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A preliminary report on the magnetotelluric surveys in and around the Aira Caldera

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We will present a preliminary report of the magnetotelluric surveys conducted in and around the Aira caldera, southern Kyushu, Japan. A magma reservoir of Sakurajima volcano is considered to be present at about 10 km depth beneath the Aira caldera, which is inferred from the geodetic and the seismological observations. The objective of this study is to reveal the electrical conductivity structure down to depths of about 20 km and to find the anomalous structure related to the magma reservoir or the magma supply path to Sakurajima volcano. The surveys are planned for three years from 2009 to 2011 within a framework of Grants-in-Aid for Scientific Research (KAKENHI). Electromagnetic data at a total of 15 sites including 5 ocean bottom sites were collected in the fiscal year 2009.

Keywords: magma reservoir, Sakurajima volcano, electrical conductivity, caldera