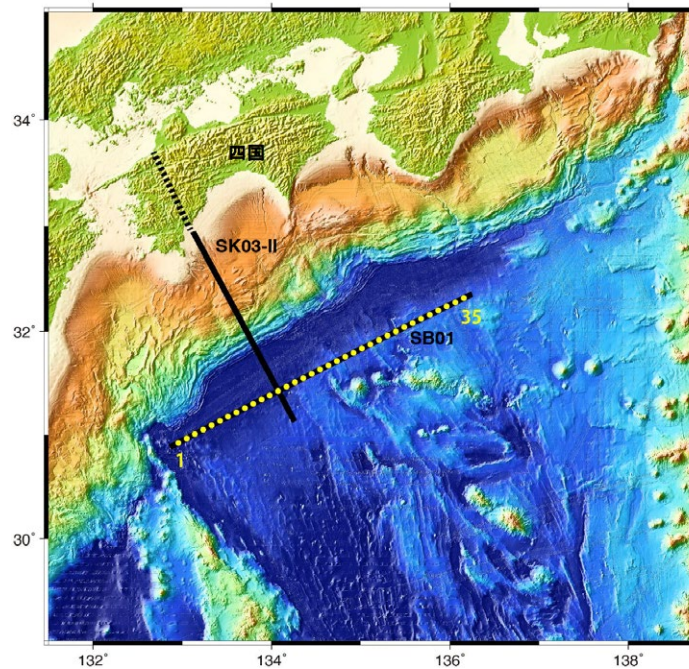
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## 1. Cruise Information

- Cruise ID : KR14-05
- Name of vessel : R/V Kairei
- Title of the cruise: Research project for compound disaster mitigation on the great earthquakes and tsunamis around the Nankai trough region
- Title of proposal : Seismic observation about earthquake and tsunami in the Nankai Trough, the Southwest Islands and off Kanto
- Cruise period : May 01, 2014 – May 15, 2014.
- Ports of call : Yokosuka (HQ) – Yokosuka (HQ)
- Research area : Off Shikoku and off Kii Peninsula
- Research Map



## 2. Researchers

- Chief scientist : Yojiro YAMAMOTO [JAMSTEC]
- Representative of the science party: Yoshiyuki KANEDA [JAMSTEC]
- Science party (List)
  - Hikaru IWAMARU [JAMSTEC]
  - Shuichi KODAIRA [JAMSTEC]
  - Narumi TAKAHASHI [JAMSTEC]
  - Yuka KAIHO [JAMSTEC]
  - Koichiro OBANA [JAMSTEC]
  - Tsutomu TAKAHASHI [JAMSTEC]

Seiichi MIURA [JAMSTEC]  
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Takeshi SATO [JAMSTEC]  
Mikiya YAMASHITA [JAMSTEC]  
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Ayako NAKANISHI [JAMSTEC]  
Yasuyuki NAKAMURA [JAMSTEC]  
Kazuhiko KASHIWASE [JAMSTEC]

### 3. Observation

- Observation

(1) Purpose

The objectives of this cruise are to reveal the crustal structure and earthquake observation in the Nankai Trough subduction zone as a part of the study of “Research project for earthquake and disaster prevention in the wide area around the Nankai Trough”, funded by the Ministry of Education, Culture, Sports, Science, and Technology of Japan.

During this cruise, we conducted the refraction survey by using airgun, land seismic station and ocean bottom seismographs (OBSs) to clarify the structural feature around the active region of deep low-frequency tremor and incoming Philippine Sea plate.

(2) Observations

1. Deployment and recovery of 35 OBSs along the line SB01.
2. Airgun shooting along two survey lines (SB01, SK03-2).

(3) Cruise log

Date		Remarks
2014/05/01	Thu.	Departure from Yokosuka
2014/05/02-03	Fri.- Sat.	Deployment of OBSs (Site 1-35).
2014/05/04-05	Sun. - Mon.	Airgun shooting along Line SK03-2.
2014/05/06-08	Tue. - Wed.	Airgun shooting along Line SB01.
2014/05/08-11	Wed.- Sun.	Recovery of OBSs (Site5-35).
2014/05/12	Mon.	Standby due to weather condition.
2014/05/13	Tue.	Recovery of OBSs (Site1-4).
2014/05/14	Wed.	Transit.
2014/05/15	Thu.	Arrival at Yokosuka.

