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Discussions

Interactive comment on "Seasonal cycles and trends of water budget components in 18 river basins across Tibetan Plateau: a multiple datasets perspective" *by* Wenbin Liu et al.

Anonymous Referee #3

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The authors exploited different sources of data to look at the variability and trend of water budget of the Tibetan Plateau. I find the paper generally well written, but language editing is required throughout the paper to fix the typos and grammar before the paper can be published. I will not give specific comments but the authors need to make good efforts to fix the language.

The paper is logically clear and gives some invaluable insights about the hydrology in the TP. However, while working with multiple datasets, the authors did not fully describe the advantage and disadvantages of each dataset in applying to the TP region, provided that these global data sets from either models or satellites have their own weakness when applied to the TP area. In particular, it's well known that land surface

models have some difficulties when applying to TP (e.g., parameter tuning in boundary layer schemes), even though they have good performances in different regimes.

I think the paper is not doing well on uncertainty analysis in the water balance estimation and trend detection. In fact, no uncertainty assessment is done at all. The authors acknowledged that the multi-source data sets have their own uncertainties biases, but failed to address the implications in their analysis. In the trend analysis, it is unclear whether the self correlation is removed, and what uncertainties are associated with the derived trends.

The tables and figures are high quality.

Figure 5, 6 and 7 show very similar seasonal behaviors in the hydrology and meteorology between the basins. So why divide the regions to these basins?

Figure 9, what is R^2 here? Do you need to remove low frequency in the indices before calculating trends?