

Crustal heterogeneities beneath Hida region as inferred from three-dimensional seismic array analysis

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We have measured the time variation of back-azimuth, incident angle, and slowness of coda waves by using data from a small-aperture three-dimensional seismic array deployed at the Kamioka mine. We found that the back-azimuth for some local to regional events is restricted to some narrow range. This observation is qualitatively explained by local zone of strong attenuation beneath Tateyama volcano. We also found that some coherent phases arrive about 8 s after the P wave, making a transient increasing of RMS amplitude. Considering the small incident angle and the lapse time from the P-wave, these phases are probably the scattered and/or reflected P-waves from the lower crust. The long duration (3-4 s) of coherent arrival suggests the scattering in a zone with a thickness of about 10 km.