

Scaling of Radiated Energy for moderate earthquakes in Japan

hideki kobayashi[1], # James Mori[2]

[1] DPRI, Kyoto Univ, [2] RCEP, DPRI, Kyoto Univ.

<http://www2.rcep.dpri.kyoto-u.ac.jp/~mori/>

We analyzed 115 moderate (M4-6) earthquakes that occurred in the Japan region from March 1997 through October 2000. We used accelerations records of events from the K-Net system. Following Kanamori et al, (1993), the integrated value of the square of the ground velocity was used for the estimate of radiated energy. We also included station corrections.

The results of the radiated energy of our study show that for shallow earthquakes there is a slight increase in the ratio of radiated energy to moment, as a function of earthquake size. Our results also show a depth dependence, with deeper earthquakes proportionately radiating more energy.