

I would like to thank the authors for their significant efforts in revising this manuscript. The issues I raised regarding the confusion between some text and figures, the construction of the observed time-series when using multiple buoys, and issues with figures have all been addressed. I think the additional model comparison section and discussion of the lagged correlations inherent in the LSTM method significantly enhance the paper.

Minor comments

Original comment #2: Additionally, from Table 2 the test date have generally deeper lows and faster wind speeds than the training set. Some discussion on the use of this method on hurricanes which fall at the extremes, or outside the range of conditions in the training set would be beneficial.

Author Response: We agree and have added the following discussion at Line 492:

“Thirdly, the selection of training and test sets would have an extremely strong impact on forecasting results. Specifically, test sets of this study (i.e., Hurricanes Dorian, Sandy, and Igor) were are all far more powerful than hurricanes within the training set, and these were chosen as it is expected that due to climate change, hurricanes are due to not only become more frequent, but also, more intense. The present method demonstrates that the model overestimates the highest SWHs of even those systems and should continue be effective if hurricanes become even more extreme (and thus, the degree by which the current model overestimates maximum SWHs should decrease). However, if future systems are weaker than the test set (as it is now), the problem of overestimation would be exacerbated. Thus, a second model that is trained with hurricanes even weaker than the training set would be prudent and run in parallel to ensure both scenarios are considered in future disaster aversion strategies.”

Reviewer response:

I think the final sentence of the new text conflates two issues: firstly, the difference in character of the training set and trial set hurricanes, and secondly the tendency of the method to overestimate maximum SWHs. While it is instructive that in this paper the model is applied to more powerful hurricanes than are included in the training set, subject to correcting the method's bias to larger SWHs, I think it would be prudent to use all of the historical hurricane data available in a training set before the model is used operationally.

Original Comment #11: Lack of a metric to capture the timing of the peak SWH.

Author Response: We are unaware of a metric that can capture the timing of the peak SWH under hurricane conditions as this is generally not known a priori given the vast quantity of variables involved in this phenomenon. If you do know of a metric, we humbly ask that you inform us so that we can do the calculations that we think would be very valuable in increasing the impact of our work.

Reviewer response: My original comment was intended to suggest comparing the SWH maxima seen in your observed and forecasted time-series presented in Figures 3, 4 & 5. Your new figure 6 and response to comments #12 and #13 addressed this.

Reviewer Comment 32: Figure 1 uses a rainbow colour scale which is generally discouraged as it is not easily interpreted by colour-blind readers. I would encourage a change to a more accessible colour-scale.

Response: We thank the reviewer for this suggestion as it would greatly reduce the marginalization of those with colorblindness in the scientific enterprise. We have replotted Figure 1 using the 'viridis' colormap available in MATLAB. Unfortunately, we are unaware of anyone in our vicinity that is colorblind and thus we are unable to assess the efficacy of the change. If you know anyone that would be able to assist, we would be more than happy for additional feedback and any future requests to change the colorscale for their benefit.

Reviewer response: Thank you for making this change. I believe that 'viridis' is a much more accessible choice. There are some web-sites which allow you to simulate the effect of various forms of colour blindness on your own figures, e.g., <https://www.color-blindness.com/coblis-color-blindness-simulator/>