

Moho depth of the Korean Peninsula via P-coda autocorrelation analysis

*Hyejeong Cho¹, Sang-Jun Lee¹, Junkee Rhie¹, Seongryong Kim²

1. Seoul National Univ., 2. Chungnam National Univ.

Moho depths of the South Korean Peninsula (SKP) were constrained via P coda autocorrelation which is developed to extract reflected P waves on discontinuities at depth, such as Moho. Autocorrelation and bandpass filtering were applied to each teleseismic events with magnitude ≥ 5.5 , occurring in 2010–2017, after spectral whitening being applied. Finally autocorrelograms for about 90 stations were obtained by stacking. The result shows the Moho discontinuity of the SKP is deepening towards Southeast, though Moho has shallow depth in the area where Gyeongsang basin is located. This result is consistent with Moho depth pattern reported in the previous studies analysing receiver function and surface wave dispersion.

Keywords: Moho discontinuity, P coda, autocorrelation