

Decay laws of an earthquake swarm - exponential and power laws -

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Simple models are presented for exponential and power laws in a decay process of a swarm activity. The exponential law is well explained by a viscoelasticity medium model. The model of the power law is based on the three assumptions: 1) Earthquakes are generated at activated preexisting faults; 2) The number of induced shocks is proportional to the fault density; 3) The induced shocks suppress the activity of the preexisting faults.