

## ***Interactive comment on “Documentary-derived chronologies of rainfall variability in Antigua, Lesser Antilles, 1770–1890” by A. J. Berland et al.***

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We are grateful for the reviewer's comments, which we have found very interesting and encouraging.

We are pleased that the reviewer has spotted a number of orthographic errors which had escaped us and we will, of course, attend to these.

As regards the reviewer's suggestion that a smoothing filter could be added to Figure 2b, we agree that this would facilitate the identification of major wet/dry periods and propose to add a moving average. In the case of Figure 3a, we acknowledge that this is a rather complex plot, displaying classifications for 121 individual rain-years as well as various annotations. Nonetheless, we feel that it is important to provide readers

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with a means of discerning our rain-year classifications at an annual resolution. This data is not available in any other section of the paper. By including it in a single figure, we eliminate the need for separate tables listing the classifications, which would add substantially to an already lengthy paper. We have provided the journal type-setter with the figure at high resolution and will request it to be positioned in landscape format across the full length of the page to make the fine details as clear as possible. However, we have taken on board the reviewer's comment and agree that for future comparisons of the chronology with proxy records or climate indices it may be preferable to apply a filter or pool data into multi-year groupings.

We are pleased that the reviewer otherwise approves of our analysis techniques and recognises that in these early stages of historical climatological investigation in the Lesser Antilles, the identification of clear linkages with broader climatic patterns or modes of variability may not be possible. The reviewer's suggestions of possible future research themes were intriguing and in a number of instances coincided with our existing plans. For instance, we are currently working to compile Antigua sugar production data for the period under study. These are available in government records, plantation papers and several secondary sources. Extending this forward in time for calibration with modern meteorological data is a promising proposition. The reviewer also hints at the examination of other socio-economic markers of climate extremes, such as human health and economic stability. This too is something that we are currently exploring from an inter-disciplinary perspective.

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