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## Unified Scaling Law for Earthquakes: space-time dependent assessment in Kamchatka region

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The observed variability of seismic dynamics of the Kamchatka Region is characterized in terms of several moving averages, including (i) seismic rate, (ii) the Benioff strain release, (iii) inter-event time,  $\tau$ , and (iv) the USLE control parameter,  $\eta$  (where USLE stands for Unified Scaling Law for Earthquakes, i.e. a generalization of the Gutenberg-Richter relationship accounting for naturally fractal distribution of earthquake loci, which states that the distribution of inter-event times  $\tau$  depends only on the value of variable  $\eta$ ).

The variability of seismic dynamics have been evaluated and compared at each of four out of ten separate seismic focal zones of the Kamchatka region and the adjacent areas defined by Levina et al. (2013), i.e., (1) seismic focal zone of the Kuril and South Kamchatka, (2) the northern part of the Kamchatka seismic focal zone, (3) commander segment of the Aleutian arc; and (4) the continental region of Kamchatka. In particular, we considered all magnitude 3.5 or larger earthquakes in 1996-2019 available from open data catalog of the Kamchatka Branch of GS RAS, Earthquakes Catalogue for Kamchatka and the Commander Islands (1962–present) <http://sdis.emsd.ru/info/earthquakes/catalogue.ph>).