

Crustal deformation and a fault model associated with the Fukuoka-ken Seiho-oki earthquake(M7.0)

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The coseismic displacement associated with the 2005 Fukuoka-ken Seiho-oki earthquake was observed by the GEONET GPS stations in the northern part of Kyushu. The largest displacement of about 17 cm to south-southwest was recorded at Fukuoka station on Shikano-shima island near the epicenter. We estimated fault parameters of a rectangular fault from the observed displacement. Our result shows a fault is oriented north-northwest at Shikano-shima with a length of 24 km, a width of 16km, and a slip amount of 0.7 m. Significant postseismic displacement with an exponential decay of a few days are observed at the GEONET station. It can be explained by an afterslip on the coseismic fault.

In the meeting, we will present the coseismic fault from three continuous GPS stations in Kasuga, just south of Fukuoka, a campaign GPS station as well as the GEONET data. We also present the postseismic deformation and the result of the kinematic analysis of 1-sec sampling GPS data.