

Seismic velocity structure of the crust and uppermost mantle beneath the northeastern Japan arc estimated from receiver functions

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We investigated seismic-wave velocity structure beneath the northeastern Japan arc by receiver function analyses. In order to obtain reliable solutions, we improved: 1) estimation method for each receiver function, 2) stacking procedure and 3) inversion technique. Main results obtained from the improved methods are as follows: We identified the Conrad in the east part of the northeastern Japan arc and its depth is consistent with the result of Zhao et al. (1990). There is a low velocity zone in the uppermost mantle below station KGJ; this result is consistent with Nakajima et al. (2001) but our result indicates that the region is thinner than 10 km. Below station HOJ, there is a very low velocity surface layer.