

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 #2

Received and published: 4 May 2016

Major comments: 1. The knowledge gap on preferential flow paths that necessitates the current study is not clear. 2. The introduction appears to be a summary of previous studies on preferential flow occurrence. A persuasive introduction with a clear hypothesis or research question to improve upon the previous studies should be included in Introduction. 3. From the results, it appears that frequency of the occurrence of preferential flow was not correlated to antecedent soil moisture content variation (very small) within a site, but it has a correlation when the frequency is compared between different sites. This result suggests that a small variation in antecedent moisture content within a site can trigger preferential flow. Is there a threshold moisture content that

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triggers preferential flow in a site? Between sites, there could be different confounding factors, so I wonder how useful it is to make a general statement about the relationship between antecedent moisture content and frequency of preferential flow. Minor comments 4. Page 1, line 9: "Observation was conducted" is vague and it sounds confusing. Be specific. 5. Page 3, line 8: What observations were carried out? Be specific. Or write a non-vague sentence. E.g., we monitored rainfall intensity, runoff, soil moisture content... at the catchment. 6. Page 4, line 6: Titration method - need a reference that describes more about the method. 7. Page 4, line 11: Data showed. Where to find those data? Be more specific about which data the readers should look for here. 8. Page 8, line 1: Grammar issue.

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

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