Location and nature of the Moho discontinuity in the northeastern Japan arc estimated from later phases

Junichi Nakajima [1], Toru Matsuzawa [2], Kouichi Nida [3], Dapeng Zhao [4], Akira Hasegawa [5]

[1] RCPEV, Tohoku Univ., [2] RCPEVE, Tohoku Univ., [3] RCPEV Tohoku Univ, [4] Earth Sci.,Ehime Univ, [5] RCPEV, Graduate School of Sci., Tohoku Univ.

Information on the detailed crustal structure is essential to understand the seismicity and the deformation process in the arcs such as northeastern Japan. We tried to determine the depth distribution and nature of the Moho discontinuity by using waves reflected or converted at the Moho. The results obtained from events occurring around seashore of Akita Prefecture show that in the eastern part of the Japan Sea the depth of Moho is about 25-28 km, about 28-32 km in the region around the coast of the Japan Sea and about 32-35 km in the region beneath the middle part of Akita Prefecture. Estimated Moho has an inclination of 4-7 degrees dipping toward east in this region. This result is almost consistent with that of Zhao et al. (1990).