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Hydrology and Earth System Sciences
Discussions

Interactive comment on "Technical Note: A data-driven method for estimating the composition of end-members from streamwater chemistry observations" *by* Esther Xu Fei and Ciaran Joseph Harman

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End member mixing analysis is commonly applied to identify the dominant runoff producing sources of water. It employs tracers to determine the dimensionality of the hydrologic system. However, determination on the composition of the freshwater source is hard without observed candidate end-member measurements. This technical note provides a statistical method to effectively identify the end-member compositions and relative uncertainties. The scientific contribution is clear and the novelty of this method is enough.

But, I have a curiosity about the tracer set size and composition in this study, which may determine which and how many end members are identified. In my opinion, the number of end-member is highly sensitive to the tracer set size and composition. Why do you choose these tracers in your study?

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