

Wide-band Magnetotellurics Survey on Kuju volcanic Group, Kyushu island

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Kuju volcano is one of the active volcano, in Kusu island, located at the prefectural border of Oita and Kumamoto. On this volcano active fumarolic activity can be seen around Mt. Hossho which is one of the volcanic cones that construct Kuju volcano.

On Mt. Hossho, phreatic eruption was occurred in 1995, and new crater chains were created by this activity (Imura&Kamata,1996).About Kuju volcano, many studies using seismological tomographic method were conducted, and Yoshikawa et al.,(2004) pointed out that a magma reservoir exists beneath the southern part of Kuju volcano.

On this study, we conducted wideband MT (Magneto-Telluric) method for inferring the state of magma supply system in this mountain ranges in September and October 2014.

Five component EM fields were measured at 11site by three MTU-5A (Phoenix Geophysics Inc.) and at 23 site by seven ADU (Metoronics Inc.),and only 2component E fields at 33 site which are in the mountains, by ten ELOG. Observed time series data are converted to wideband section by Fourier transform and calculate impedance. In our presentation, we will show the details about our observations and also show the preliminary results of data analysis.