Stress drop distribution of micro-earthquakes by extremely high sampling waveform data

Shigeki Horiuchi [1], Yoshihisa Iio [1]

[1] NIED

We are making a temporal seismic observation with sampling frequency of 10 KHz, which is higher by about 100 times than ordinary observations,

since 1995(Iio et al., 1995). Values of corner frequency and stress drop

for about 1,000 micro-earthquakes are determined by the use of high sampling waveform data observed at two borehole stations 3km apart. The following is the obtained result. (1) Values of stress drop are large for earthquakes at regions having very high seismic activity. (2) Average

stress drop for events at depths shallower than 3 or 4 km is smaller by nearly one order than that for deeper events. (3) There are large spatial changes in values of the stress drop for micro-earthquakes.