

Interactive comment on “Effects of Y-type spillway lateral contraction ratios on debris flow patterns and scour features behind a check dam” by Huayong Chen et al.

Anonymous Referee #2

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This manuscript presents experiments and an empirical model on debris flow and scour features behind a check dam. The paper is well written and the scope and contents of the manuscript are appropriate for the journal. Therefore, I can recommend this manuscript to be accepted after minor revisions.

The following questions need to be clarified

In the experiments, the size of the model is much smaller than in the reality, which leads to much smaller stress in the debris flow and check dam. How would the results change for large scaled models? Please add some discussions.

Page 8 line 151 The mean value of the energy dissipation rate demonstrated a good

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positive correlation between the energy dissipation rate and the lateral contraction ratio. Do you mean: The mean value of the energy dissipation rate demonstrated a good positive correlation with the lateral contraction ratio?

Page 9 line 178 The absolute error was smaller than 15.0% in most cases, as shown in Figure 11 . What means in most cases, how many percent?

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