

A scaling relation between the seismic moment of main event and time constant of postseismic deformations

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We analyzed postseismic deformations reported in Yamauchi [J. Geode. Soc. Japan, 21, 75-80, 1975] and observed by recent GPS and other geodetic measurements. The individual deformation is fitted by a logarithmic function to determine its time constant. The results indicate a following scaling relation between the seismic moment of main event (M_0) and time constant (T): $\log T = 1.4 \log M_0 - 24.1$ (T :hour, M_0 :Nm). Existence of such regularity suggests that postseismic deformation is one of intrinsic properties of slip on a fault.