

North-south shortening ground deformation of the Fuji volcano

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Ground deformation monitoring system on the Fuji volcano (3,776m) was established to get the basic information of how to estimate the time and location of the next eruption. GPS and EDM measurement system of both automatic and manual method were set on the volcano, which altitude were from 1,000m to 3,400m above the sea level. The automatic GPS instrument had been set on the nine locations both on the northwest side and on the southeast side of the volcano. All the GPS stations were connected with the wired and/or wireless telephone system to transfer the data immediately to the GSJ office in Tsukuba, about 150km east of the volcano. The maximum height difference in the GPS network is around 1800 meters, and the large annual change was detected in the network. No large abrupt deformation was detected in this system until January 2004. As to the horizontal deformation, no movement was detected along the east-west direction, but small amount of north-south shortening movement, which order is around 1mm per 1km a year was detected. The slow movement, which was detected by the long term deformation measurement, should be caused not by the magmatic activity but by the tectonic movement.