Magnetotelluric observations at Kusatsu-Shirane Volcano, Gunma, Japan

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We collected wideband magnetotelluric (MT) measurements in Kusatsu-Shirane Volcano, Gunma, Japan, which last erupted in 1982. Considering the deployment difficulties of the instruments, especially for the higher areas, 3 magnetotelluric and 41 telluric-only, in total 44 stations were installed forming a grid (1.5 km x 1.5 km) as even as possible. We set up 5 short profiles that are perpendicular to the regional strike around the crater, covering the gas vents and the seismicly active regions. Tensor-decomposed data were inverted. The resistivity structure is simple in the study area that there are three low resistivity blocks found at the depths of 500m, 1000m and 2000m. The shallowest one coincides with the main gas vent. The resistivity is relatively high on the deeper parts of the profiles. The seismicity (N-type earthquakes) of the area shows that the micro-earthquakes occur on the edge of the resistive basement.