

Existence of An Active Fault Zone along the Izu-Toho Tectonic Line Inferred from the Marine Geomorphology

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Having scrutinized topography of the seabed in the region southeast-off Izu Peninsula, we found out that submarine reverse faults inclining to the west exist along the Izu-Toho Tectonic Line (ITTL). The ITTL was proposed by Okayama (1968) as the boundary dividing the Izu crustal block and the seabed of Sagami Bay that subducts beneath the Kanto region. This indicates that the ITTL is an active tectonic line. In the research we used the bathymetric data with 500m mesh and 10m or 100m contours published by Hydrographic and Oceanographic Department. We suggest that shortening of the distance between the southern tip of the Izu Peninsula and Shikine-jima and Nii-jima after the 2011 Tohoku-oki earthquake may be related to the existence of the faults.

Keywords: Izu Peninsula, Izu-Bonin Arc, Active Fault Zone along the Izu-Toho Tectonic Line, Marine Geomorphology, Izu Terrain, GNSS