

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

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In order to investigate the deep slip processes at seismogenic inland faults, we carried out wide band magnetotelluric soundings across the northern part of Itoigawa-Shizuoka tectonic line. We had 8 sites from Omachi to Ueda on a 40km-long profile. This profile goes across the surface exposure of an active fault (Matsumotobonchi-toen fault) and over the active fold region further to the southeast, where the deep extension of the fault is expected. This area has electromagnetic noise from 50 and 60Hz power lines and several DC trains. By use of the far remote reference at Tarumi/Kagoshima, the noise was reduced to some extent. Preliminary 1d inversion showed the dipping conductor to the southeast at 5-10km depth, which may correspond to the deep extension of the active fault.