

## ***Interactive comment on “A Comparison of the Discrete Cosine and Wavelet Transforms for Hydrologic Model Input Data Reduction” by Ashley Wright et al.***

**Ashley Wright et al.**

ashley.wright@monash.edu

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The authors would like to thank the reviewer for their comments and questions. The remarks made by the Reviewer are written in italics, and the replies in normal font. *The paper presents a comparison of two methods of model order reduction, cosine transform and wavelet transform. It is general a smooth good read. However, the contribution of the author is not clear as the similar comparison has been investigated before in fields other than hydrology (please refer to the papers on the model order reduction methods for the modulation schemes on communication channels for example). I think the authors need to clearly state their contribution to this paper. Other than that, the authors have to compare the results with other methods of model reduction,*

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*i.e. projection-based methods.*

The manuscript presents a comparison of two methods of model input data reduction, the discrete cosine transform and the discrete wavelet transform, in a hydrological context. The novelty of the paper is that these transforms are discussed in a hydrological context. This is clarified on page 3 line 23 Reasons for selecting these two transform are addressed on page 2, lines 23-35 and page 3 lines 1-4. There are a large number of transforms that could be used, the authors chose the two most common transforms that are used for model input data reduction techniques in other fields. We would also like to clarify that methods of model order reduction are a related field, yet are outside the scope of this paper.

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