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SHAKEABILITY DISTRIBUTION FOR LONG-PERIOD (1-15 SEC) GROUND MOTION IN JAPAN

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ABSTRACT: We presented an empirical predictive model for the long-period (1-15sec.) ground motion and examined the validity of the model by comparing with the observations. We computed the acceleration response spectrum of 5 and 1 percent damping using the strong ground motion records retrieved by the K-NET, KiK-net, and JMA. We defined the shakeability at a site by the spectral ratio of the response spectrum observed at a site to the ones at seismic baserock predicted using the empirical attenuation model. Shakeability maps for LPGM in Japan were provided and they were examined using typical observed records.

Key Words: Long-period Ground Motion, Strong Ground Motion Records, Acceleration Response spectrum, Empirical predictive Model, Shakeability