

## Electro-magnetic survey off San-in region

# Takafumi Kasaya[1]; Naoto Oshiman[2]; Hiroaki TOH[3]; Masashi Shimoizumi[4]; Ichiro Shiozaki[5]; Ryohei Yoshimura[2]

[1] JAMSTEC; [2] DPRI, Kyoto Univ.; [3] Dept Earth Sciences, Univ. Toyama; [4] Kyushu Polytechnic College; [5] Dept. of Civil Eng., Tottori Univ

San-in area in southwestern Japan is a high seismic activity region. Hypocenter distribution extends in a east-west direction, and large earthquakes have occurred in this seismic activity (ex. the 2000 Western tottori earthquake and the 2001 northern Hyogo earthquake).

Recently, the relationship between the pore fluid and the occurrence of the earthquake has been discussed. The resistivity structure is very sensitive to the existence of the pore fluid. It is reported that the seismogenic zone agree with the resistivity boundary and high resistivity area where nearby the very lower resistivity zone (Mitsuhata et al., 2001; Kasaya et al., 2002).

Our group carried out MT observation in many survey lines. In northern hyogo area, existence of the low resistivity zone was detected at the depth of 10km, and very low resistivity body reached at the depth 5 km around the high seismicity area. Because survey area is close to the Japan Sea, and enough long period data can not be obtained, the relationship between Philippine Sea plate and deeper structure is not clear below this study region. Therefore, we carried out marine and land MT surveys. It is important to analyze both marine and land data to obtain high accuracy resistivity structure (Kasaya et al., 2005; Toh et al., 2006).

Four OBEMs and one OBE were set up along 150km survey off Tottori prefecture, using Wakatori-maru which is the Tottori prefecture high school ship. Three small-sized OBEMs of JAMSTEC(Kasaya et al., 2006) were recovered by the KT06-25 cruise. In this presentation, we will discuss the obtained MT data.