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Hydrology and Earth System Sciences Discussions

Interactive comment on "Identifying erosive periods by using RUSLE factors in mountain fields of the Central Spanish Pyrenees" *by* M. López-Vicente et al.

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Allowing also for referee’s comments, with which actually I fully agree, my general overview of the paper suggests it is rather weak in the present form and does not provide key details as readership of HESS would expect. I see the following points as the major issues. Firstly, the authors should take the questions raised by the referee into due account. In addition, no erosion measurements were carried out and this can contrast with the overall aim of the paper, namely to provide techniques and promote effective measures to avoid soil degradation in a fragile Mediterranean agro-

ecosystem (albeit no evidence was actually given on how much fragile is the study site). Therefore, without experimental verifications, I also have suspicions that the results presented are biased by the rainfall regimes observed by the selected weather station (only one, without a spatial variability analysis); and this feature can be exacerbated by the type of mathematical structure of the RUSLE relation. The authors mention the influence of different tillage practices, but no information is given about soil bulk density. As the authors measure soil water contents, it would be interesting to get information on water content values at which tillage produces the greatest proportion of small aggregates, which on turn exert effects on soil erosion. Regarding the water content measurements, the ThetaProbe equipment is an impedance soil water probe requiring local field calibrations for its correct use, but no details are given in the text about this problem.

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