

Hydrol. Earth Syst. Sci. Discuss., referee comment RC1
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Comment on hess-2022-186

Anonymous Referee #1

Referee comment on "Technical note: How physically based is hydrograph separation by recursive digital filtering?" by Klaus Eckhardt, Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2022-186-RC1>, 2022

Comments:

- For equation 5 and 6, if no delay is assumed ($d = 0$), the subscript of y and b should be $k-1$ instead of k . Why is $(y_k - b_k)$ in the manuscript? The baseflow in the current step should be related to the past step.
- For line 120, the assumption is that there is no major time lag between precipitation and the exfiltration of groundwater into surface waters. I don't think this statement is always true, especially in the large storm or extreme soil infiltration.