Comment on egusphere-2022-268
Anonymous Referee #1

Referee comment on "An experimental perspective on the effects of initial structures on rock avalanches’ propagation and sedimentary characteristics" by Zhao Duan et al., EGUsphere, https://doi.org/10.5194/egusphere-2022-268-RC1, 2022

The initial discontinuous sets play an important role for the happening of rock avalanches. The authors performed a series of mass flows with different initial configurations and with materials containing blocks and fine particles. This is an interesting experiment, in which the runout of these mass flows at different configurations showed both inhibiting and intensifying effects. However, there are still some points confused me, please clarify.

Figure 2, the caption is “experimental apparatus”, but what is mean the right part of the figures? Please clarify and provide more details.

L 110, how were the blocks produced? It should be specific and others can repeat the procedure.

In addition, I noticed that the sand the authors used to produce the blocks is with different colors. Does the attributes of the sand or sand blocks affect by the difference in colors? Besides that, is the particle size of the sand with different colors same?

What is the intention the different color blocks were used to simulate the large blocks in field? Is the intention to study the sequence of sliding mass during motion? Because I noted the blocks with different colors was placed in a same layer (Figure 6).

The results showed that the blocks contained relatively well the initial structures. Are avalanche events in field with a same phenomenon?