

Interactive comment on “Detection of seasonal erosion processes at the scale of an elementary black marl gully from time series of Hi-Resolution DEMs” by J. Bechet et al.

G. Sofia (Editor)

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Dear authors, First of all, I appreciate the efforts you are taking in bringing forward the research of Dr. Bechet: it is admirable that you decided to finish this research and dedicate it to him.

I have now reviewed the referees' reports and the discussion of your manuscript. Based on this review, I agree with the comments of both referees, also regarding the fact that some terms missed a clearer explanation and some figures were too small. In addition to their technical comments, I would suggest to provide table I in scientific notation or 10^{-n} to simplify the read, and to round numbers in table II to two decimals, to be

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comparable to table III. On top of this, I have one further comment about your research. It is not clear to me how you propagate the errors for balance estimation. You stated that “A possible procedure to estimate the overall errors is to define the quality of the alignments for each campaign (1) and between them (2)”. How do you transfer these errors to the estimation? Do you use any propagation approach such as (Lane et al. 2003; Wheaton et al. 2010), for example? Please clarify better this part. You provided a series of replies which give a first overview of the steps you are going to take for the review. If you are willing to pursue these revisions, I will be pleased to reconsider your submission, with the help of the same reviewers who examined the present work. In submitting your revised version, please provide a detailed list of the changes made to the text, and a detailed list of your responses to each reviewer's comment. Please note that this editorial decision does not guarantee that your paper will be accepted for final publication in ESurf. A decision will be made only when the revised version will be available, and will be evaluated. Best regards Giulia Sofia

Lane SN, Westaway RM, Hicks DM (2003) Estimation of erosion and deposition volumes in a large, gravel-bed, braided river using synoptic remote sensing. *Earth Surf Process Landforms* 28:249–271. doi: 10.1002/esp.483
Wheaton JM, Brasington J, Darby SE, Sear DA (2010) Accounting for uncertainty in DEMs from repeat topographic surveys: Improved sediment budgets. *Earth Surf Process Landforms* 35:136–156. doi: 10.1002/esp.1886

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