

A consideration concerning precursory phenomena

Kunio Fujimori[1], Atsushi Mukai[2]

[1] Earth and Planetary Sci., Kyoto Univ., [2] Faculty of Law, Nara Sangyo Univ.

It is considered that the sudden changes of the pore pressure and strains observed in Awaji 800m borehole before earthquakes are precursor. The sudden pressure changes are rapid migrations of groundwater, and the sudden strain changes are micro-fracturings caused by stress concentrations. A stress increase before an earthquake will generate the following events in about 3 months. First, at neap tides, rapid migrations of groundwater are caused many times. Second, at the next or the following flood tide, the micro-fracturings are generated. Finally, at the next flood tide, A rapid stress change in the epicenter starts a few days before the earthquake, and the earthquake occurs. Many kinds of precursory phenomena will be happened by such groundwater migration and micro-fracturing.