

Estimation of conversion interfaces by using converted wave in seismograms of intermediate earthquakes beneath the Kyusyu district

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In the seismograms of intermediate-depth earthquakes many later phases appear between P and S-wave arrival observed at seismic stations in the Kyushu district, Japan. For example, the traveltime differences between the initial and prominent later phase recorded at tkd, which is a station of the Kyushu University, are in the range 2-3s and 4-5s. Based on two dimensional ray tracing for the later phases, depths of conversion interface are estimated. One is the horizontal conversion interface of about 20 km. For another prominent later phase, the interface is parallel to the deep seismic plane and located about 20 km above the seismic plane. The clear interface is interpreted as the upper boundary descending the Philippine Sea plate.