

## Resistivity imaging of deep extension of Nagamachi-Rifu Fault

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We imaged the crustal resistivity structure around Nagamachi-Rifu Fault in Sendai, where we had M5.0 Earthquake in 1998. Focusing on the deep extension of the fault, we had 40 wide-band magnetotelluric soundings along three profiles perpendicular to the fault trace. The data showed strong two-dimensionality in the period range between 1s to 1000s. Tensor-decomposed apparent resistivity and phase in two modes and projected transfer functions in the period range 1-1000s were used for two-dimensional inversions. The final models imaged the main shock regions as resistive blocks in between the mid-crustal conductors. One of the conductors is located at the deep extension of the fault, which is also characterized by the seismic low velocity and high  $V_p/V_s$  ratio. This implies the distribution of fluids at the root of the active fault, which may help accommodate the quasi-stationary preslip before the main shock.