

SVC063-P08

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Ground deformation of Kuchinoerabujima volcano detected by GPS. - Slipping down of Shindake -

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By continuous GPS observation, three inflation events were detected around the summit of Shindake, Kuchinoerabujima volcano during the period from 2004 to 2009. The GPS is installed 250m NW of the center of Shindake crater. The ground deformation showed only inflation and displacement has accumulated.

Addition of new stations in 2006 allows us to grasp spatial distribution of the ground deformation. Center of source for the ground deformation was located in the crater and the deformation was detected up to 1km from the crater. Moreover, minute deformation caused by other source than inflation were continuously included at the observation sites installed in 2006. This minute deformation was caused by slip on the west side and the falling a normal fault presumed beneath the ridge line between Shindake and Furudake. It is possible that the fault began to move corresponding to inflation in 2006 considering repetition GPS measurement result (DPRI, 2009) around the summit crater. The fault plane may be related to the subsurface structure of the mountain body inferred from geographical features.

Keywords: Volcano, Ground deformation, GPS, Inflation, Kuchinoerabujima, Fault