



Localized temporal variation of Earth's inner-core boundary from high-quality waveform doublets

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The accurate determination of the topography of an Earth's internal boundary is difficult because of the possible trade-off with the velocity of the media above it. Here we use waveform-doublet method to map the ICB topography. A waveform doublet is a pair of earthquakes occurring at essentially the same spatial position and received by the same station with high similarity in their waveforms (Poupinet et al. 1984), which make the exact detection of the ICB topography possible. In this study, we used this method to detect temporal change of the ICB using doublets from the Western Pacific (WP) area to increase global coverage of the ICB. Compared with previous study using doublets from South Sandwich Islands (SSI) (Song and Dai, 2008), the new samples showed negligible temporal change of the ICB.