

Wide-band magnetotelluric survey across the northern part of Itoigawa-Shizuoka tectonic line

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Wide-band magnetotelluric survey was carried out across the northern part of Itoigawa-Shizuoka tectonic line (ISTL), which is one of the most active faults in Japan. To overcome cultural noise, simultaneous data at Kagoshima was used for remote referencing. The preliminary two-dimensional modeling revealed the following features. (1) Thickness of the active folding region to the east of ISTL was estimated as 6km. Underneath the ISTL, the lower crust is anomalously conductive, probably representing fluids. The upper mantle of the Japan Alps also shows low resistivity. The earthquake foci cluster in a resistive part of the crust. (2) An anomalous conductor is located at 2km depth beneath Tateyama volcano, which may imply magma chamber.