Electromagnetic images of the fault zones at Itoigawa-Shizuoka Tectonic Line -Gofukuji Fault and Kamanashi-gawa Fault Zone

Yasuo Ogawa[1]; Yoshimori Honkura[2]

[1] TITECH, VFRC; [2] Earth and Planetary Sci., Tokyo Institute of Technology

Fault geometry and segmentation are important parameters for estimation of seismic hazard. Change of fault geometry at the Itoigawa-Shizuoka Tectonic line is believed to take place at the Suwa Lake. However, deep geophysical studies to confirm this idea were lacking. In this regard, we carried out wide-band magnetotelluric measurements at two project sites, one is the Gofukuji Fault and the other is Kamanashi-gawa Fault zones.

Gofukuji Fault is known to have short reoccurrence time and large displacement per event. Our two-dimensional model showed (1)no conductor at the fault trace, corresponding to the possible fault zone conductor at Gofukuji Fault(2)but the east dipping conductor, corresponding to the major fault geometry of northern segment of the Itoigawa-Shizuoka tectonic line, (3) and the recent seismic activities (October, 2002) are located at the boundary where the east-dipping conductor gets obscure.

As for the Kamanashigawa Fault Zone, a preliminary resistivity model is characterized by the east dipping basement structure in general. However, the basement has locally shallows at the deep extension of the two faults. This feature implies the crustal movement due to the west-dipping faults.