

***Interactive comment on “How rainfall event
characteristics affect the applicability of I_{30} as an
index of intense or erosive rainfall: a brief review
with proposed new rainfall index” by
David L. Dunkerley et al.***

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I sincerely thank Referee #3 for taking the time to evaluate and comment on my manuscript. I will attend to the minor corrections and revisions suggested by the Referee in a revision of the manuscript.

Anonymous Referee #3 comments in particular that it would be helpful to make an addition to the Conclusions section of the paper. This would touch on the possible future application of the EDfx index in studies of soil erosion. I thank the Referee for

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this suggestion, and will attend to it in a revision of the manuscript. Essentially, the proposed index is thought of as a replacement for, or perhaps a supplement to, the use of the I30 index. That is, in analysing the results of soil loss in field experiments, correlations among soil loss indices and the value of the EDfx index would be sought, in the same way that relationships with I30 are sought. Various possible advantages of this approach are sketched in the paper, including a more consistent representation of rainfall intensity in both short- and long-duration rainfall events. Event durations may extend from tens of minutes to several days, and a core idea explored in the manuscript under review is that a fixed 30-minute clock period might not be the best index to represent peak rainfall intensity through events spanning such a wide range of durations. Whether indeed the use of EDfx would confer improved explanatory power in accounting for soil loss under varying rainfall conditions will have to await field testing and evaluation. It is possible that, whatever the outcome of such evaluations, there might nevertheless be value in considering the uses of indices such as EDfx as alternatives to the use of conventional measures such as I30, or as supplementary approaches to the analysis and description of rainfall intensity. This idea was motivated by the range of rainfall climatologies, from arid to wet tropical, that have rainfall event characteristics that contrast markedly with those of the regions of the USA for which the I30 index was originally shown to be appropriate.

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