

## The structure beneath the Japan islands using local and teleseismic data

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In this work we have attempted to determine the deep structure beneath Japan from the tomography using local and teleseismic data jointly and the relative residuals from teleseismic events. We used 205,593 P-wave arrival times from 7992 local earthquakes in and around Japan. We have also collected 25,364 data from 292 teleseismic events from seismograms recorded by the J-array Seismic Network. Beneath the subducting Pacific slab under central Japan, a slow anomaly is imaged at depths of 350-500 km, which may represent a mantle plume. Beneath Shikoku and Chugoku the Philippine sea slab is detected down to at least about 200 km depth.