

## Static stress drop of microearthquakes in the Western Nagano Prefecture region

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We determined static stress drops of microearthquakes by using waveform data from the 800-m-deep borehole of the dense seismograph networks. Many previous studies assumed corrections of the radiation patterns as a constant value. In this study, we determined the fault plane solution by using polarity data of the dense seismograph networks in the Western Nagano and estimated the radiation pattern for each event. The corner frequency and the spectral level were estimated by the model of Boatwright(1978) with a varying fall-off value. The Q value is estimated as 600 by fitting the initial rise of velocity pulses.

We used the data of microearthquakes observed between June 1, 1999 and February 27, 2000 at the Western Nagano. The number of events was 2046 events. The sampling frequency of the data logger was 10kHz. The natural frequency of the seismograph was 2Hz and damping was 0.7.

Stork and Ito(2004) shows that values of stress drops range between 0.01 MPa and 100 MPa. However, in this study we estimated that those range from 0.1 MPa to 10 MPa.