

Distribution and activity of active faults in the northern segment of the Fujikawa-kako fault zone, central Japan

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Fujikawa - kako fault zone is an active fault zone that extends from south to north at the mouth of Fuji river at Fuji, Shizuoka, which is considered the landward boundary of the plate. Therefore, which is included in the source region of expected earthquakes along the Nankai Trough in the called Tokai, Tonankai and Nankai . Most previous studies are the fault has been approved by the indirect information such as borehole surveys, studies have confirmed the fault surface is less direct. Moreover, most of which are conducted mainly in central and southern segments, the Nebara segment was not confirmed the presence of active faults.

This paper is to determine the distribution of active faults in the study area due to terrain analysis, and field observations conducted based on it. Analysis of terrain by aerial photographs, and 1:25,000 topographic maps and the DEM has resolution 10m.

This study revealed active faults have not been confirmed so far in central and southern segments. The surface of older lava, Fuji volcano in the Nebara segment (11,000-8,000 y. a) has a few tens of meter high cliff successive are sloping toward the east or southeast, at surface younger lava, Fuji volcano (2,200 - y. a) has the number of meter of low cliffs slope down toward the southeast. These cliffs slope and the lava flow direction are inclined in the opposite direction. From the above, these cliffs are considered to be formed by active faults and it is considered that the accumulation of displacement. Moreover, fault outcrop found in the southern segments and Nebara segment. Continuous cliff have been the location of the northern limit from previous study area, which can be found intermittently about 10km further north, the entire length of the Fujikawa - kako fault zone is likely to be about more than 36km. And the height of the cliffs can be seen in the older lava in the Nebara segment is up to approximately 70m, the average vertical velocity of the Fujikawa - kako fault zone about 7mm/yr reached maximum, and this fault zone displaced the younger lava, most recent activity is considered to be 2,200 years ago that is later.

Keywords: Fujikawa-kako fault zone, active fault, terrain analysis