

Network-MT survey in Chubu district, central Japan (second report)

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In Chubu district, there runs the Niigata-Kobe tectonic zone in its backarc side, seismic and volcanic active zone beneath the Northern Japan Alps, and low-frequency seismic zone of non-volcanic origin in its forearc side. All these crustal activities are considered to be directly or indirectly related to the existence or movement of the crustal fluids such as water or melt. Electrical conductivity is an underground physical property which is sensitive to the existence of such crustal fluids and their connectivity. Thus, aiming at elucidating mechanism of the various kinds of crustal activities occurring beneath Chubu district, we have started the Network-MT survey to determine regional and deep electrical conductivity structure down to the upper mantle. In this study, we introduce its first and second surveys on a 260 km NNW-SSE survey line from Noto Peninsula, Ishikawa Pref. to Tooyama, Nagano Pref. together with a 45 km sub-survey line along the Atotsugawa Fault from Higashimozumi to Hatogaya, Gifu Pref. We will show characteristics of the Network-MT responses from 8s to several 10^4 s and preliminary 1-D and 3-D inversion results by using those responses.