

Arrival-time and hypocenter determination using S-net

*Tomomi Okada¹, Ryota Takagi¹, Takashi NAKAYAMA¹, Syuichi Suzuki¹, Ryosuke Azuma¹, Genti Toyokuni¹, Keisuke Yoshida¹, Naoki Uchida¹, Ryota Hino¹

1. Research Center for Prediction of Earthquakes and Volcanic Eruptions, Graduate School of Science, Tohoku University

Hypocenter distribution is basic information for understanding seismogenesis.

For east off Honshu from Hokkaido, Tohoku, Kanto, S-net has been deployed by NIED. S-net is expected to improve accuracy of hypocenter location. In this study, we show a preliminary result of hypocenter determination using S-net and onshore stations.

We used hypomh (Hirata and Matsu'ura (1984)) with seismic velocity structure of Hasegawa et al. (1978). In our case, we used waveform converted to vertical, north-south, east-west components by Takagi et al. (this meeting).

For the earthquake near coast line, we can determine reliable hypocenter location, which is correspond to the location determined by F-net CMT or AQUA catalog. However, large travel time residuals over 3 seconds earlier are estimated for distant stations including the stations east of trench. This would mainly be due to the high velocity Pacific plate (e.g., Toyokuni et al., this meeting). To improve the velocity structure and use station correction are necessary for further study.

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