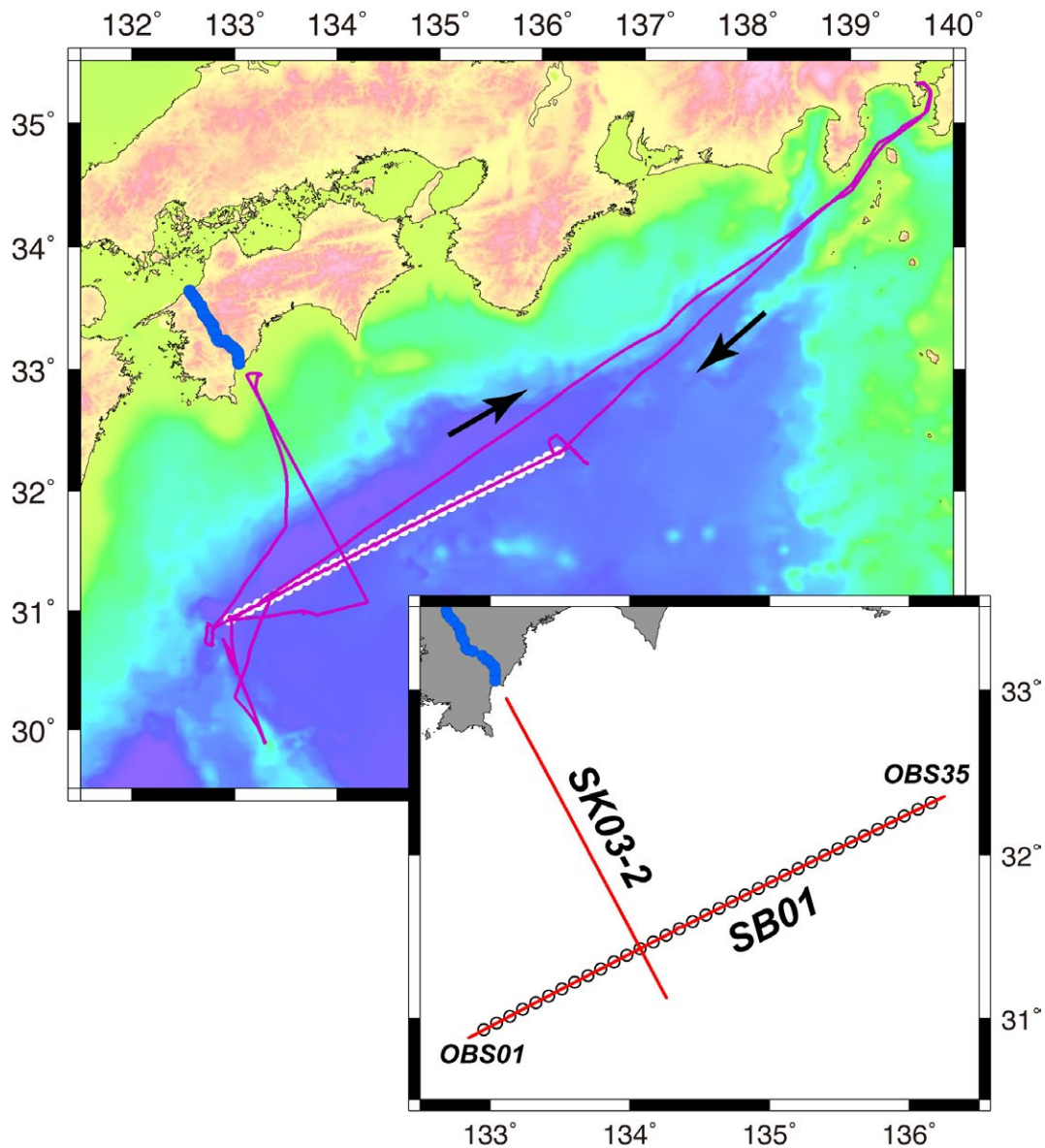


Figure. Ship track (purple line), location of OBSs (white circles) and land seismic stations (blue circles), and shot points (red dots) during this cruise.

