

Shear wave splitting analysis of P-wave receiver function

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Horizontal particle motion of shear wave split due to seismic anisotropy is sometimes distorted by seismic source time function, and shear wave splitting analysis of the distorted particle motion may lead to incorrect result of seismic anisotropy. Since such influence of source time function is removed in receiver functions, we apply shear wave splitting analysis to waveforms of P-wave receiver functions, focusing on the Ps phase which is P-to-S converted wave generated at the Moho discontinuity. We analyze seismograms recorded at a seismic station in Okayama University. As a result, the crust below the station is shown to be characterized by seismic anisotropy with hexagonal symmetry axis in the NE-SW direction. This result is consistent with the direction of crustal anisotropy in southwest Japan, which Iidaka(2003) obtained by the shear wave splitting analysis of S-wave multiple reflections in the crust.