

2009 Fall Meeting  
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**receiver function**

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**Receiver function images of subducted slabs beneath South Korea**

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We analyzed stacking receiver functions using 1162 events observed on 39 broadband seismic stations in South Korea. To make receiver function images a grid was set 0.25 degrees between 30.0°N and 41.0°N in latitude and 120°E and 135°E in longitude, and piercing points of individual receiver functions were computed for a 5 km depth interval from 5 km to 800 km in depth. Individual receiver functions were converted to depth and laterally migrated to their conversion point using the iasp91 model with redundant signals stacked to enhance signal. Our P-wave receiver function images show clear P to S conversions on boundaries created by the slabs subducting from the Kurile, Japan, Izu-Bonin, and Mariana arcs, the northern Kurile and Mariana slabs beneath the Korean Peninsula. Depressed 660-km (P660s) conversion phases are observed beneath eastern part of South Korea and the East Sea between 128°E and 133°E in longitude indicating that the cold slab penetrates the 660-km seismic discontinuity in this region.

[7203] SEISMOLOGY / Body waves

[7208] SEISMOLOGY / Mantle

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