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Teaching Introductory Seismology using Hi-net waveforms

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Hi-net has been operated by NIED for more than a decade and is one of the premier seismographic networks in the world. Major characteristics of Hi-net is the national high-frequency seismographic network major characteristic of which include that sensors are uniform in the network, that stations are distributed densely and uniformly in Japan, and that waveform data are available to public in quasi real-time. Data from Hi-net has been used to elucidate seismicity in Japan as well as to study earthquake sources and interior of the Earth. Hi-net also is a major contributor in JMA catalog and early earthquake warning system in Japan. In addition to scientific researches, waveform of Hi-net has been utilized in schools, and several proposals have been reported previously in JPGU meetings.

In this presentation we discuss our ongoing efforts to utilize Hi-net waveforms in introductory college lab courses in Earth science. Specifically, we discuss our material efforts and successes in teaching seismology in the courses in Kyoto University for science-oriented undergraduate students. Earth science is not a popular subject in high schools, and such introductory courses are designed for students with little previous experiences in the subject. Seismic waveform analysis has been one of the popular lab projects, and we have integrated use of Hi-net waveforms into wealth of lab materials we inherit to teach introductory seismology. Our ongoing effort is trying to take advantage of that waveform database of Hi-net is expanding every day,

We discuss why and what we are doing, and what could be ahead of us in teaching seismology with Hi-net.

Keywords: College Education, Earth Science Education, Seismology, Hi-net