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# Slow Slip Events: Earthquakes in Slow Motion

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Faults can slip episodically during earthquakes, but also during transient aseismic slip events, commonly called Slow Slip Events (SSEs). The mechanisms at the origin of SSEs might be investigated based on their scaling properties. Previous compilation of SSE characteristics from various area suggested their moment, $M_0$, is proportional to their duration, $T$, suggesting a different physics from regular earthquakes which obey $M_0 \propto T^3$. Thanks to a new catalog of SSEs on the Cascadia megathrust consisting of 64 events between 2007.0 and 2017.632, we find that SSEs actually follow the same scaling laws as regular earthquakes: $M_0 \propto T^3$, $M_0 \propto A^{3/2}$, where $A$ is the rupture area, and the Gutenberg-Richter frequency-magnitude relationship, with a b-value of $\sim$0.8. These scaling properties are to be expected if slow slip events, like regular earthquakes, are frictional instabilities on faults embedded in an elastic medium, though with much lower stress drop that we estimated to $\sim$5 kPa. SSE might therefore be considered as earthquakes in slow motion.