

Cruise Summary

1. Cruise Information

- Cruise ID: MR18-01C
- Name of vessel : MIRAI
- Title of cruise: “Research Project for Compound Disaster Mitigation on the Great Earthquakes and Tsunamis around the Nankai Trough Region”
- Chief Scientist [Affiliation]: Toshiya Kanamatsu [CEAT JAMSTEC]
- Proposal representative [affiliation]: Shuichi Kodaira [CEAT JAMSTEC]
- Cruise period: Jan. 21th, 2018-Feb. 5th, 2018
- Ports of departure / arrival: Shimizu Nakagusuku
- Research area: Nansei-shoto (**Figure 1**)

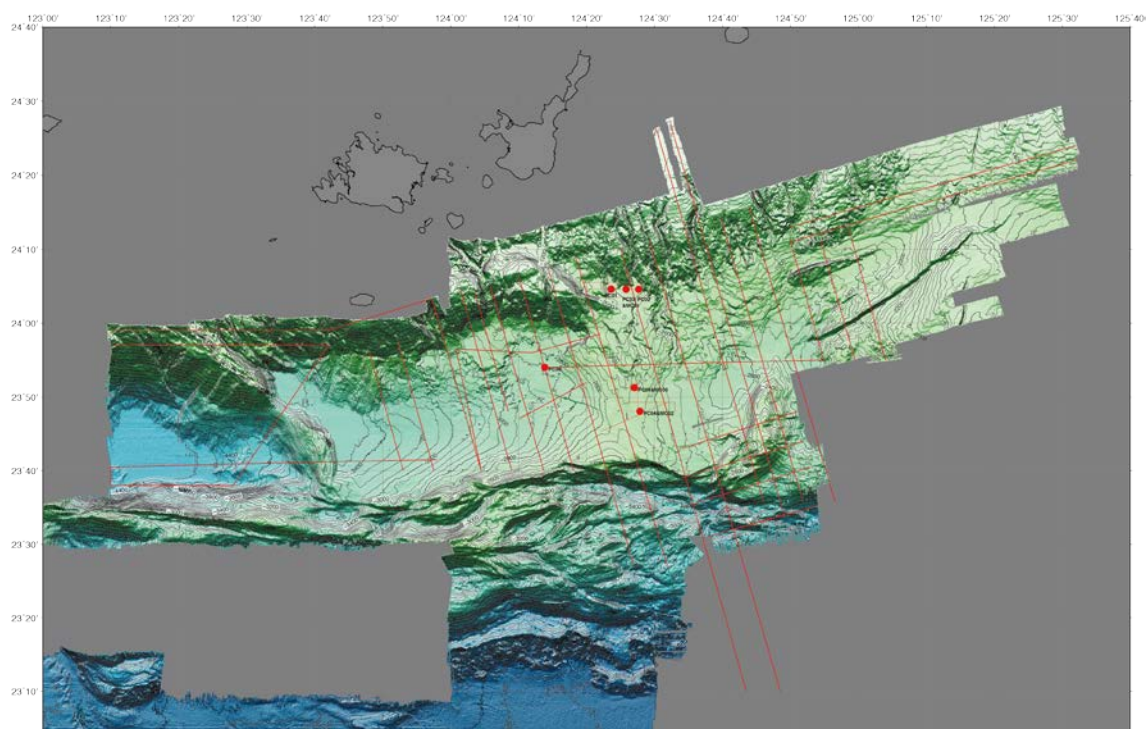


Figure 1: MR18-01C research area: Red line: SBP and MBES survey lines. Red circle: coring point. Bathymetric data from compilation of YK15-01, KR15-18, KR16-E06, and MR18-C01.

2. Overview of Research Activities

- Purpose, background: This cruise was conducted under “Research Project for Compound Disaster Mitigation on the Great Earthquakes and Tsunamis around the Nankai Trough Region” entrusted by the Ministry of Education, Culture, Sports, Science, and Technology. The object was to investigate evidences of past -Tsunami in marine sediments around Nansei-shoto.

- Activities: We carried out 5 piston coring (**Table 1**) and 3 multiple coring (**Table 2**) operations, MBES and SBP surveys, gravity and three-component magnetic measurements. Shipboard MSCL measurements, visual description, and sub-sampling for post-cruise researches were carried out on obtained samples during the cruise.

- Methods, instruments: Piston corer, Multiple corer, MBES, SBP, MSCL

- Results: Summarized in Tables (Tables1 and 2)

Table 1. Summary of PC operation during MR18-01C

Date (UTC)	Core ID	Water depth (m)	Position		Core Length/Pipe		Winch wire Tension Max(ton)	K
			Latitude	Longitude	PC	PL		
20180127	PC01	2,190	24-04.5998N	124-23.6320E	0.00	0.05	3.2	-
20180127	PC02	2,239	24-04.5882N	124-27.6599E	2.56	0.09	3.3	0.27
20180128	PC03	2,229	24-04.5826N	124-25.8288E	2.55	0.08	3.3	0.28
20180128	PC04	2,533	23-48.0456N	124-27.8484E	4.71	0.00	4.0	0.23
20180130	PC05	2,531	23-51.2605N	124-27.0450E	3.53	0.20	3.4	0.09
20180203	PC06	2,848	23-54.0114N	124-13.8548E	5.06	0.19	3.8	0.07

Corer: Inner tube PC (480kg weight)

** "K value" is the strength barometer of the sea floor sediment

Table 2. Summary of MC operation during MR18-01C.

Date (UTC)	Core ID	Water depth (m)	Position		Core Length/Pipe		Winch wire Tension Max(ton)
			Latitude	Longitude	PC	PL	
2018/02/02	MC01	2,229	24-04.5800N	124-25.8231E	HND2	26.5	3.2
					HND3	26.0	
					HND6	26.0	
					HND7	26.0	
2018/02/02	MC02	2,532	23-48.0425N	124-27.8573E	HND2	19.5	3.3
					HND3	20.0	
					HND6	20.0	
					HND7	18.5	
2018/02/02	MC03	2,529	23-51.2567N	124-27.0376E	HND2	19.5	3.3
					HND3	20.0	
					HND6	20.0	
					HND7	18.5	