

# The 1998 dike intrusion at Eastern Izu Peninsula from Kinematic GPS analysis.

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Earthquake swarms have been repeated in Izu Peninsula since 1980. The swarms sometimes accompany crustal deformation which can be well modeled by dike intrusion. Hayashi and Morita (2003) determined the precise temporal hypocenters of the seismic swarm in April to May, 1998.

In this study, we determine the station velocities of GEONET GPS sites every 30 seconds using with kinematic GPS processing programs, Real Time Dynamics (Bock et al., 2000) and Bernese (ver.4.2) to discuss the dike intrusion model with more precise and detail.

As the result of kinematic processing, we detect ground deformation of a few cm, when hypocenters migrate to upward from neutrally buoyant layer. As the GPS data are every 30 second sampling, we can not determined the station velocities with more precisely and detail. However, we make a time dependent of magma intrusion model preliminarily. It suggests that increasing volume of intruded dike is almost constantly in the period of April 20- 27, and dike heads are changing in the period.