

Establishment of GPS real-time monitoring System for volcanic activities in Izu Islands

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Real time monitoring system of volcanic activity is very important for inhabitants around volcanoes, especially inhabitants in Volcano Islands. For example, a dike intruded promptly for two hours in the 2000 Miyakejima Volcano eruption and ground deformation by magma intrusion was detected by GPS measurements. When they determine the designated escape route, the information of ground deformation and earthquake epicenter should be very important.

We are establishing the GPS real-time monitoring system of ground deformation in Izu islands to monitor the volcanic activities. Observation data was transferred to processing site from the GPS observation sites, and the data are processed by Linux PC at the processing site in real time. After the processing time series of station velocities and horizontal displacements are shown as figures and these results are opened by website. Preliminary we constructed the GPS stations at Hachijyo, Kozu and Niijima Islands in December 2008.

Through the test installation, we should make clear some subjects; 1) error assessments on long baseline of 100km and by atmosphere delay, 2) website construction to understand the ground deformation by inhabitants.