

Gravity changes from the beginning of collapse to just before the largest eruption at Miyakejima volcano, 2000

Masato Furuya[1], Shuhei Okubo[2], Yoshiyuki Tanaka[3], Wenke Sun[4], Hidefumi Watanabe[5]

[1] ERI, [2] Earthquake Res. Inst. , Univ. Tokyo, [3] ERI, Univ. Tokyo, [4] ERI, Univ Tokyo, [5] Earthq. Res. Inst., Univ. Tokyo

We carried out 3 sessions of hybrid gravity measurements from July 11 to August 12, 2000, and report the derived spatio-temporal gravity changes. We describe our models which may account for them. For the inversion, we also employed ground displacement data derived by GPS.

It is shown that a hydrothermal system started to form and change during the time period, and that the material density were getting lighter. Moreover, although its depth is estimated to be 4500 m depth at the beginning of July, we suggest that the deflation source has migrated to the shallower depth of 2000 m or less.