

Comparison of frequency dependent amplitude ratios of PKiKP/PcP observed by Hi-net and USArray

SATORU TANAKA¹

¹D-EARTH, JAMSTEC, 2-15 Natsushina-cho,
Yokosuka 236-0061, Japan. E-mail:
satn@jamstec.go.jp

PKiKP/PcP amplitude ratios have been used for the inference of the density jump at the inner core boundary (ICB). Recently, Tanaka and Tkalcic (2015) examined their frequency variations and suggested a topographic variation at the ICB, based on the observation by Hi-net that is a Japanese dense seismic network. Here I newly examine the spectral ratios of PKiKP/PcP observed by USArray that is a dense seismic network in USA. Basically the PKiKP/PcP ratios observed by USArray are larger than those observed by Hi-net if PKiKP is detected. Especially the PKiKP/PcP ratios from a Guatemalan earthquake show large ratios around 1 Hz whereas large frequency components around 2 Hz are observed in Hi-net data. This suggests that ICB topography geometry beneath the east of Mexico, where is the reflection points of PKiKP from the Guatemalan earthquake, is different from that beneath the western Pacific.