

Mechanism of slimy earthquakes and tsunami earthquakes

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Tsunami earthquakes are special earthquakes named by Kanamori (1972). The 1896 Sanriku, the 1946 Aleutian, the 1960 Peru, the 1963 and 1975 Kuril, the 1992 Nicaragua, the 1994 Java, the 1996 Peru, and the 2006 Java earthquakes are called Tsunami earthquakes. Tsunami earthquakes have anomalous rupture properties (low stress drop, slow rupture velocity, and long duration time). We analyzed the source processes of tsunami earthquakes by using teleseismic bodywave data and found the feature that 1. the seismic moments at each grid are small, 2. source area is large, 3. rupture velocity is not slow. Moreover, we found the earthquakes without tsunami, which source process is very similar to tsunami earthquake.

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