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Earthquakes triggered by tides in Iwo-jima island, Japan

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We investigate dynamic and tidal triggering of earthquakes in Iwo-jima, a south small volcanic island 1250 km away from Tokyo. After seismic waves of four far-distant huge earthquakes including 2004 Sumatra earthquake reached Iwo-jima, a local seismicity was activated. At the time of largest amplitude of arrival seismic waves, in particular, triggered earthquakes occurred in south - west area of Iwo-jima for all of huge earthquakes. From spectrum analysis of time-series of earthquake number per hour, M2 and K1 components of ocean tides significantly enhanced. In the presentation, we discuss the triggered mechanism.

Keywords: Seismicity, Triggering, Tide, Dynamic triggering