

Temporal changes in electrical resistivity of Kirishima volcano from continuous magnetotelluric observations

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Continuous magnetotelluric (MT) measurement was conducted since March, 2011 at Iwo-Yama, which is located 5km NWN of Shinmoe volcano. Five components of EM fields were measured in the sampling frequency of 32Hz (00:00~23:50 UT) and 1024Hz (17:00~19:00UT). By applying the comb filter to reduce the harmonics of 60Hz and the robust MT response function estimation code, slight resistivity change were obtained. The diagonal component of impedance tensor (Z_{xy} , Z_{yx}) showed temporal variations in apparent resistivity of approximately 5% and phase of 1 %, which is smaller by a factor of five than those observed at Sakurajima volcano (Aizawa et al., 2011, JVGR). In this presentation, we will show the temporal change of the resistivity structure by 1D inversion, and will discuss the mechanism of the electric resistivity change.