

Tomographic Imaging of P and S Wave Velocity Structure Beneath Hokkaido

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To better understand the seismotectonics of Hokkaido, in this study we have tried to determine the detailed 3-D P and S wave velocity structure under the entire Hokkaido region. Our results are as follows. (1) The Pacific slab is imaged clearly with a thickness of about 70 km. (2) A low-velocity zone is found beneath the Tokachi-Dake volcano to a depth of 125 km, which may show the arc magmas. (3) A low-velocity zone is detected in the shallow part of the forearc region in southeast Hokkaido, which may be the accretionary prism containing fluids. (4) There is a dipping low-velocity zone at 20-65 km from Urakawa-Oki to earthen Hidaka Mountains, which may be the subducted crust of the norhearst Japan arc.