# Activated seismicity in crust in assumed focal region of the Tokai Earthquake

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The seismic activity has been activated in crust in the area assumed to be a focal region of the Tokai Earthquake since the Long-term Slow Slip Event stop (middle of 2005).

Especially, an active seismic activity continues in depth 16-18km in Mori and Kakegawa City boundary since November 12, 2007. A current maximum is an earthquake of M4.2 occurred on January 27, 2008 (As of 2008.1.30). The mechanism was strike-slip fault type which has pressure axis in the direction of east and west. In addition to this seismic activity, big earthquake and active aftershocks activity occurred in Iwata and Fukuroi City boundary on June 1, 2007 (maximum M4.3, depth 13 km). The seismic activity bigger than M3.0 after 1987 shows remarkable active state from the latter half of 2007. Moreover, the tendency of the seismic activity bigger than M1.1 after 1997 changes from active, quiet and active. This is correspond to progress and the stagnation of a Tokai Long-term Slow Slip event. The activation after middle of 2005 is more active than the seismic activity situation until middle of 2000.

The extraction of the seismic activity on the plate boundary was tried to examine the relation between this activation and the Tokai Earthquake. It is because of the idea that there is a possibility that some changes would appear to the seismic activity generated on the plate boundary if the Tokai earthquake is near. Earthquakes were extracted which mechanisms were reverse-fault types with low angle plane, and appropriate place (especially depth) between crust and slab. It shows that seismicity on the plate boundary has been decreasing from Aichi Prefecture side (northernwest). This can be interpreted to be the stress concentration on the assumed focal region in the Shizuoka Prefecture, and accumulation of the distortion continues aiming at the Tokai Earthquake generation. On the other hand, a remarkable seismicity change is not seen on the plate boundary, so it is considered that the Tokai Earthquake is not urgent situation.

It has been understood that the center of the seismic activity is mainly in middle layer in western Shizuoka Prefecture after a Tokai Long-term Slow Slip Event stops. The middle layer in western Shizuoka Prefecture is thought to be a inclining layer as well as the Philippine Sea plate on 7km above plate boundary. Further analysis and consideration would be necessary to clarify the cause of the seismicity activation in this middle layer.