Comment on nheSS-2021-127
Anonymous Referee #1

Referee comment on "Multiscale effects caused by the fracturing and fragmentation of rock blocks in rock mass movement: Implications for rock avalanche propagation" by Qiwen Lin et al., Nat. Hazards Earth Syst. Sci. Discuss., https://doi.org/10.5194/nheSS-2021-127-RC1, 2021

Dear Authors,

Thank you for interesting paper. I made several comments and suggest some minor corrections listed hereafter:

Line 65. fracturing and fragmentation. fracture means object while you are talking about the process.

Lines 86-89. It will be good to add some comments, explaining how fractal grain-size distribution is related to hypermobility. Any grain-size distribution is what we measure afterward. Why it appear to be this or that is another question.

Line 150. For the traveling path, the inclined plane is a frictionless rigid one with a slope angle of 30°... I do not think that "wall" is a proper word here.

Lines 162, 163, 173, 187. fracturing (see my first comment).

Line 271. based on my field observation I cannot say that rolling is a common process in rock avalanches, unlike fragmenting and sliding.