

Dense AMT observations across the Japan Median Tectonic Line Izumi fault zone

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The Japan Median Tectonic Line Fault Zone (MTL) is a fault system that extends for about 360km and locates along the geological boundary between the Ryoke and the Sanbagawa belts. Izumi segment fault zone of the MTL consists of Gojodani and Shobudani faults, etc. Wideband Magnetotelluric (MT) soundings were carried out across these faults (Yoshimura *et al.*, 2014). The obtained resistivity model was characterized by a contrast around the MTL. However, the shallow resistivity structure was not so clear.

In order to delineate fine subsurface structure around the fault, we carried out audio-frequency magnetotellurics (AMT) measurements at 38 sites along a 5km profile perpendicular to the Gojodani and Shobudani faults in November, 2014. MT responses of a frequency band of 10,400-0.35 Hz were obtained using remote reference processing (Gamble *et al.*, 1979). As a result, relatively good quality MT responses were obtained at most sites.

In this presentation, we will show the final MT response functions at each site and report a preliminary results of two-dimensional inversions.

Keywords: the Japan Median Tectonic Line Fault Zone, magnetotelluric, damage zone, shallow resistivity structure