

Interactive comment on “A Waveform Skewness Index for Measuring Time Series Nonlinearity and its Applications to the ENSO-Indian Monsoon Relationship” by Justin Schulte et al.

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Review of the Manuscript “A Waveform Skewness Index for Measuring Time Series Nonlinearity and its Applications to the ENSO-Indian Monsoon Relationship” by Justin Schulte et al.

The authors propose a new measure for nonlinearity using waveform index. The paper is well written and informative. Indeed, the paper is of great interest to NPG readers. But before acceptance, the authors should provide valid responses for the following comments. 1. There are several other nonlinearity measures available, and the author can use them to compare the results. 2. Page 2, lines 1-2, there could several other

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manifestations of the nonlinearity in a time series, may measure such as transfer entropy could capture them. 3. Page 8 lines 1-2, it is not clear, please elaborate 4. Fig 6 and 7, state the reasons why the authors have chosen 10 and 20 year sliding window. 5. The authors have used correlation and sliding correlation to measure the relationship between the nonlinearity in ENSO and AIR anomalies, they could have very well used other measures such as mutual information. That would be more appropriate. 6. The author have chosen AIR for the analysis, many studies have shown that the relationship between ENSO and Indian rainfall is spatially variable, in that context how the application of AIR is justified and the results are meaningful.

Other minor comments, The author refer to the paper Schulte 2020 many times in the introduction, but I could not find it in the references Please correct the Eq.4 denominator

Interactive comment on Nonlin. Processes Geophys. Discuss., <https://doi.org/10.5194/npg-2020-48>, 2020.