

Successiveness and diffusiveness of large inland earthquakes

Gen Aoki[1], Akio Yoshida[1]

[1] MRI

We investigated statistical characteristics in space-time distribution of large shallow inland earthquakes in Japan from the viewpoint of successiveness and diffusiveness, using the JMA earthquake data with M5 or larger during the period from 1926 through 2001. We show that probability to observe another earthquake within the distance of 50 kilometers from one large earthquake is significantly high for 5 years after its occurrence. On the other hand, the occurrence rate in the doughnut area between the distance of 50 to 100 kilometers becomes higher after 5-10 years. This feature implies that stress field diffuses at a velocity of about 10 kilometer per year around the focal region of a large earthquake.