

## Earthquake early warning system and its practical applications

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Recently, with advances in data analysis and increased awareness of the seismic hazard, the topic of earthquake early warning has attracted more research attention, and various early warning methods have been proposed from seismologists and engineers. The goal of seismic early warning is to initiate optimal mitigating actions based on the arrival time and amplitude of seismic waves predicted at a given location. To achieve this, an earthquake early warning system must collect and quickly analyze seismic data in a manner that can be used to predict future shaking. The information on the size and location of the event is estimated from the first P-wave record.

In October 2007, the Japan Meteorological Agency starts providing earthquake early warning publicly. They broadcast the early warning message on TV and radio in real time, so that public people can take damage-mitigating actions before strong shaking arrives. The news of the system was broadcasted widely and attracted considerable public attention in Japan. This presentation shows the algorithm to estimate the ground motion at a site for the earthquake early warning system and its practical applications.