

Continuation of Submarine Active Fault in the Suruga Trough towards Inland Area

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We discuss on continuation of submarine faults in Suruga trough to inland active faults based on the detailed submarine topographic map as well as field observation in the area along Fujikawa River. Many workers have considered that the Fujikawa-kako Fault Zone is the inland boundary of the Philippine Sea Plate. The fault zone is believed to be composed of active reverse fault traces with very high slip-rate as fast as 7m/1000 years. However, in spite of repeated paleoseismological field studies, concrete evidence for past activities of proposed active fault traces has not been so far found. The fault zone consists of two fault lines, namely east and west lines, and the east one following the eastern margin of the Habuna and Hoshiyama hills was first recognized by Tsuya (1940) as an arcuate fault scarp facing Mt. Fuji. We found similar faulted feature of the Habuna and Hoshiyama hills to the southwestern part of the outer rim of Taal caldera lake, Central Luzon, Philippines.

Therefore, we consider that the active faults composing the east line of the fault zone may be gravitational fault related to volcanic activity of Mt. Fuji. The submarine active fault in Suruga trough extends northward to the mouth of Yui river where Iriyama fault, the southern part of the west line of the Fujikawa-kakou Fault Zone is located. Active fault trace along the Iriyama fault is hardly recognizable due to its low slip-rate. We also newly found consistent left-lateral stream offsets along Minobu, Neguma and Tashirotoge faults previously known as thrust in the southern Fossa Magna zone between Itoigawa-Sizuoka Tectonic Line and Fujikawa river. In conclusion, it is necessary to collect more dependable evidence for discussion about location of the plate boundary in the northern margin of the Philippine Sea Plate.

Keywords: active fault, submarine active fault, Suruga trough, Fujikawa-kakou Fault Zone, plate boundary