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3 次元電気伝導度構造から推定される東北地方上部マントル沈み込み帯の流体移送プロセス
Geofluid migration process inferred from a 3-D electrical conductivity model beneath Tohoku district.

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We carried out long-period MT observation using the state-of-the-art equipments. The MT impeadance responses were inverted into 3-D electrical conductivity model using WSINV3D (Siripunvaraporn et al, 2005). The 3-D model delineates vertical continuous conductive zone from subducting Pacifc plate surface to lower crust below Ou backbone range. The conductive body indicates saline fluids and/or melt pathway from the subducting slab surface to lower crust. The resistivity of the lower crust conductor is 1 Ωm or more conductive and saline fluids and/or melt volume fraction is estimated to be 7 vol. % at minimum. Other resistivity profile in the across-arc direction indicates that conductive body separated from Pacific plate surface at 80-100 km depth and assumes an overturned form towards backarc direction. The head of the conducting body attains to the lower crust just below Mt. Gassan. This suggests the backarc volcanisms are caused by saline fluids and/or melt overturn rising towards backarc direction.