

広帯域MT観測から推定される南東北地方の比抵抗構造(2)

Resistivity structure in southern Tohoku region inferred from Wide-band MT surveys (2)

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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 (Chase and Thomson, 2004), and estimated 2D resistivity structure by using a 2D inversion code (Ogawa and Uchida, 1996). 2D models from TE and TM modes show a conductive part (C1) between two resistive parts (R1, R2) in the middle of the survey line. The C1 is located at the volcanic front, which can image that the C1 is partial melts or hydrothermal area.

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