

Nat. Hazards Earth Syst. Sci. Discuss., community comment CC2
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Reply on CC1

Xuezhong Chen

Community comment on "Analysis of seismic strain release related to the tidal stress preceding the 2008 Wenchuan earthquake" by Xuezhong Chen et al., Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2021-405-CC2>, 2022

We thank Venkatanathan for the comments. Some researches reported the tidal triggering of earthquakes prior to moderate to large earthquakes (Tanaka et al., 2002b; Tanaka, 2010, 2012; Li et al., 2018). They investigated the tidal triggering of earthquakes in terms of event count. We investigated the tidal triggering of earthquakes before the Wenchuan earthquake in terms of seismic strain release, but not event count. Therefore the behavioural changes observed between PEQs and NEQs result from the tidal triggering of earthquakes prior to the Wenchuan earthquake indeed. The tidal triggering of earthquakes focus on the promoting effect of the tidal stresses, but our results reveal not only the promoting effect, but also the inhibiting effect of the tidal stresses. The increasing tidal stress will promote the occurrence of earthquakes, while the decreasing tidal stress will inhibit the occurrence of earthquakes when a large earthquake is impending.