

## Rupture Process of Moderate-Size Earthquakes by the MeSO-net

Ko Nishizawa<sup>1</sup>, Takumi Murakoshi<sup>1\*</sup>, Yasuyuki Iwase<sup>1</sup>, Takao Eguchi<sup>1</sup>, Shin'ichi Sakai<sup>1</sup>, Shigeki Nakagawa<sup>2</sup>, Naoshi Hirata<sup>2</sup>, Ryou Honda<sup>3</sup>, Hisanori Kimura<sup>4</sup>

<sup>1</sup>National Defense Academy, <sup>2</sup>ERI, Univ. of Tokyo, <sup>3</sup>Hot Springs Research Institute of Kanagawa Prefecture, <sup>4</sup>NIED

The purpose of this study is to obtain the rupture process of moderate-size earthquakes in space and time by using waveforms in the Metropolitan Seismic Observation Network (MeSO-net). The MeSO-net is high-density seismograph network in and around the Tokyo metropolitan area, Japan. About 300 seismic stations are installed in the average intervals of several kilometers. The average station-to-station distance in MeSO-net is less than a quarter of existing seismic networks in Japan, where the average distances in K-net and KiK-net are about 20 km. In this study, we analyzed the fault motion of moderate-size earthquakes in and around Kanto region, Japan by applying the back-projection method to seismic waveforms in MeSO-net. We obtained detail images of the rupture process of moderate-size earthquakes.

Keywords: back-projection method, rupture process, MeSO-net, moderate-size earthquake