P-wave structure of the Philippine Sea plate subducted from the Nankai trough and volcanoes in the Chugoku and Chubu regions,Japan

Ichiro Nakanishi [1], Takahiro Yamane [2], Shin'ichiro Kamiya [3]

[1] Dept. Geophys., Kyoto Univ., [2] Geophysics, Kyoto University, [3] IISEE, BRI

Three-dimensional P-wave structure beneath the Japanese Islands is obtained from the travel time data observed by Japan Meteorological Agency in the period from October, 1994 to September, 1997. It is suggested that the Philippine Sea plate subducted from the Nankai trough reaches the mantle beneath the Japan Sea side of the Chugoku region, and the volcanoes in the Chugoku and Chubu regions. The roots of these volcanoes may be located near the upper boundary of the Philippine Sea plate. It is clearly shown that the Phlippine Sea plate is divided into at least four segments: Shikoku region, western and eastern parts of the Kii peninsula, and the Tokai region. These segmentation may play an important role in the recurrence of the great earthquakes along the Nanakai trough.