

***Interactive comment on “Erosion after an extreme storm event in an arid fluvial system of the southern Atacama Desert: an assessment of magnitude, return time, and conditioning factors of erosion caused by debris flows” by G. Aguilar et al.***

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The paper by Aguilar et al. has as a main goal to assess the erosional impact during a single extreme rain event in southernmost Atacama Desert. The paper is well written and easy to follow. The structure is correct and conclusions are in line with the research goals and questions presented in the introduction. The paper provides new knowledge on the geomorphic dynamics in the southern Atacama, including quantita-

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tive data obtained both from the field and using remote sensing. The authors put their results in a wider context with direct impact in our understanding of the erosion rates in the Atacama and the main factors underlying them. To my knowledge, the approach of this work is unique and valuable for publication in NHESS.

Minor comments.

Line 17, p2: space between "by" and "terrestrial" Line 21, p3: you mean processes Line 3-4, p6: question: This statement refers to debris flows reaching the main valley, isn't? I mean, it probably there were debris flows within the catchment but not big enough to deliver sediment to the outlet alluvial fan? Line 14, p6: regarding positive correlation you mention: the higher the relief factor the steeper the slope within the catchment? therefore negative correlation with volumes of debris flows? Line 16, p8: erase ";" Line 24, p8: replace "did" by "does"

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