

## Estimating and considering the finiteness of small and moderate earthquakes in Iwaki area

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In order to understand rupture process of earthquakes more deeply, the parameters that describe spatial and temporal finiteness of earthquakes are important.

Particular models are often assumed so that these parameters can be derived from seismograms.

However, such assumption can make great error when the model does not reflect real rupture process enough.

The second seismic moment gives us these parameters (characteristic rupture duration, fault averaged directivity, and characteristic rupture length) with a few approximations (McGuire 2004).

We applied this second seismic moment approach to waveform data of small to moderate earthquakes in Iwaki area.

We estimated rupture process of these events using waveform data recorded by a dense seismic network (Kato et al., 2013), and discussed spatial variations of these parameters.

Keywords: earthquake rupture, source finiteness, second moment