

## Ground Penetrating Radar Survey at Mt. Aso and Frequency Characteristics of Complex Relative Permittivity of Volcanic Ash

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Five people are missing after a volcanic disaster at Mt. Ontake in September 2014. We have developed for a search method of the missing people of the East Japan great earthquake with the ground penetrating radar (GPR). It is also possible to apply the GPR to search missing people for volcanic disasters. However, there are not many papers about the GPR survey at a new volcano the eruption, and frequency characteristics of the complex relative permittivity of volcanic ash at the range of 100 MHz to 1 GHz in use of the GPR. In this study, a 350/500 MHz GPR survey at Mt. Aso that explosively erupted in October 2016 and frequency characteristics of the complex relative permittivity of volcanic ash at Mt. Aso have been shown. And it is shown that we have detected the pile of volcanic ash at a depth of about 40 cm with the GPR.

Keywords: ground penetrating radar, volcano ash, Complex Relative Permittivity, Mt. Aso