

## The tidal effect on the seismic swarm activity in the western Shizuoka Prefecture

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A crustal earthquake swarm activity (the maximum magnitude is 4.2 as of Jan. 2008) in the western Shizuoka Prefecture started in November 2007, and is still continuing. Hypocenters show an almost vertical planar distribution with about 3km width and NNW-SSE strike, which is consistent with representative focal mechanism.

The seismic activity is sporadic in nature, and we investigated the tidal effect on it using a similar method to Tsuruoka and Ohtake (2002). The theoretical Coulomb failure stress on the hypocentral fault driven not only by a solid earth tide but also by an ocean tide loading effect is calculated using modified Gotic2 (Matsumoto et al. ,2001), and statistical test (Schuster,1897) for the phase angle frequency of the earthquake occurrence time shows that this seismic activity is clearly correlated with tidal effect. The phase angle frequency shows a peak at about -90 degrees range, corresponding to the period of the maximum stress accumulation speed.