

Depth of Moho beneath Indonesia by receiver function analysis

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We estimated depths of Moho beneath Indonesia by a receiver function analysis from broadband teleseismic waveforms observed by JISNET, that is seismic network made up of 23 seismic stations deployed in Indonesia. The obtained receiver functions detected the P-to-S converted phases from Moho at 16 stations. Assuming a velocity structure, we can estimate the depth of discontinuity from the travel time of Ps converted phases relative to direct P. Depth of Moho under each station was obtained by using NMO corrected receiver functions employing the iasp91 velocity model. The results are as follows: Moho depth varies from 20 to 40 km beneath Indonesia. It is deeper beneath the stations located in the back-arc such as Kalimantan and Sulawesi island as compared to the fore-arc.

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