

Depth dependence of the decay rate of aftershock activity

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We investigated depth dependence of the decay rate of aftershock activity for three large intraplate earthquakes; the 2000 western Tottori Prefecture earthquake (M7.3), the 2003 northern Miyagi Prefecture earthquake (M6.4), and the 2004 central Niigata Prefecture earthquake (M6.8). We used hypocenter data determined by the DD method. It was found that the p-value in the modified Omori law is smallest for the aftershock activity in the medium-depth range for all of the cases investigated, corresponding to the feature that aftershock activities in the shallower and deeper parts of the focal zone have a tendency to disappear faster than that in the middle range which we pointed out in the spring meeting last year. The difference of the p-value of the aftershock activity between shallow, middle and deep parts of the focal zone suggests that the relaxation rate of stress in the crust depends on the depth.