

Preliminary version of the advanced national seismic hazard maps for the Kyushu district

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The Headquarters for Earthquake Research Promotion (HERP) is making advanced national seismic hazard maps for Japan. HERP has tentatively made advanced probabilistic seismic hazard maps for the Kyushu district with the following new methods and new data.

(1) Site amplification factor

Matsuoka et al. (2005) from Fujimoto and Midorikawa (2003) for AVS30

Fujimoto and Midorikawa (2005) from Matsuoka and Midorikawa (1994) for velocity amplification

(2) Empirical relation between maximum velocity and measured seismic intensity

Fujimoto and Midorikawa (2005) from Midorikawa et al. (1999)

(3) Fault models of major active faults

Fault area estimated from magnitude derived from relation between fault length and magnitude by Matsuda (1975).

(4) Variations of amplitude with distance in empirical attenuation relations for peak ground velocity

Common logarithm standard deviation 0.23 near the source fault

(5) Mesh size

1km mesh to 250m mesh (Wakamatsu and Matsuoka, 2007)

(6) Revision of the long term evaluations of the active faults

(7) Vague location, magnitude and recurrence of earthquakes in the region outside the area of long-term evaluation

Earthquakes in the Philippine Sea Plate in the Suwodana region

(8) Off-shore active faults

The advanced national seismic hazard map for Japan will be made considering the methods and data described above in 2009. Some other methods and data may be included in the map if there are large progress.