Geoelectromagnetic investigations of Yake-dake volcano - wideband magnetotelluric measurements and magnetic survey -

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In order to delineate subsurface structures as basic information for monitoring Yake-dake volcano, we carried out wideband magnetotelluric (MT) measurements. For clarifying electrical properties, we totally obtained electromagnetic data at 11 sites along a north-south profile and estimated MT responses by using the remote reference technique. Obtained preliminary result of a two-dimensional inversion reveals a cap-like conductor just beneath the latest phreatic eruption. Additionally, we performed ground magnetic survey along a north-south profile crossing the summit of Yake-dake volcano. To simulate obtained magnetic anomaly, a zone of low magnetization is required at the same location as the cap-like conductor.

Keywords: Yake-dake volcano, magnetotellurics, ground magnetic survey

