Preliminary Report on an Investigation of Deep Resistivity Structure Beneath Daisen Volcano

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Mt. Daisen is a quaternary volcano in the east part of Chugoku region, the southwestern Honshu of Japan. It is known that there is few earthquake in the vicinity and the peripheral area of Mt. Daisen. A wideband MT(Magneto-telluric) survey was conducted in the N-S direction across Mt.Daisen at seven sites in the fall of 2001, in order to determine the deep crustal resistivity structure beneath the volcano.

One dimensional inversion was carried out using invariant impedance. Based on the final one dimensional model, two dimensional forward modeling was performed for the TM mode data. A tentative two dimensional model has a key feature that the crustal conductor exist at the depth of a few km from the earth surface in the vicinity of the Daisen volcano. It is interesting that a low resistivity upper crust area corresponds with the low seismicity region, comparing this result of the MT survey with the precise seismological observations.