

## Anelasticity in the upper mantle surrounding Izu-Bonin subduction zone inferred from BBOBS waveform data

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Anelasticity in the upper mantle surrounding Izu-Bonin subduction zone is estimated by using the amplitude spectra of BBOBS waveform data. The waveform data were taken from Stagnant Slab Project which deployed 12 Broad Band Ocean Bottom Seismometer (=BBOBS) from October 2005 to October 2006 in and around the Philippine Sea. The sites were equipped with three components Guralp CMG-3T sensors recorded at 200 Hz.

Waveform data of local events occurred in Izu-Bonin slab were recorded by the BBOBS array with adequate signal to noise ratio to estimate  $t^*$  of P wave. We estimated the anelasticity in the upper mantle using differential attenuation method. The method measures the difference in spectral decay for P waves with different paths and determines the path averaged anelasticity. Time window is set to be 6s; before 1s and after 5s onset of manually picked P wave. Then compute the spectral decay over the range 0.75 to 4.0 Hz. We try to estimate anelasticity not only above but also beneath subducting Pacific slab. The results show high attenuation in mantle wedge and low attenuation in the slab. We will show the example of BBOBS waveform data and estimation of  $t^*$  of the P wave. And we will discuss anelastic structure and the tectonic implications.

BBOBS data recorded just above the Izu-Bonin subduction zone will provide us constraints on physical property of subduction zone.