

YK15-01 Cruise Summary

1. Cruise Information

Cruise ID: YK15-01

Name of vessel: YOKOSUKA

Title of the cruise: "Project for wide-area earthquake research of the Nankai Trough"

: Paleoseismology in the slope to trench.

Chief scientist [Affiliation]: Toshiya Kanamatsu [CEAT-JAMSTEC]

Lead proponent [Affiliation] : Shuichi Kodaira [CEAT-JAMSTEC]

Title of proposal: "Project for wide-area earthquake research of the Nankai Trough"

: Paleoseismology in the slope to trench.

Cruise period: 7th, Jan – 29th, Jan 2015

Ports of call: Sumitomo, Yokosuka –Yokosuka (Fig.1)

Research area: Nansei-shoto

Research map: Figure 1

2. Overview of the Observation

The objectives of this cruise are to explore the recurrence record of Large Tsunami and earthquake archived in deep-sea sediment in the Nansei-shoto as a part of the study of "Project for wide-area earthquake research of the Nankai Trough" funded by the Ministry of Education, Culture, Sports, Science, and Technology of Japan. In the Southwest Islands subduction zone, tracks of past large earthquakes and Tsunamis were observed. However, because of less information about the recurrence and location of Tsunami and earthquakes in comparison with the case of Nankai trough. General images of recurrence of Tsunami and earthquake should be figured out. We focus on the area where are largely affected by 1771 Meiwa-tsunami and Yaeyama earthquake (Figure 1). Because Ujiie et al., (1997) reported that medium to coarse turbidites are intercalated in the cores which obtained from the deep sea fan developing in the south of Ishigaki-shima, we began an intensive sampling from the fan. Because no detail topographic data in the survey area, we collected bathymetric data in order to design a coring plan in the south area of Ishigaki island from ca 1000m water depth to 6500 m (Figure 3). We recovered 14 piston cores, and two multicores. We found that a frequent intercalation of medium-coarse grain size turbidites in the collected cores (Figure 2). Post-cruise analyzing will provide us more detail information of the Nansei-shoto earthquake and Tsunami history.

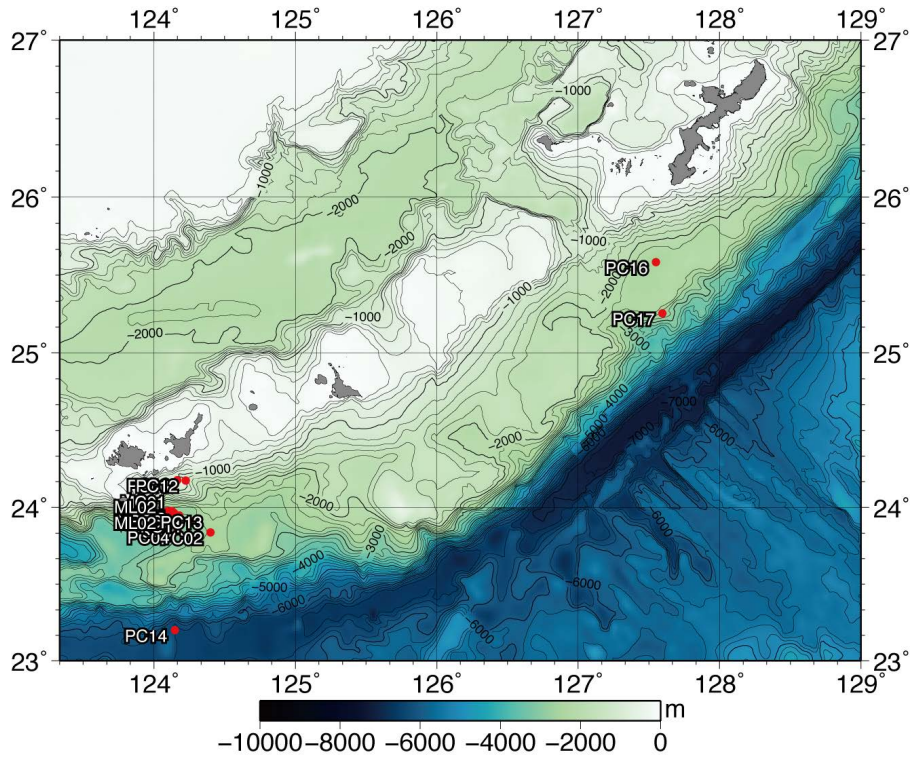


Fig. 1 Locations of cores obtained during YK15-01



Fig. 2 Photo of YK15-01 PC01 (23-56.3055°N, 124-04.4122°E, 2,765m). Note intervals of light color correspond to turbidites including shell and coral fragments.

