

SCG063-15

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Crustal structure and active tectonics in the southeastern border of Chubu, Central Japan

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New powerful technique, MDRS (Multi-Dip Reflection Surface) Method (Aoki et al., 2010), has improved successfully seismic imaging of SCAT (2008 Southern and Central Alps Transect). This makes it possible to reveal the crustal framework in the southeastern border of structurally active Chubu region adjoining the Izu collision zone, as follows.

1. The frontal active fault group of the Itoigawa-Shizuoka Tectonic Line and its deeper extension (Active ISTL) is traceable down to 20 km deep at about 20 degrees. It cuts the deeper parts of both the Itoigawa-Shizuoka Tectonic Line (ISTL) and the Outer zone. Beneath it, the subducting Izu arc materials extends in 40 km thick. A-ISTL has been keeping its original form at the beginning of the subduction of the Philippine Sea plate, and still active associated with the present subduction at depth.

2. The present Median Tectonic Line (MTL) running along the western margin of the Southern Alps is not the original one, but corresponds to the northern extension of the vertical Akaishi Tectonic Line (ATL)(Kano,1990). The ATL played the important role on the Middle Miocene bending of the Japanese Island Arc as a huge left-lateral fault, together with the ISTL. Although both the ATL and the MTL do not show superficially the manner of an active fault, their deeper parts are surely active at depth with left-lateral-type-dominant microseismicities.

Keywords: Itoigawa-Shizuoka Tectonic Line, seismic reflection survey, Izu collision zone, bending of the Japanese island arc, Median Tectonic Line, Akaishi Tectonic Line