

## ***Interactive comment on “Hydrograph separation: an impartial parametrization for an imperfect method” by Antoine Pelletier and Vazken Andréassian***

**Keith Beven**

k.beven@lancaster.ac.uk

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Clearly, prohibition has not worked since I wrote my summary almost 20 years ago!! But that does not mean that the definition of base flow is any clearer now than then. And that is not just a matter of single storm separations versus long term separations, since environmental isotope data can be used over long time series to infer velocity-related (and process based) travel time distributions. These generally reveal no clear separation between slow and fast, but a full spectrum of travel times. That will also be true of the celerities that control the rising and falling limbs of the hydrographic.

As I said in my comment I fully understand the aims of the authors in presenting their

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methodology but they should explicitly recognise that they are producing AN estimate of base flow (which, depending on their particular assumptions, cannot be considered definitive as THE estimate of base flow). Applied in the way they have done so, consistently across many basins, it might a useful tool - but please remove any process interpretation in revising the paper.

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