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Recovering source properties from nine-component monitor data

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ABSTRACT

Monitor phones usually have only a single-component, and are intended to monitor source statics and wavelets. Three component monitor phones can be used for this purpose as well, but also provide additional multicomponent information that can be used to track source moves, examine source-ground coupling and radiation patterns, and look for near-surface anisotropy. I demonstrate a simple, robust method for estimating wavetype polarization directions at a single geophone. The results appear to be repeatable to within about half a degree. The wavetype polarization directions in turn provide information about the position of the source. Knowing that the source motions derived from both P and S arrivals should be the same gives us further information about the source radiation patterns. The main effect seems to be that the first stomp at a given location is weaker than all later ones.

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