

Interactive comment on “Shear rate effect on the residual strength characteristics of saturated loess” by Baoqin Lian et al.

Anonymous Referee #1

Received and published: 8 October 2019

This paper provides interesting data on soils obtained from three landslides and could be of interest to many readers. However, I feel some additional work is required prior to it being suitable for publication in the journal.

1. Some more details need to be provided on the soils (D₁₀, Y_d and D₆₀), e.g. particle size distribution curves. 2. Line 91, “their relationships” could be changed to “the relationship between the residual strength parameters”. 3. Line 146, “crushed”, does this affect results? 4. Line 169, to keep consistency with the text body, change “moisture water content” to “moisture content”, please revise it. 5. Lines 172-173, there are 2 main types discussed in the literature, the Bromhead device and the IC/NGI device, which one is this? Please point out it in the paper. 6. Line 198, please give more detail about compaction. 7. It seems that you do not need to mention the

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shearing process in lines 203-204 again since you have mentioned the procedure in Lines 176-177. 8. Line 207, “the sampling rate was increased to 1 min”, please check the sampling rate unit. 9. Line 209, in my opinion, “the samples were subjected to shear” could be changed to “the samples were subjected to shearing”. 10. Lines 209-210, how do you define the residual state was achieved? 11. Lines 238-239, The authors should clearly define what are low and high shear rate. 12. Lines 375-376, the authors do not need to write Liquid limit (LL) again since you have mentioned that in lines 372-373, just use LL in lines 375-376. 13. Line 400, change “Figs. 7, 8 and 9” to “Figs. 7-9”, please revise it. 14. In Table 1, units missing on the header. Feel PSD curve is necessary. Please revise it. 15. The use of the English language needs some work. I really recommend the authors to send the manuscript to be reviewed thoroughly by a native English speaker.

Please also note the supplement to this comment:

<https://www.nat-hazards-earth-syst-sci-discuss.net/nhess-2019-156/nhess-2019-156-RC1-supplement.pdf>

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2019-156>, 2019.

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