

Post-seismic deformation for the 2005 west off Fukuoka earthquake (M7.0) observed by GPS

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On March 20, 2005, a large earthquake (Mj7.0) occurred at west off Fukuoka prefecture. Kyushu University, Kagoshima University, and Hokkaido University had started to install GPS observation sites as soon as possible to find out the post seismic deformation accompanied with the earthquake in details. As of April 10, 2005, we have set up six temporal observation sites, Hakozaki Campus of Kyushu University, Oronoshima Island, Kitazaki, Genkaijima Island, Nokonoshima Island, and Shikanoshima Island. Hakozaki and Oronoshima stations were set up within half a day after the earthquake had occurred. We fixed GPS antennas using a stainless bolt, buried to a roof of the elementary school or a public facility. The data is sampled every 30 seconds, and stored in each GPS receiver. We used AC 100V power in Hakozaki and Oronoshima station. However in other stations we use car batteries for power supply to the receivers. To estimate daily variation of the coordinates of both our six GPS stations and surrounding GEONET GPS stations, we used BERNESE GPS software (Version 5.0) together with the International GPS Service final orbits. We are still continuing analyzing the data using the GPS software. As a preliminary result, we detected counter-clock-wise rotation movements around hypocentral region as post seismic deformation accompanied with the earthquake. More detail results will be presented in this meeting.