Review of the paper

A Taylor's power law in the Wenchuan earthquake sequence with fluctuation scaling

by **Peijian Shi et al.**

The authors explore Taylor's power law (TPL) of the released energy of Wenchuan earthquakes sequence on varying timescales. In my opinion the paper is interesting and well written. Here there are a couple of major comments:

- The authors show that the exponent of the TPL is a value independent of timescale equal or almost equal to 2. Why does it happen? The authors mention some general explanations, some of them related to Ecology, but none of them is focused on the released energy of earthquakes along time. In other works, my question is, for what physical reason would the exponent of the TPL be equal to 2?
- Note that using the logarithm to model the intercept as a function of the temporal block size A, the overall formula of the TPL remains,

  $$V = kA^{\beta}\mu^{b}$$

  This is an interesting expression that would deserve more attention in the paper. In particular, the exponent of A (it is around 0.2) is an interesting parameter that should be highlighted and discussed in the paper.

Minor comments

- Lines 20-22: "On the other hand…approximately definite and deterministic". This paragraph is not clear, what does it mean?
- I realize that the authors are using along the paper logarithms with base 10, it should be mentioned. Moreover, notation "lg" for logarithms is not standard and it would be better changed to "log" along the paper.
- Usually, when the mean is denoted with the Greek letter μ the variance is denoted as σ^2.
- Lines 296-298: "The variations of the estimated exponent b… are shown in Figure 6". Something is wrong here because Figure 6 shows the variation of the estimated intercept.