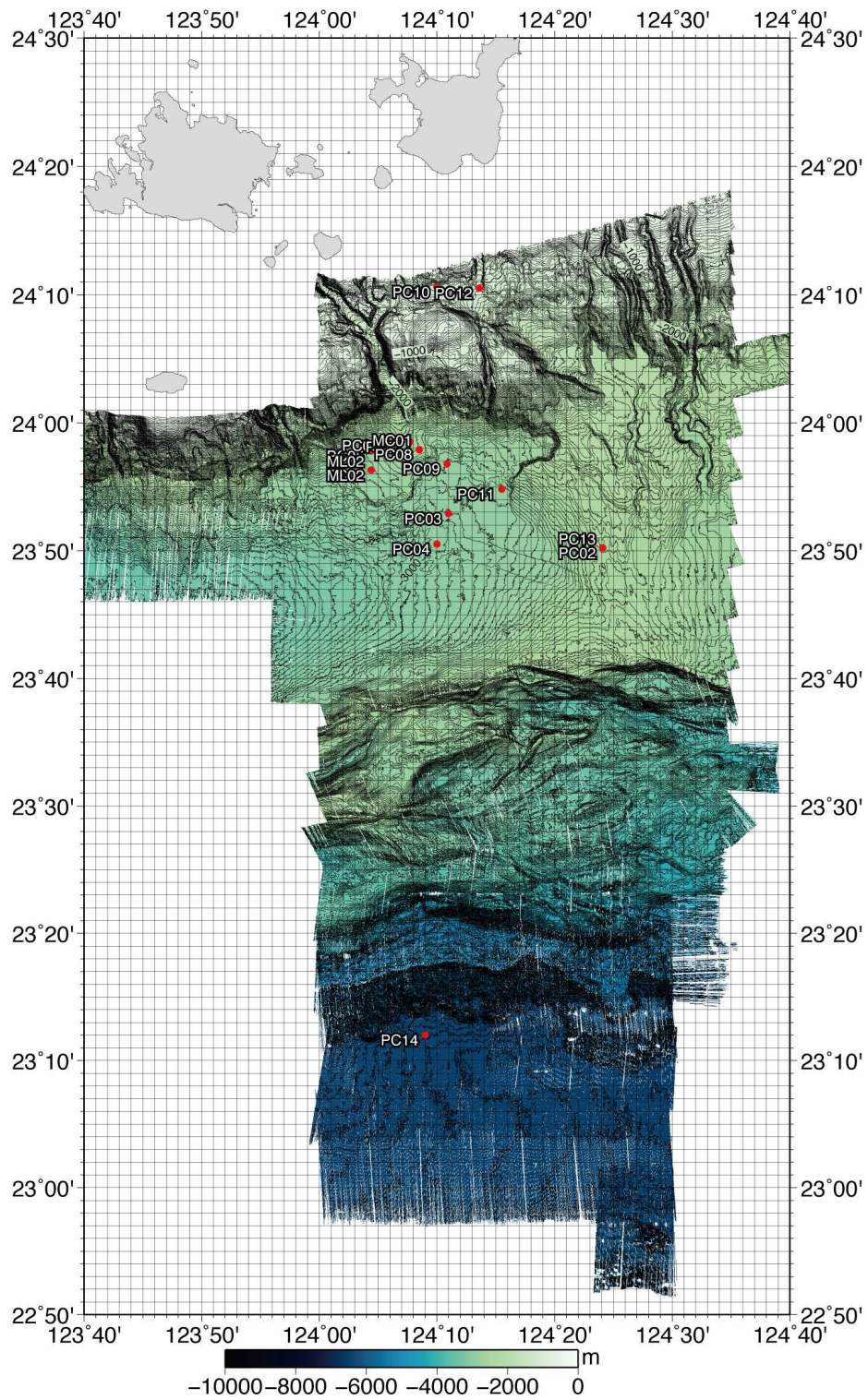


Fig. 3 Bathymetric map of the south area of Ishigaki Island.