Detection Method for Exceeding Threshold of P-Wave, Using an Amplitude Ratio of S-Wave to P-Wave

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An earthquake warning by observing the threshold value of earthquake motion is generally applied to an amplitude of S-wave, which is dominated in seismic waves. To issue the earthquake warning earlier, we investigated the applicability of earthquake warning by the threshold of P-wave in seismic data, using an amplitude ratio of S-wave to P-wave. Prediction by P-waves using the amplitude ratio of S-wave to P-wave at seismic stations reproduces S-waves well. Finally, we concluded that this method can potentially issue the earthquake warning earlier than the previous method by Ts-p.