



Interactive comment on “Formation of runoff at the hillslope scale during intense precipitation” by S. Scherrer et al.

S. Scherrer et al.

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Most of the suggestions of referee 2 will be introduced in the paper as they complete our arguments and improve the quality. We thank for the constructive and helpful suggestions.

In your general comment a) you propose to insert pictures of the different experimental sites. However, pictures will not provide much additional information as the most of the plots show only grass grown hill-slopes with nearly uniform micro- topography. We will clarify this fact in writing.

The general comment b) focused on the “traceability” of the results. As you propose, we will include a reference to our process decision scheme. In addition, as we will stress

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that knowledge on soils and on runoff processes and as well as field as experience is required for a reliable process identification.

p2527 [line 2]: " to cover a broad range of conditions" versus [line 10]: "fairly homogeneous sites were selected". To me, this is a conflict. Our 18 plots were selected to represent a broad range concerning soil structure and soil characteristics, geology and slope. Each individual site, however, was chosen to be as homogenous as possible with no changes in slope, soil, geology, etc. within the plot. We will clarify this aspect.

The information about the equipment (nozzles, rainfall distribution, etc.) will easily be added.

p 2537 [line 5]: There is really no hard criteria to distinguish between SOF1 and 2. The differentiation was made depending on the start of runoff and by considering runoff volume.

In a nearly saturated area the differentiation between SOF and HOF is difficult, when high rainfall rates are applied. On less permeable patches of this plot, Hortonian overland might occur, which cannot re-infiltrate due to high wetness. On more permeable patches, however, water infiltrates, saturates the soil and produces SOF. For this is the reason the differentiation is called "somewhat" arbitrary.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 3, 2523, 2006.

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