

Repeatedly occurring slow slip around eastern Boso Peninsula, detected by continuous tilt observation.

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Having been conducting continuous tilt observations in Boso Peninsula located in the southeastern end of the Kanto plain, Japan, we detected a gradual but unusual signal change in Oct., 2002. This anomalous tilt change could be detected at two observatories of KTU and SRK, which were constructed near the eastern coastline of the peninsula in 1983, and in 1998, respectively. In the same time and in the same place as the unusual tilt change, a seismic swarm was activated, which was recognized to occur on the plate interface between the continental plate and the subducted Philippine Sea plate. Analyzing both seismic data and tilt movements, we could build a slip model as following. A rectangular thrust fault of 50 km by 60 km on the plate interface was assumed to slip about 10 cm along NNW-SSE direction during several days. This model is consistent with lateral movement provided from GPS observations performed by GSI. A quite similar phenomenon was observed in the same place in May, 1983, Dec., 1990 and May, 1996. We can conclude that such a movement, a slow slip on the plate interface regularly occur with a repetition time of 6-7 years beneath the southeastern end of Boso Peninsula, where is considered to be a backward region of the locked interface zone for the future great Kanto earthquake.