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AMT observations over the remotely triggered seismicity in Hakone volcano

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Seismicity around the Hakone volcano was activated just after the arrival of surface waves caused by the 2011 off the Pacific coast of Tohoku Earthquake. Most of these triggered earthquakes had similar distribution to prior occasional swarm activities. In order to image electrical properties around such seismic events, we carried out audio-frequency magnetotelluric (AMT) measurements at 39 sites in December 2011. These AMT sites were arranged in an area of approximately 15km by 20km covering the caldera of Hakone volcano. On each site, electromagnetic data were recorded for up to 20 hours. As the result of remote-reference processing using local and far sites for shorter and longer periods, respectively, we obtained fair sounding curves at most sites for frequencies higher than 1Hz. In this presentation, we will show the outlines of our research project, an overview about the AMT data, and report preliminary results of three-dimensional inversions compared with seismicity.

Keywords: resistivity, magnetotellurics, Hakone volcano, triggered earthquake