Preliminary report of the investigation of ocean effects on the resistivity structure beneath the land area

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In order to investigate the existence of fluid around hypocenters of intraplate earthquake, wideband MT survey was carried out around the aftershock area of the 2003 Northern Miyagi earthquake, NE Japan(Satoh et al.,2005). Estimated MT impedance data were analized by 2D inversion by Uchida and Ogawa(1993). The main model features are: (1) a conductive layer distributes widely in shallow from western to central part of the surveyed area, (2) a conductive block is situated at central part of survey area at depth of about 10km. The former is interpreted as Neogene tertiary of sediments. The latter may imply fluid. As distribution of hypocenters were located above conductive block. If this conductor is fluid, our result suggests that earthquakes are driven by the fluid existing below the fault. To examine whether the conductor situated at the depth of about 10km was meaningful in our model, we carried out 3D forward model calculation including bathymetry of the ocean. We will report the preliminary results of 3D forward model calculation in this presentation.