

Interactive comment on “Impacts of rainfall features and antecedent soil moisture on occurrence of preferential flow: A study at hillslopes using high-frequency monitoring” by Z. Peng et al.

Anonymous Referee #4

Received and published: 3 June 2016

General Comments

The study of “Impacts of rainfall features and antecedent soil moisture on occurrence of preferential flow: A study at hillslopes using high frequency monitoring” is of considerable significance to the scientific community interested in better understanding the onset of preferential flow. The vast amount of observational data collected by the authors is impressive. However, a significant revision needs to be done before the manuscript becomes suitable for publication.

One of the main issues with the manuscript is that it fails to engage the reader as

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to the importance of this study and how it differs from previous studies. The authors should highlight it in the Introduction section. Secondly, having a separate Discussion section is not the best approach here. Having a Results and Discussion section merged together will give the readers a better understanding of the similarities and disparities between the current study and the previous studies.

There are also a lot of grammatical mistakes in the manuscript, which makes the manuscript harder to understand and keep the focus on the actual research part. I suggest the authors have a native English speaking person review the manuscript to improve its overall quality.

Specific Comments

The title of paper can be shortened. Consider leaving out the second part of the title, as it does not provide much additional information.

Authors have used the word “rainfalls” at numerous instances throughout the manuscript. It should be “rainfall”.

Missing citations in the Reference section. For example, Vogel et al. 2010; Niu, 2003. Please re-check and make sure all the references listed.

Page 1, Line 14: Remove “,” after intensity.

Page 1, Line 22: Replace “knowledge” with “finding”. Using the word “finding” instead of “knowledge” tells the reader the importance of the study.

Page 1, Line 26: Indent the paragraph.

Page 2, Line 4: Rewrite 1st sentence. “Among the many” what? Cite the studies after you have addressed what are “among the many”.

Page 2, Line 6: Do not begin the sentence with “And”. Reword the sentence.

Page, Line 20: A 2008 study, in my opinion is not “recent”. Rewrite the sentence and

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try not to refer a 2008 study as “recent” or cite another relevant “recent” study.

Page 2, Line 20-24: Try to break the sentence “On one hand” It is too long.

Page 2, Line 20: swap “became” with “becomes”.

Page 2, Line 24: rewrite the sentence “However, since larger”. It is poorly worded and is difficult to understand.

Page 2, Line 28: “Among the numerous approaches” has only reference. Please cite additional studies if “numerous approaches” are mentioned.

Page 2, Line 29: Use a semicolon instead of a comma after 1996 to cite two different papers.

Page 2, Line 3: In the last paragraph of the Introduction, the authors should not only mention what they are doing in the study but why and also highlight how their study is different from previous studies.

Page 2, Line 8: Indent the first paragraph.

Page 2, Line 16: Indent the first paragraph. I have noticed this error through out the manuscript. Please fix this.

Page 3, Line 20: The authors have not mentioned the reason as to why the probes were buried at different depths at different sites. Was it due to varying soil depths at these locations? What was the need to bury the probes further than 60cm if the authors only use 0-60cm for their analysis shown in the Figures?

Page 4, Line 11: Which “data” are the authors referring to?

Page 2, Line 27: Swap “was” with “is”.

Page 4, Line 25: “Producer” is not an appropriate word here. May be the authors can use “manufacturer”.

Page 4, Line 27: “. . . a bunch of studies”. Use another way of describing like “ a lot of
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studies” or “other studies”.

Page 5, Line 21: change “. . . as was shown” to “as is shown”.

Page 6, Line 4: Wrong usage of word “respectively”.

Page 8, Line 22: What does n=233 refer to?

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., doi:10.5194/hess-2016-112, 2016.