Geochemical evolution,provenance of the Shimanto terrane, Kii Peninsula, and displacement at the Cretaceous-Eocene Japan margin

Barry P. ROSER [1]

[1] Earth and Planetary Sci.,Hokkaido Univ.

Shimanto sandstones from Kii Peninsula, display marked contrasts in chemical composition related to changes in provenance, source weathering, heavy mineral concentration, and recycling. These features are combined with existing modal and geological studies to produce a translocation model for the SW Japan margin, with derivation of Nyunokawa Formation from granitoids extensively exposed in west Honshu, and subsequent sinistral displacement along the Median Tectonic Line, in tandem with coeval west to east denudation of the Ryoke source in the Inner Zone. The model infers total displacement of 180-200 km between the Maastrichtian and latest early Eocene, at an average rate of ~5.1-5.7 mm/year.