

## ERI Strong Motion Observation Network and Database

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Earthquake Research Institute, University of Tokyo (ERI) has performed strong motion observation since 1953, then currently operates the strong motion network with 64 stations. Most stations are located on the ground surface with K-NET95, and several stations with JEP-4B3 & SMAC-MDU or JEP-4B3 & AJE8200 are installed both at the borehole and the ground surface for better understanding of site response. Recently, we upgrade several stations in the rock tunnels and start continuous observation with JEP-8A3 & HKS9700 that can record distant earthquakes even occurred in the southern hemisphere. The data are transmitted to ERI every second via JDXnet by the mobile router for cell phones.

In addition to the Izu & Suruga bay, Ashigara valley, and southern Kanto regions, recently most offline stations are installed in the Nagano and Suwa basins as a framework of joint strong motion observation with Shinshu University. These stations are nearby the active fault traces such as the Itoigawa-Shizuoka tectonic line. The dominant periods of the Ashigara valley and the Suwa basin range between 1 to 3 s, that may affect largely on seismic intensity measures. The stations succeeded to record the 2009 Suruga-bay intraslab earthquake and the 2011 Tohoku megathrust earthquake. Strong azimuth variation along the coast line of the Suruga bay were captured during the 2009 Suguba bay earthquake, and significant local amplification in a period range of 2 to 3 s were seen in the Ashigara valley, rather than the Kanto basin during the 2011 Tohoku earthquake.

ERI established strong motion observation database in 2008. The data are open to the public via <http://smsd.eri.u-tokyo.ac.jp/smad/> with K-NET format. Data of temporary strong motion observation by portable sensors after the 2004 Chuetsu, 2005 Fukuoka, 2007 Chuetsu-oki, and 2008 Iwate-Miyagi earthquakes are also open on the website with publications.

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