

Recurrence intervals of turbidite deposition along the marine active faults, off Tokai region, Japan

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To evaluate the activities of marine active faults along the eastern Nankai Trough, recurrence intervals of deep-sea turbidites in marine cores collected along each faults were examined. Along the Tokai Thrust, turbidite recurrence intervals were reported as 100-150 years during the last 3000 years. A sediment core record from the outer ridge of Kumano Trough, however, showed longer intervals with 500-1000 years. The cored site was composed with semiconsolidated sediments, which have much resistance to the ground motion than the sedimented sea slopes. Therefore, there is a possibility that the abnormally large earthquake events recorded in this core. Along the Kodaiba Thrust, 300-600 years intervals were calculated in cores from the Ryuyo Submarine Canyon, and 240 years interval was obtained in core from north of Atsumi No.2 Knoll. Turbidite recurrence intervals in cores along the Enshu Fault were estimated as 190-670 years and 240 years. Recurrence intervals of deep-sea turbidites along each fault in the eastern Nankai Trough are summarized as follows: Tokai Thrust: 100-150 years, Kodaiba Thrust: 300 years, and Enshu Fault: 200-300 years.