Nat. Hazards Earth Syst. Sci. Discuss.,
doi:10.5194/nhess-2016-138-RC2, 2016

Natural Hazards and Earth System Sciences
Discussions

Interactive comment on "Factors controlling erosion-deposition phenomena related to lahars at Volcán de Colima, Mexico" *by* R. Vázquez et al.

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Received and published: 21 June 2016

Erosional-depositional processes by secondary lahars are discussed in this paper in one of the most active ravines at Colima volcano. The study is based on detailed morphological changes at specific points and slope variations during a period of almost three years. This is an important topic since these processes define the generation and transformation of secondary lahars, they influence lahar inundation areas and, in consequence, have strong implications for hazard assessment. The article is well written and most results and conclusions are well supported by field data. However, some points would be worth considering in the discussion section: - A wider discussion of how lahar characteristics (single pulse vs multiple pulse events, sediment concentration, magnitude, duration, velocity) interact with channel morphology to control erosion-deposition phenomena. - What factors favor erosion of channel bed vs ero-

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sion of channel walls? - How does channel sinuosity affect the erosional-depositional processes described? Photographs of figure 7 show some points very near to channel curvatures and some tight turns are described in line 97. - Accumulated rainfall and the sediment availability are identified as some important factors controlling erosion and deposition. Please add some extra data to give support to this conclusion. I hope that these comments help to improve the present manuscript.

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