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Hydrology and Earth System Sciences
Discussions

Interactive comment on "Development and testing of a large, transportable rainfall simulator for plot-scale runoff and parameter estimation" *by* T. G. Wilson et al.

Anonymous Referee #1

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Overall, the paper was well written and well organized in an easy to follow manner. The rainfall simulator design and testing will, without doubt, be of interest to hydrologists in the field of rainfall\runoff. There are a few corrections and questions given below. Page 4268 Line 11: change carried out in on to carried out on. Line 16: change comparable to similar. Page 4269, lines 12-14: perhaps consider emphasizing the lack of repeated measurements of soil hydraulic properties over time and how your work will help to overcome this issue. Page 4270, line 20 change is to are. Page 4271: line 3: change a by 3.7m to a 3.7m. Page 4274: why were the soil moisture probes inserted at an angle? – also why was 0-15 cm depth range selected to measure soil moisture? Would eroding

soil in runoff water harm the tipping-bucket mechanism or result in errors in measured amount of water runoff? Page 4275: line 12, delete the word with. Page 4278: line 4: Did the value of K potentially change between 2008 – 2010? Page 4280: the meaning of condensed ponding time is unclear. Page 4280, line 15: what is the meaning of the parameters it, Kt, and thetat? Page 4281: what is the meaning of T in equation 14? Page 4284: in equation 21 maybe consider using a different letter than Q for cumulative runoff as it is used to represent infiltration on page 4279. Page 4285: line 23, delete the word are.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 11, 4267, 2014.