Japan Geoscience Union Meeting 2014
(28 April - 02 May 2014 at Pacifico YOKOHAMA, Kanagawa, Japan)

MAG39-07 Room:502 Time:May 1 11:00-11:15

A new direction of the MeSO-net

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We have developed the Metropolitan Seismic Observation network (MeSO-net) under the Special Project for Earthquake Disaster Mitigation in Tokyo Metropolitan Area (FY2007-FY2011) and maintain it by the Special Project for Reducing Vulnerability for Urban Mega Earthquake Disasters (FY2012-FY2016), which are supported by MEXT. The network consists of 296 seismic observation stations, from which data are continuously transmitted and recorded at a data management center in ERI. We developed an intelligent data transmission protocol for MeSO-net System, which is referred to as Autonomous Cooperative data Transfer (ACT)(Morita et al., 2010) . As culture noise in urban areas is very high, we use a 20-m-deep shallow borehole to install wide-band accelerometers but a signal-to-noise ratio is still low. A large number with short interval of station configuration helps us to obtain better resolution and high quality seismic data. We are now developing a new automatic data processing function in the MeSO-net: automatic event detection and P- and S-phase picking. We also develop a method to predict ground and building motions from the MeSO-met data.

Keywords: MeSO-net, accelerometer, continuous recording, Autonomous Cooperative data Transfer, automatic event detection, seismic tomography