

Hi-net で計測される日本列島における splitting intensity の空間的变化について II Regional scale variation of splitting intensity observed in Japanese islands by Hi-net II

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To systematically investigate the spatial variation of seismic anisotropy around the Japanese islands, we measured the splitting intensity (SI) of teleseismic SKS and SKKS phases by Hi-net (Ogawa et al., 2013, SSJ). SI is first introduced by Chevrot (2000) as a method of measuring seismic anisotropy; it is based on cross-correlation of polarized waveforms, and can be modeled like the delay time of seismic tomography considering the effect of finite frequency (e.g., Favier and Chevrot, 2003). In this study, we extend our previous work by measuring SI for a large number of dataset recorded by the dense seismic station network, Hi-net. We use data from tilt-meters of Hi-net from October in 2000 to September in 2013. We have selected the recordings of SKS phases for epicentral distances between 90 and 135 degrees and SKKS beyond 105 degrees, and Mw larger than 6.0, resulting in a total number of events to be 189 that is much larger than the previous case. For the actual analysis, we apply a band-pass filter between 0.05 and 0.125 Hz, and the measurement error of each SI will be carefully estimated using a new formulation, as there appears an error in the Chevrot (2000)'s original treatment. The preliminary analysis indicates regional scale variations of SI patterns that apparently depend on the back azimuth of seismic event, which may be influenced by the subducting slabs.

キーワード: 地震波異方性

Keywords: seismic anisotropy, splitting intensity