

Comparison between the resistivity profile and fault rock microstructure in fault zones -Case study at Atotsugawa fault-

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Structure and friction characteristic in a fault zone are not homogeneous, and the inhomogeneity is observed as asperity. However, main features of the inhomogeneity in fault zone are not yet sufficiently understood. I consider it is effective to compare geophysical data, such as seismological and/or electromagnetic survey data, and fault rock microstructures and mineral compositions in the fault zone. In this presentation, I report the results of comparison between the resistivity profile by electromagnetic survey across the fault zones (Omura et. al., Seismological Society 2005) and microscopic observation and mineral composition analysis of fault rocks provided by boring into the fault zones (Hirokawa et. al., Joint Meeting 2007), as for Atotsugawa fault, central Japan, where the inhomogeneity is clearly recognized; seismically active region and non-active region are distinctly distributed along the fault trace.

Keywords: resistivity, electromagnetic survey, fault rock, microstructure, mineral composition, earthquake generation