

## ***Interactive comment on “Sigmoidal Water Retention Function with Improved Behavior in Dry and Wet Soils” by Gerrit H. de Rooij et al.***

**Anonymous Referee #1**

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In this manuscript, the authors report some new formulations for the soil water retention curve and hydraulic conductivity curve. The formulations work at different moisture conditions, from the dry condition to the fully saturated condition. The manuscript is generally well written and can be followed easily. Prior to a final recommendation, the authors should address the following comments. 1. In the literature, some existing formulations have comparable capabilities with the newly proposed formulations. The authors should explain the new contribution clearly. 2. Equation (4) plays a very important role in the manuscript, but there is no sufficient discussion about this equation. For example, how is this equation derived? What are its advantages compared to existing equations? 3. For many figures, the curves cannot be differentiated easily if printed in black and white.

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Interactive comment on Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2020-380>, 2020.

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