Fluctuation of wave amplitude when assuming convolution of source, path and site factors (2)

Mitsuyuki Hoshiba[1]

[1] Matsushiro Seis. Obs.

Seismic ground motions are often represented by convolution of source, path and site factors. By analyzing the data obtained from northeast Kagoshima earthquake swarm activity in 1997, I conclude that we should expect about 10 times as fluctuation even when using the form. As the reason of the fluctuation, effect of rupture directivity is considered. The directivity effect is visible for frequency only around corner frequency, which is contrary to the expectation by Boor and Joyner(1978) and Joyner(1991), in which they expected that it is visible for frequency larger than corner frequency. However, the observation is not completely explained by the rupture directivity.