

The resistivity structure around Eastern Tottori prefecture and Northern Hyogo prefecture

takafumi kasaya[1], Naoto Oshiman[2], Ichiro Shiozaki[3], seturo Nakao[4], Sei Yabe[5], Tomofumi Uto[6], Kenichi Yoshida[7]

[1] RCEP DPRI Kyoto Univ., [2] DPRI, Kyoto Univ., [3] Dept. of Civil Eng., Tottori Univ, [4] Tottori Obsv., RCEP, DPRI, Kyoto Univ., [5] TOTTORI OBSERVATORY,RCEP,DPRI, [6] Graduate School of Engineering,Tottori Univ, [7] Civil Engineering,Tottori Univ

We carried out magnetotelluric measurements in Eastern Tottori prefecture and Northern Hyogo prefecture. Most earthquake distribute along the coast line. Miyakoshi and Suzuki (1978) pointed out the low resistivity structure under the seismicity region in this region. Our purpose is to investigate the relation between the resistivity structure and the earthquake activities.

Using the scheme with smoothness constraint on ABIC developed by Ogawa and Uchida (1996), we obtained 2D resistivity structures. The resistivity structure around the Eastern Tottori prefecture shows high resistivity in the depths range from 2 to 15 km. On the other hand, the resistivity in deeper portions shows low resistivity. The upper limit of the low resistivity portion become shallow in the seismicity region. This structure consistent with the result indicated by Miyakoshi and Suzuki (1978). The resistivity structure in the Northern Hyogo prefecture is similar the structure feature around Eastern Tottori prefecture. However, The depth of the low resistivity portion around the area from the center to south side is very shallow. Earthquakes in this region distribute around the resistivity boundary and high resistivity portion.