

The ground deformation around Iwo-yama, Kuju volcano since 1995

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The ground deformation observation is carried out using GPS and EDM since November, 1995 to monitor the volcanic activity of Iwo-yama, Kuju volcano, Kyushu which erupted in October, 1995. On 12 bench marks around Iwo-yama and other 3 bench marks in the surrounding area, the GPS measurement has repeatedly carried out 9 times until now. The GPS and EDM data shows the consistent subsidence which center is around fumarolic area of Iwo-yama. The largest subsidence of the GPS bench mark near the contraction center reached about 50cm. The cause of the deformation is estimated to be the dry up of the part of the geothermal reservoir which center is around 500 meters in depth. Volume lapse rate supposing the mechanism of elastic fluctuation model calculation should be estimated as 160 cubic meters/day, and it is 1 to 2% of discharged gas from Iwo-yama area, including the craters of the 1995 eruption.