

Deep structure off Boso region investigating with multichannel seismic reflection profiles

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Off-Boso region is an active seismic region locating southeastern offshore of Kanto district. The 1703 Genroku earthquake of which magnitude (M) is 8.2 occurred south of Boso Peninsula. The 1923 Kanto earthquake (M7.9) initiated in the western part of Kanagawa prefecture, migrating the rupture toward Boso peninsula along with Sagami Trough, followed by the largest aftershock off Boso in the next day of the main shock. Silent earthquakes have been observed in every 5-7 years, accompanying the repeating earthquakes in the vicinity. These seismic activities are influenced by the complex tectonics of subductions of Philippine Sea and Pacific Plates below Kanto district. Moreover, plate motion of Philippine Sea Plate has been changed at 3Ma: present plate motion of Philippine Sea Plate is northwestward direction, whereas the plate motion before 3 Ma had been northward. The plate motion change is also an important factor to understand the tectonics of the region. Revealing the deep structure is a powerful way to understand the various seismic activities and the complex tectonics. Japan Agency for Marine-Earth Science and Technology (JAMSTEC) has been conducted a seismic survey with multichannel reflection seismic system on R/V Kairei. Outlines of the seismic survey and acquired data have been introduced at the 7th General Assembly of Asian Seismological Commission (ASC), with reflection signature of top of Philippine Sea Plate combined with seismic activity. In this talk, we will present some interpretations based on the character of deep structure, seismic activity, and tectonics off Boso region..