Finite-Difference computation of synthetic seismograms for tomographic velocity models

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We used a finite-difference method to compute synthetic seismograms of P-SV waves for 2-D velocity structures that are derived from 3-D tomographic models for subduction zone and earthquake fault zone areas. Our results show that anomalous structural features such as the subducting slab and magma chambers would significantly affect the waveforms, in particular, their amplitudes. The use of waveforms would be important in the future studies of the Earth structure.