

Interactive comment on “A two-phase model for numerical simulation of debris flows” by S. He et al.

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The authors would like to express deep appreciation again to the editors and the reviewer for your useful comments on our manuscript entitled “A two-phase model for numerical simulation of debris flows”. The authors thus revised the manuscript carefully and explained the questions presented by the reviewer. The following are the necessarily responses for the comments in detail: (1) The Reynolds stress caused by turbulent is not included in the momentum equations of fluid phase in this stage of study. The effect of Reynolds stress on the mobility of fluidly debris flows will be evaluated in future study. (2) Erosion and sediment along the channel also will be included in future study. (3) To validate the model, comparisons with physical tests performed

C1273

by USGS will be added to the paper.

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