

## Seismic reflection survey investigating subduction inputs at the Sagami Trough

MIURA, Seiichi<sup>1</sup> ; NO, Tetsuo<sup>1\*</sup> ; SATO, Takeshi<sup>1</sup> ; YAMASHITA, Mikiya<sup>1</sup> ; SAITO, Saneatsu<sup>1</sup> ; TAKAHASHI, Narumi<sup>1</sup> ; KODAIRA, Shuichi<sup>1</sup>

<sup>1</sup>Japan Agency for Marine-Earth Science and Technology

The Sagami Trough is a plate convergent zone of the Philippine Sea Plate underneath the NE Japan including the Kanto area. Varied seismic events occurred associated with the plate convergence. Magnitude (M) 8-class earthquakes, for example 1703 Genroku and 1923 Taisho-Kanto events, damaged the Kanto area seriously. On the other hand, slow-slip events have been observed in the Boso area with 5-7 year interval, whose released energies were comparable to Mw 6. Source depths of the M8-class earthquakes and slow-slip events are almost same. One possible reason of the varied seismogenesis is different subduction inputs at the Sagami Trough. To understand the varied seismogenesis, structural and material information are important. A drilling proposal for subduction input at the Sagami Trough is planned to be submitted. Japan Agency for Marine-Earth Science and Technology was conducted a seismic reflection survey in April, 2013 at the southward of the Sagami Trough on the Philippine Sea Plate. Although a planned seismic line had been 270-km length at the 50-km southward of the trough in WNW-ESE direction, acquired data is limited in half of the planned line for rough weather from volcanic front to landward slope of the trench axis, showing sediment distribution and basement morphology. Sediments can be divided in three units. Basement morphology is rugged as basement highs reaching seafloor at the volcanic front and rising at the Frontal Arc and Outer Arc High of the former arc in the Izu-Ogasawara area, and as depressions as 4-km from seafloor filled by thick sediments. The sediments and basement are comparable to those in the vicinity of the Sagami Trough using conducted seismic profiles at the cross points. In this presentation, we will show the seismic profiles around the Sagami Trough, deduce the ages and materials of sediments and basements comparing previous results, infer the subduction inputs of the Sagami Trough, and discuss the seismogenesis around the Sagami Trough.

Keywords: MCS survey, Sagami Trough, subduction input