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Biogeosciences Discussions

Interactive comment on "A multifractal approach to characterize cumulative rainfall and tillage effects on soil surface micro-topography and to predict depression storage" *by* E. Vidal Vázquez et al.

Anonymous Referee #2

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The authors have shown a great work and it has the level to be published in Biogeoscience Journal. However, there are a few things that still they have to work on.

Please, you have to put more emphasis in the differences with the work presented in Vidal Vazquez et al., 2008. Assessing soil surface roughness decay during simulated rainfall by multifractal analysis, Nonlin. Processes Geophys., 15, 457–468.

How can you explain this conclusion: "Spatial configuration patterns of soil microtopography from duplicate neighbour measurements taken on the same treatment and

date can exhibit great differences,and this for the three roughness conditions analyzed". Is this not saying that you cannot really comapre several treatments? Perhaps the phrase is not well explained.

Another conclusion: "Both, rough soil surfaces resulting from primary tillage and smooth ones produced by two tillage passes, with high and low random roughness values, respectively, can display similar levels of spectral complexity." I think that you should put more emphasis in your conclusions and express it in other way. It looks that you have contradictory results if they are not well explained. For example, in this case I will say that RR and spectral complexity are different type of information because high and low RR could give the same SC.

Please, rewrite the conclusion sections. You have a lot of information there and is the right place to show it.

Please, remove anythig related with q=+10 and q=-10. The errors that you are handeling are too big for this.

Why this difference in MDS estimation using the borders or not?

Interactive comment on Biogeosciences Discuss., 7, 2099, 2010.