

Interactive comment on “An improved method of Newmark analysis for mapping hazards of coseismic landslides” by Mingdong Zang et al.

Anonymous Referee #2

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The topic of this MS is related to landslides induced by earthquake, which is suitable for publication in NHESS. In the MS, an improved model based on the Newmark method is introduced by authors, it should be noticed that joints in rock mass are considered in the improved model, which probably makes the model more reasonable, maybe is more suitable for evaluating the shallow landslides. However, the contents including analysis and figures in the MS does not convince me of the advantages of improved model. I'm afraid more work is needed. Here are some specific comments for your reference only. 1. I would like to hope the authors to modify abstract to highlight the improved model and its evaluated results. 2. The results of the improved model need to be compared with the results of the original model to verify the improved effect of the model. The authors need to add some contents to compare. 3. For shake map(line185-

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196, also figure 12). This map is very different from that presented by China earthquake administration. Please make clear the source of the strong motion data. If you get the raw data, please let me know how to deal with it. Also please list the information including PGA data, position, soil or rock base of these 23 stations. If you refereed it, please add the corresponding paper in the suitable positon. 4. For empirical estimation of newmark displacement(line197-214). Some new empirical models suitable for the south-west region of China have been developed (such as paper in BSSA, 2018). 5. For Figure 14, please enlarge the compare part of the figure to make the positions of landslides more clear. Otherwise, from the current comparison, we can't see what the comparison results are. More important, it seems this improved method overestimates the severity of the landslide hazards, although the mapped landslides induced by the Ludian earthquake based on images are almost in the area with over 0.6 CF.

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