

## **Basic geological knowledge of Sagami trough and surrounding area: Towards South Kanto Asperity Drilling Project**

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Sagami trough is an oblique subduction boundary extending from the Boso triple junction of trench-trench-trench type (Ogawa et al, Seno et al) in the NW Pacific. Large earthquakes periodically occur along the trough with some precursors and repeated crustal movement, giving us the probability of mitigation and remission from the possible hazard. We are preparing the Integrated Ocean Drilling Program (IODP) proposal, called KAP, and try to drill and do down hole measurement.

The meandering channel comes down along the trough, making different types of several basins including the final depositional area at the triple junction. The erosion by the channel still going on, and the Philippine Sea plate still underlying the North America plate on the NE side (according to the multi-channel seismic profiles in the triple junction area (Iwabuchi et al)), suggest that the present tectonics along the Sagami trough is very new. The several basins show diagnostic large structures of right-lateral Riedel shear system, being reproducible by simple model experiments. Each basin including the forearc area off Katsuura of the Boso Peninsula are the targets for drilling. The Sagami basin and the middle Sagami trough basin (particularly its NW thrust belts) are the exact places for the asperity of Taisho and Genroku Kanto Earthquakes, respectively.

The points are where the asperity, slow-slip, and steady-slip areas are, and what kind of reasons or causes of geological or topographical configuration and condition of plates are responsible for the detectable crustal movement and seismicity.