

## Low-fold reflection profile along the DAIDAITOKU 2004 Shingu-Maiduru line.

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The Special Project for Earthquake Disaster Mitigation in Urban Area (DAIDAITOKU) succeeded in imaging clearly the subducting Philippine Sea plate (PHS) beneath the Kinki district in the single-fold reflection profile along the Shingu-Maiduru line (MEXT et al., 2005; Ito, K. et al., 2005). We have improved on the profile and made a low-fold reflection profile using wide-angle reflection additionally (See Figure). The new profile provides the following essential information to understand the crustal structure.

1) The reflective zone associated with the subducting PHS corresponds to the duplex zone + the layers 1 and 2 of the oceanic crust, whereas the poorly-reflective one to the layer 3. The subducting angle of the PHS of the Kinki district is about 20 degrees beneath the Outer zone. It is steeper than that of Shikoku (Ito, T. and Ikawa, 2005; Sato, et al., 2006).

2) The Median Tectonic Line (MTL) which divides the Japanese island arc into the Inner and Outer zones dips northward at about 20 to 30 degrees cutting the whole crust

3) The Gobo-Hagi Tectonic Line (GHTL), a major boundary fault in the Outer zone, which thrusts the Northern Shimanto (Cretaceous) over the Southern Shimanto (Paleogene to lower Miocene) groups dips northward at about 20 degrees down to 20 km deep.

4) The very gentle undulation with a 40-km wavelength seems to control the structure of the whole upper crust in the Inner zone.

5) The deeper extension of the Arima-Takatsuki Tectonic Line (ATTL) may contact with the MTL in the lower crust. If so, the tectonic interaction must occur between the two in the ongoing process.

6) Considering that the lower crust is generally characterized by dense laminations, its upper and lower boundaries are tentatively indicated by the dotted lines UL and LL, respectively. It is doubtful that the lower crust exists in the overall Outer zone. The precise velocity structure by the refraction method is necessary for further discussion about the lower crust.

The combination of the above information with the results of the Shikoku-Chugoku profile (Ito, T. and Ikawa, 2005; Sato et al., 2006) must contribute to the research of the structural development of the Japanese island arc.

