

## Applicability of receiver function inversions in estimating S wave velocity structure of sedimentary layers

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The inversions of receiver functions are originally developed for the estimation of S wave velocity structure of the crust and the uppermost mantle. Some researches to explore subsurface structure have been recently conducted using arrival time differences between direct P-waves and P-to-S converted waves generated at the surface of seismic bedrock in receiver functions. However, receiver functions inherently contain much more information about P-wave multiples and P-to-S conversions than that used in the method above. In this study, applicability of receiver function inversions in estimating S wave velocity structure of sedimentary layers are evaluated by both numerical experiments and the analysis of actual earthquake records.