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Interactive comment on "Ecohydrological effectiveness of litter crusts in sandy ecosystem" *by* Yu Liu et al.

Anonymous Referee #1

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It is an interesting and complex study to explore the hydrological impacts of litter crusts and biocrusts in desert ecosystems.

I am not a native speaker so I cannot judge whether the manuscript has reached the level of scientific writing in grammatical terms. Some small suggestions:

Percentage (%) should be closer to the previous number (for example L29, L95 etc.).

L168 "stopwactch" => stopwatch

Some characters do not display correctly, but this is a typographically problem in preference (incompatible editing programs): ä, é and °C (for example L29, L62, L144 etc.).

I suggest using the word "layer" instead of "crusts".

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Discussion paper

L94-L95: minimum/maximum in which period?

"Simulated rainfall (rainfall intensity was 20 mm h-1) was applied to the quadrats for successive 30 minutes and then weighed to determine the Max WIC (g dm-2). " How long after the simulation was the sample measured? If it was measured immediately then water still drips out of the crusts and it is not exact and should not be called interception (MIC), because a part of it would infiltrate into the soil (in field).

L294-L295: "We immersed. . .weight gain." sentence is reduplication (Materials and methods).

Is 24 hours enough to saturate the litter? After L289 WHC was 170%, but after L296 could it be 200%. The correct name would be WHC_24.

How did you measure the infiltration with crusts or without crusts on bare sand?

Could cylinder edge cut the leaves or what about the leaves under the edge of the sampling device?

Is the sample number sufficient? (Did you make statistics e.g. based on standard deviation?)

L465 (Figure 2.): Missing: BSL, bare sandy land;

L478-L479 (Figure 4.) Is "ns" non-significant? You use different scale for the diagrams, please be consistent in all of them. The scale of diagram A goes to 40 mm/min, so it would be double size, and the others from 0 to 25 mm/min with original size. It helps the comparison.

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