

## Isotope characteristics of groundwater in and around Mt. Sambe, an active volcano in western Japan

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A study using a coupled hydrological and geochemical (water chemistry,  $\delta D$ - $\delta^{18}O$ ,  $\delta^{13}C$ , and helium isotope) approach is in progress to elucidate the groundwater system in and around Mt. Sambe, a 1126-m high active volcano located in western Japan. Groundwater in its south to east flanks proved to be characterized by high  $\delta^{13}C$  values (in the range between -9 - -5 ‰  $\delta^{13}C$ ) as well as an elevated concentration of total carbon compared to those in other flanks. These observations clearly indicate an admixture of magmatic fluid into shallow groundwater of the south to east flanks, being also in accordance with its water chemistry with an increased chloride ion concentration.

Keywords: active volcano, groundwater, water chemistry, isotopes, volcanic fluid