

Vp/vs estimation in the source region revealed by high sampling rate observation at western Nagano region, Japan

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We try to estimate vp/vs ratio estimation in source region of western Nagano region. In this region, since high sampling rate (10kHz) and dense seismic observation have continued from 1995, it is convenient to conduct this kind of the analysis. We use the method of Lin and Shearer (2007) to determine vp/vs ratio. We obtained vp/vs values for each grid regions (0.01 deg x 0.01 deg in horizontally and 2km in vertical). Relatively higher vp/vs values in the source regions than path averaged vp/vs values in this region by plotting Wadati diagrams. It may suggest abundance of fluid in seismic source regions. We also obtained spatial heterogeneity. Higher vp/vs ratios are obtained in top and lowermost in seismogenic layer. This may reflect these zones are close to fluid sources.