

Estimation of Strong Ground Motion at Genkai-island during the Fukuoka-ken Seiho-oki Earthquake, March 20, 2005.

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A large earthquake (Mj 7.0) with a focal depth of about 10km occurred at west off of Fukuoka prefecture, western Japan on March 20, 2005. This earthquake caused widespread destruction. In particular at Genkai island, most of structures were seriously damaged by the earthquake.

We performed the temporary seismic observation from March 21 at 3 sites, including Genkai island. Wide band and wide dynamic range accelerometers were installed at each site. We obtained strong ground motion records at near source area from many aftershocks, including the largest aftershock (Mj 5.4) on March 22.

We investigate the characteristics of the strong ground motion from the largest aftershock at the temporary and permanent sites. Attenuation relation of peak ground accelerations can be explained by the empirical relation by Si and Midorikawa(1999). We also estimate the strong ground motion at Genkai island during the main shock using the aftershock data as an empirical Green's function. Preliminary analysis shows that the peak ground acceleration at Genkai island exceeds 1000 cm/s/s.