

Geomorphic investigations raise a query against the Shiojiri-pass Gap in active faults along the ISTL, central Japan

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The Itoigawa-Shizuoka Tectonic Line (ISTL) is one of the most long and major active faults in Japan. To the north of Suwa Lake, there was the Shiojiri-pass gap in active faults subdividing the ISTL into smaller segments, according to the previous studies. However, we found convincing evidences of recent faulting activity in the gap area. Several left-lateral faults and graven faults extend across the gap area in the direction of NW-SE. The amount of distinct left-lateral offset is less than 250 m. Excavation study revealed that the most recent faulting event occurred between 250AD and 645AD. These results require urgent and careful re-examination of recent activities of ISTL. In order to know the future co-seismic behavior and estimate the strong ground motion, the research should be carried out with scrupulous attention to detail in the distribution of active faults.