Interactive comment on "A Skewed perspective of the Indian rainfall-ENSO Relationship" by Justin Schulte et al.

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The purpose of this paper is to apply novel methods for bivariate, nonlinear wavelet analysis to understand whether apparent changes in the relationship between indices for ENSO and the Indian Monsoon represent fundamental changes in their relationship. The methods are based on those published in previous peer-reviewed papers by the authors, and so this paper can be viewed as an application of these methods to a relevant and interesting scientific problem. These tools for higher-order wavelet analysis allow the authors to quantify the nonlinearity of ENSO and indices for the Indian monsoon. The authors conclude from this analysis that ENSO nonlinearity is related to ENSO flavors, and that the apparent changes in the relationship between ENSO and Indian rainfall are also related to ENSO flavors. Finally, the authors use these findings

to re-interpret findings by Yun and Timmerman (2018) which suggest that the breakdown of the ENSO-India rainfall relationship is related to shifts in the linearity of the ENSO regime. Specifically, the authors argue that the nonlinear relationship identified by their higher-order wavelet model will have non-Gaussian noise components, potentially confounding the alternative analysis. While this paper is unlikely to be the final word on this debate, it is a clear, well-written, and important contribution to the study of the ENSO-Indian rainfall relationship, and to time series analysis more broadly, and should be published pending minor stylistic edits.

I also note a lack of a data availability policy [https://www.natural-hazards-and-earth-system-sciences.net/about/data_policy.html]. Making the code and data used to others would help other researchers apply these methods to other time series.

Minor comments: please see attached PDF

Please also note the supplement to this comment:
https://www.hydrol-earth-syst-sci-discuss.net/hess-2019-280/hess-2019-280-RC1-supplement.pdf