

SVC049-P01

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Volatiles and resistivity structure around the aquifer of Mt. Fuji

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Recently, volatiles in magma are considered to be important for understanding volcanic eruptions, because they may control the occurrence and the style of eruptions. Even in the volcano without active crater or vent, volatile may escapes laterally to the interior of the volcanic body, and therefore, it is useful to investigate the volatile migration path in the volcanic body prior to the eruption. We think that electric resistivity structure may delineate the zone of laterally degassed volatile beneath a volcano. The laterally degassed volatiles are absorbed by groundwater at the shallow level beneath the volcano by dissolution. As a result, the amount of dissolved ions changes, and subsequently changes the groundwater conductive. In summary, the conductive zone in aquifer may indicate the large contribution of volatile. We will investigate the possibility of above scenario with the results of resistivity surveys and $^3\text{He}/^4\text{He}$ ration, D/H and $^{16}\text{O}/^{18}\text{O}$ ratios, chemical composition of groundwater at Mt. Fuji volcano. In particular, the relationship between the resistivity structure and the volatile in the deep groundwater (more than 1000m depth) is discussed.

