# Rupture Process of the 1946 Nankai Earthquake and Segmentation of Megthrust Earthquakes in the Nankai Trough

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We have performed a subevent analysis of seismic records from the 1946 Nankai earthquake. The results of this analysis show that the rupture process consists mainly of two asperities. We find that the begining of the main rupture coincides with a pronounced segmentation boundary of historical megathrust earthquakes in the Nankai Trough.

Furthermore, the zone of slow slip between the two asperities corresponds to the track of a large subducting seamount that has been imaged by a recent seismic survey. We therefore conclude that these structural features are responsible for segmentation of megathrust rupture in the Nankai Trough.

We have performed a subevent analysis of seismic records from the 1946 Nankai earthquake. The results of this analysis show that the rupture process consists mainly of two asperities. The main rupture began to the northwest of the epicenter directly beneath the southwest coast of the Kii Peninsula, while the second asperity occurred to the southwest of Cape Muroto. We find that the begining of the main rupture coincides with a pronounced segmentation boundary of historical megathrust earthquakes in the Nankai Trough. An examination of intraslab earthquake activity in Southwest Japan suggests that this coincides with a tear in the Philippine Sea Plate beneath the Kii Peninsula.

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