Deep seismic structure of interplate seismogenic zone beneath the southern part of NE Japan arc(4)

Minoru Nishino[1]; Ryota Hino[1]; Masanao Shinohara[2]

[1] AOB, Tohoku Univ.; [2] ERI, Univ. Tokyo

In the off-Fukushima region, the interplate seismicity is active mostly in the landward half of the plate boundary zone where the subducting oceanic crust and the overriding mantle wedge are in contact. We try to estimate the precise seismic velocity structure of the interplate seismogenic zone by using the double difference tomography. As a result of the preliminary analysis, P-wave velocity of the mantle wedge is 7.1 - 7.3 km/s, and Vp/Vs is about 1.9. Most earthquakes are not located in the mantle wedge, but in the landward dipping low velocity layer beneath the mantle wedge. P-wave velocity of this layer is about 6.5 km/s and the thickness is about 6 km, indicating that this layer is the subducting oceanic crust and that seismicity is active within the oceanic crust.