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Note on seismic hazard assessment using gradient of uplift velocities in the Turan block (Central Asia)

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Abstract:

Uplift gradients can provide the location of highly strained zones, which can be considered to be seismic. The Turan block (Central Asia) contains zones with high gradient of uplift velocities, above the threshold $0.04 \text{ mm km}^{-1}\text{year}^{-1}$. Some of these zones are associated with important seismic activity and others are not correlated with any recent important recorded earthquakes, however, recent faults scarps as well as diverted rivers may indicate a recent tectonic activity. This threshold of gradient is probably a significant rheologic property of the upper crust. On the basis of these considerations the Uzboy river area is proposed as a potential high seismic hazard zone.