
[JJ] Evening Poster | S (Solid Earth Sciences) | S-SS Seismology

[S-SS12]Seismicity

convener:Kei Katsumata(Institute of Seismology and Volcanology, Hokkaido University)

Thu. May 24, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)

This session aims to improve our understanding on seismicity. Any contribution on behavior of earthquakes as a cluster, such as regional seismicity and aftershocks, are welcomed. We also welcome contribution on temporal and spatial interactions that control seismicity, and tectonic processes, and geological and thermal structures that regulate seismicity.

[SSS12-P08]On S wave picking of the 2016 Kumamoto earthquake

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Keywords:S wave, onset time, the 2016 Kumamoto earthquake

Picking of S wave is essential in various seismic analyses such as hypocenter location, seismic tomography, waveform inversion, spectral inversion, and so on. It is more difficult to detect the onset of S waves than that of P waves since the start of S wave packets are buried by later phases of P waves. Especially local seismic records are so susceptible for local site effects that the onsets of S waves are prone to become rather vague. Hence the accuracy of S wave detection strongly affects the outcomes of aforementioned seismic analyses, the accurate and objective S wave detection is desirable.

Recently, an abundance of seismic stations has been deployed in all over the world and plenty of seismic records have been obtained so automatic P and S wave picking techniques have been developed. Some of those techniques make use of STA/LTA, polarization of waveforms, and stochastic characteristics, and so on.

In this study, the author applied those S wave picking techniques for waveform data of the 2016 Kumamoto earthquake recorded by KiK-net underground stations and made some trials to pick S waves precisely and objectively.

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