

Temporal Changes in Seismic Activity during the Tokai Slow Slip Event

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In the Tokai region, central Japan, two notable phenomena has observed. The one is the change in seismicity which has appeared since the latter 1990's. And the another is a transient slow crustal deformation event around Lake Hamana which started at 2000 or 2001. This slow event is considered to be due to a transient slow slip on the plate interface beneath Lake Hamana. It has released the accumulated moment equivalent to an earthquake with at least M7 magnitude. The change in seismicity can also be considered as the result of the stress change due to the slow slip event, although the change in seismicity began several years before the appearance of the slow slip event. In this study, we investigate temporal changes in seismic activities in the Tokai region: (1) seismicity, (2) mechanism (directions of stress axes), and (3) b-value. They might reflect the stress change due to the slow slip event or the transient cessation of the locked portion beneath Lake Hamana. We want to discuss the stress field around the slow slip area on the plate interface beneath Lake Hamana which is inferred from the seismicity data. And we want to see and discuss the spatio-temporal distribution of the locked portions on the plate interface.