The Prompt ElastoGravity Signals (PEGS) : Detection capabilities and limitations of very broadband seismometers

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Résumé

Prompt ElastoGravity Signals (PEGS) originate from the gravitational perturbations associated with the mass redistribution carried by elastic waves. As such, they are the earliest deformation signals observable after an earthquake. Today, PEGS were clearly observed with (very) broadband seismometers for 6 large magnitude earthquakes (Mw > 7.8), and can be accurately modeled by several approaches. After summarizing these main observational results of the last two years, we will then concretely illustrate when detection can or cannot be achieved with seismometers, based on the characteristics of the lowest-noise very-broadband stations (Geoscope, Global Seismic Network, FNET).

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