(4) Survey lines

KR14-05 LINE LIST

NO.	LINE NAME	UKOOA P1/90 P2/91	DATE (UTC)	TIME (UTC)	F.S.P. F.G.S.P. L.G.S.P. L.S.P.	VESSEL POSITION		Depth (m)	NUMBER OF SHOT FGSP - LGSP (SP# Increment)	LENGTH FGSP - LGSP (km)	DIRECTION (°)	Mode (m)
						Lat.	Lon.					
1	SB01_0	SB01_0_0.p190 SB01_0_0.p291	05/05/2014	23:39:46	969	30 52.85230'N	132 51.05401'E	4589	1809 (+4)	361.60	63.345	Distance (200.0m)
			05/05/2014	23:42:59	977	30 52.95627'N	132 51.27417'E	4568				
			07/05/2014	21:15:59	8209	32 21.46296'N	136 15.30027'E	4298				
			07/05/2014	21:15:59	8209	32 21.46296'N	136 15.30027'E	4298				
2	SK03-2_0	SK03-2_0_0.p190 SK03-2_0_0.p291	03/05/2014	15:53:15	996	31 07.61763'N	134 15.78077'E	4398	1145 (+1)	228.80	332.545	Distance (200.0m)
			03/05/2014	15:56:28	998	31 07.80621'N	134 15.65677'E	4398				
			04/05/2014	23:40:07	2142	32 56.98592'N	133 07.06686'E	86				
			04/05/2014	23:40:07	2142	32 56.98592'N	133 07.06686'E	86				
Total								2954	590.40			

## (5) OBS information

OBS	Latitude				Longitude				Water depth [m]
	Deg.	Min.	N/S	Decimalize	Deg.	Min	E/W	Decimalize	
Site No.1	30	55.7	N	30.928777	132	57.4	E	132.95667	4793
Site No.2	30	58.2	N	30.970740	133	3.0	E	133.04947	4730
Site No.3	31	0.8	N	31.012658	133	8.5	E	133.14236	4731
Site No.4	31	3.3	N	31.054410	133	14.1	E	133.23520	4720
Site No.5	31	5.8	N	31.096198	133	19.7	E	133.32821	4721
Site No.6	31	8.3	N	31.137942	133	25.3	E	133.42139	4720
Site No.7	31	10.8	N	31.179532	133	30.9	E	133.51452	4715
Site No.8	31	13.3	N	31.221103	133	36.5	E	133.60779	4703
Site No.9	31	15.8	N	31.262632	133	42.1	E	133.70114	4696
Site No.10	31	18.2	N	31.303972	133	47.7	E	133.79445	4668
Site No.11	31	20.7	N	31.345347	133	53.3	E	133.88792	4656
Site No.12	31	23.2	N	31.386613	133	58.9	E	133.98155	4634
Site No.13	31	25.7	N	31.427922	134	4.5	E	134.07520	4621
Site No.14	31	28.1	N	31.468957	134	10.1	E	134.16893	4621
Site No.15	31	30.6	N	31.510058	134	15.8	E	134.26272	4566
Site No.16	31	33.1	N	31.550942	134	21.4	E	134.35659	4518
Site No.17	31	35.5	N	31.591980	134	27.0	E	134.45058	4460
Site No.18	31	38.0	N	31.632815	134	32.7	E	134.54453	4408
Site No.19	31	40.4	N	31.673597	134	38.3	E	134.63870	4384
Site No.20	31	42.9	N	31.714355	134	44.0	E	134.73299	4258
Site No.21	31	45.3	N	31.755035	134	49.6	E	134.82738	4428
Site No.22	31	47.7	N	31.795627	134	55.3	E	134.92181	4389
Site No.23	31	50.2	N	31.836188	135	1.0	E	135.01625	4413
Site No.24	31	52.6	N	31.876583	135	6.7	E	135.11089	4250
Site No.25	31	55.0	N	31.916937	135	12.3	E	135.20547	4347
Site No.26	31	57.4	N	31.957263	135	18.0	E	135.30016	4380
Site No.27	31	59.9	N	31.997518	135	23.7	E	135.39501	4516
Site No.28	32	2.3	N	32.037695	135	29.4	E	135.48991	4385
Site No.29	32	4.7	N	32.077805	135	35.1	E	135.58489	4300
Site No.30	32	7.1	N	32.117868	135	40.8	E	135.68010	4329

Site No.31	32	9.5	N	32.157738	135	46.5	E	135.77510	4339
Site No.32	32	11.9	N	32.197703	135	52.2	E	135.87030	4345
Site No.33	32	14.3	N	32.237528	135	57.9	E	135.96568	4334
Site No.34	32	16.6	N	32.277232	136	3.7	E	136.06120	4348
Site No.35	32	19.0	N	32.316962	136	9.4	E	136.15656	4327

#### 4. Notice on Using

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.