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Interactive comment on "HESS Opinions: Improving the evaluation of groundwater representation in continental to global scale models" *by* Tom Gleeson et al.

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A 1962 recession hydrograph for Big Spring, Missouri, USA

This follow-up will illustrate a comparison of the universal logarithmic and the new NISR transformation as represented, in SC1, by Equations (1) and (2).

Figure 2 summarizes result of a new recession flow analysis for year 1962 for Big Spring near Van Buren, in Missouri, a regional-scale limestone karst having a drainage

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area of 1500 km^2.

The graph shows a long recession hydrograph from May to August of 1962 (Florea and Vacher, 2006, Figure 2C). The recession literally started one day after the last of the major peaks and ended at the start of the next noticeably uptick. It also includes the log and NISR transformation of the observed flow.

In their absolute value, from untransformed, to log-, and finally NISR-transformed recession hydrograph, the correlation coefficient R improves incrementally; and the recession slope flattens successively by one order of magnitude.

References

Florea L.J. and Vacher H.L.: Springflow hydrographs: eogenetic vs. telogenetic karst. Groundwater. 44(3):352-61, 2006.

Pyto© - Python 3, version 13.0

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Figure 2. Observed, and log- and NISR-transformed recession hydrographs for Big Spring near Van Buren. Karst aquifer is of limestone, 475 Ma in age, and 1500 km^2 in area (USGS Gage 07067500; Florea and Vacher, 2006).

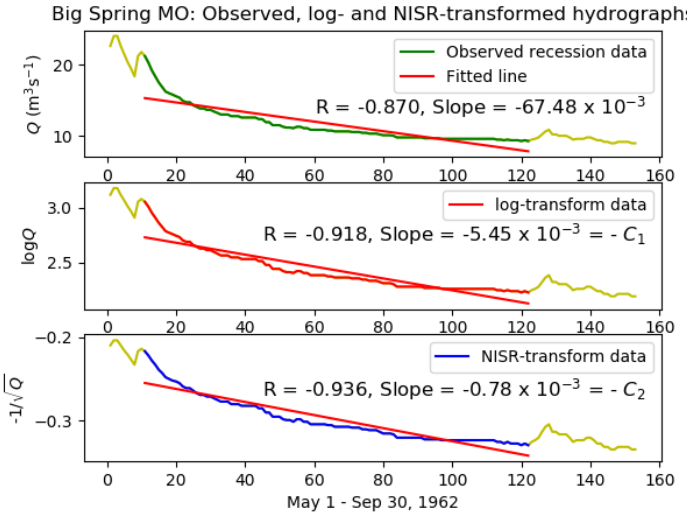

Fig. 1.

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