

## Resistivity structure in southern part of Zao volcano, Japan

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In the tectonic zone, dehydrated fluid from a subducted oceanic plate is estimated to be localized in the crust and the upper mantle. It is considered that identifying the localized fluid is the critical key to clarify the mechanism of tectonic zone. Therefore, measuring of electrical resistivity structure which is highly sensitive to fluid, is thought to be contributing to clarify the mechanism of the tectonic zone. We started wideband magnetotelluric (MT) surveys in the northeastern margin of Japan sea tectonic zone since 2008. In 2010, we performed 27 MT surveys on YNZ line (Murakami, Niigata <-> Soma, Fukushima) from east to west in the southern part of Tohoku region. The surveys have been continued about 20 days at each site by using 12 measurement devices (11 of ADU07 [Metronix Geophysics] and a MTU [Phoenix Geophysics]). We obtained impedance responses by using the robust code of BIRRP (Chave and Thomson, 2004), and estimated 2D resistivity structure by using a 2D inversion code (Ogawa and Uchida, 1996). 2D models from a TM mode show a conductive part between two resistive parts in the middle of the survey line. The conductive part is located at the volcanic front, beneath Mt. Zao which can be imaged that the conductive part is volcanic fluid such as partial melts or hydrothermal zone.