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and aseismic observations and self-similar theory

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The postseismic slip that follows large earthquakes is typically a few tens of percent of the coseismic moment, while the postseismic slip following small earthquakes appears to be comparable to the moment. Here I estimate the postseismic slip following intermediate-magnitude earthquakes and find that it is intermediate between the two, about 40% of the coseismic moment. The variation in postseismic slip with moment suggests that earthquakes may not be self-similar: that the properties of earthquakes or the regions that surround earthquakes vary systematically with earthquake size. If this is true, it would reveal a global fact related to the physical processes of earthquakes.

Promotional text

This study is important for a better understanding of earthquake physics, which helps us in improving Earth models. If moderate earthquakes could produce large postseismic offsets which are related to aftershocks, then those postseismic values would be vital for hazard assessment.

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