

Initiation of the Japan Trench and large-scale Pullout of the Pacific Plate, relating to the Japan Sea Opening

Nobuaki Niitsuma[1], Toshiya Kanamatsu[2]

[1] Inst. Geosci., Shizuoka Univ., [2] JAMSTEC

The Middle Miocene sequence of ODP Site 1151 off Kesenuma on the Fore Arc of Japan Trench is distinguished with high magnetic intensity from the younger sequence. The intensity change is correlated with the rotations of the Japanese Island Arcs relating to the opening of the Japan Sea, which should correspond to the initiation of the Japan Trench. The tectonic reconstruction of the Japan Sea Opening indicates large-scale pullout of the Pacific Plate along the eastern margin of the Philippine Sea Plate. The pullout might be related to the ultra-basic rock of fore arc along the Izu-Mariana Trench.