

The Nankai Trough -the effect of the subducting oceanic lithosphere

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The basement relief of the subducted Shikoku Basin affects the geometry of the accretionary prism and the inter-plate coupling which is related to the mechanism of earthquakes along the Nankai Trough. The subduction of the young hot lithosphere has influence on the thermal structure and the magmatism in the overriding plate. The age of the last backarc spreading at the northern Shikoku Basin is 14.8 Ma. The age of the eruption of the Kinan Seamount Chain is estimated as 7-10 Ma, so the young/active seamount subducted under the Nankai Trough. The present geometry of the spreading segment and the seamount chain indicates that the another member of the seamount chain was under the western Nankai Trough, which is consistent with the result of the magnetic anomaly and the seismic imaging.