



Relatively high attenuation in the mantle transition zone beneath in and around Japan and its possible cause

N. Fuji (1), K. Kenji (2), and R.J. Geller ()

(1) EPS, Univ. of Tokyo, Tokyo, Japan (fuji@eps.s.u-tokyo.ac.jp), (2) EPS, TITECH, Tokyo, Japan

Using localised body-wave waveform inversion method for both elastic and anelastic structure (which we have recently developed), we found relatively high attenuation in the mantle transition zone beneath in and around Japan. We divide the region of interest into several sub-regions and obtained 1-D structure model both for elastic and for anelastic structure. From plural aspects of statistics (stacked waveforms, AIC, data distribution for kernels), we confirm that the high attenuation is the key to realise the amplitudes of the waveforms particularly (Fuji et al., in prep.).

In this presentation, we will mention on our methodology briefly and show our results. Beneath the mantle wedge (Philippines Sea), we found higher attenuation than beneath the Pacific Ocean. This will suggest some anomaly information either on the temperature or on the water content. We will discuss the meanings further in the last of the presentation.