

University of Arizona (UA) Forecasts an Above-Average Hurricane Season
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The University of Arizona (UA) forecasting model predicts above-average hurricane activity for the 2019 Atlantic Hurricane Season (including subtropical storm Andrea, which formed in May). Our models predict the following:

| | 2019 Prediction | 70% Probability Range | Median Since 1980 |
|------------------|--------------------|--------------------------|----------------------|
| Hurricanes | 8 | 7-9 | 7 |
| Major Hurricanes | 3 | 2-4 | 2 |
| ACE | 150 | 124-176 | 100 |
| Named Storms | 16 | 14-18 | 12 |

Our total predicted tropical activity is above the median since 1980 in all four categories. Please note this year is our first for predicting named storms.

One of the most important aspects in our models is sea surface temperatures (SSTs), which are very near the average since 1980. The Atlantic Multidecadal Oscillation (AMO) index - another measure of Atlantic SSTs and directly used in our ACE forecast - was climbing throughout the year until it dropped in May, but still remains slightly positive.

The El Niño Southern Oscillation (ENSO), represented by the Multivariate ENSO Index (MEI), was not factored in as the AMO index was greater than zero. We also did not factor ENSO into either the major hurricane or ACE predictions, as the MEI values were not high/low enough. This index also had been steadily increasing for the first quarter of the year, but has backed off significantly the last two months.

The Atlantic zonal pseudo-wind stress is actually the determining factor in making this an above average year. The values for this season are quite similar to what they were in 2017, which was a very active year. The difference, however, is this year does not feature the very warm SSTs that 2017 had. Still, this factor increases our predictions.

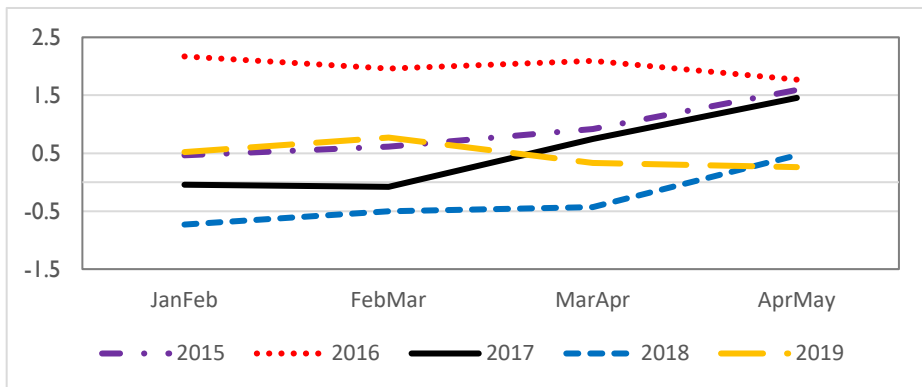
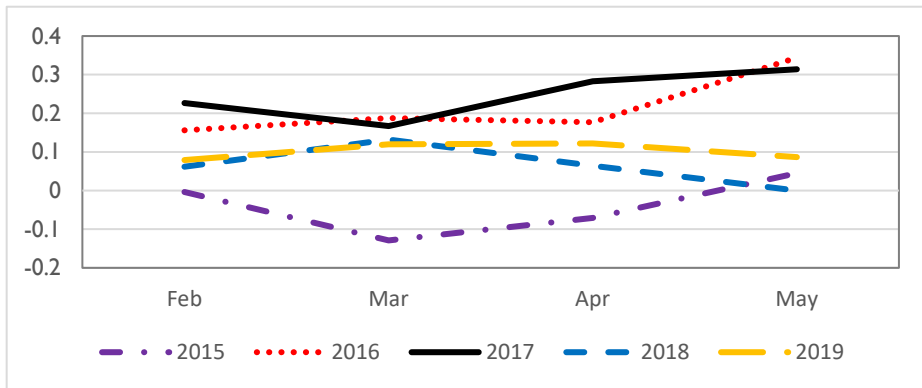
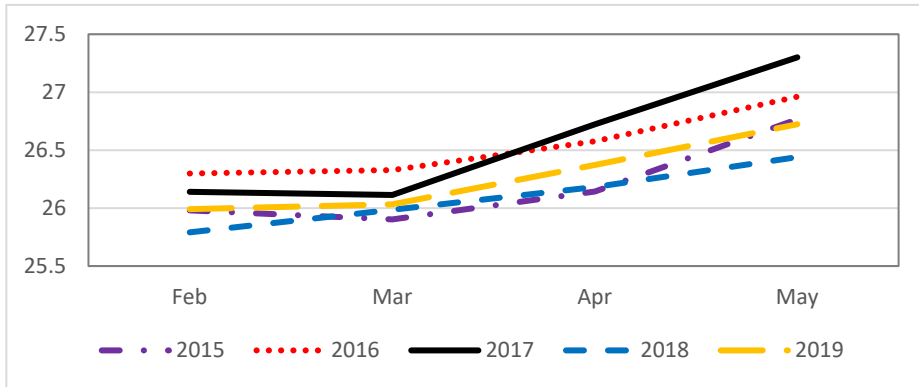
Since we started issuing predictions for tropical cyclone activity in 2014, our average errors have been quite similar to the error published in both Davis et al. 2015 and Davis and Zeng 2019. For hurricane, our average prediction error is 1.8. For ACE and MH, since 2017, when we started issuing forecasts, our average errors have been 39 and 0, respectively.

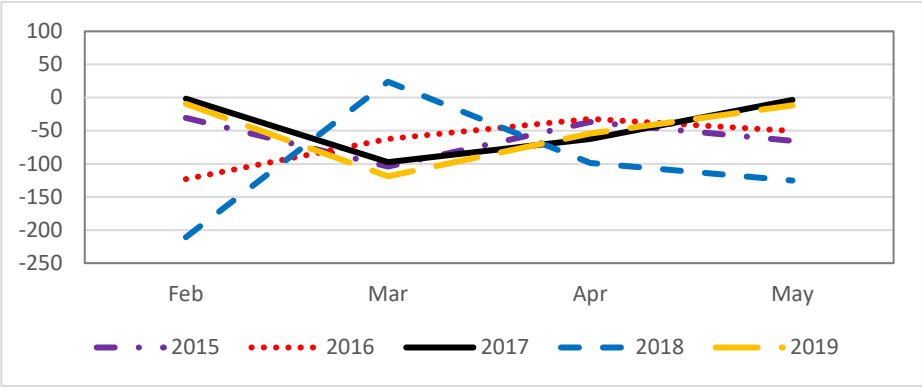
Reference: Kyle Davis, Xubin Zeng, and Elizabeth A. Ritchie, 2015: A New Statistical Model for Predicting Seasonal North Atlantic Hurricane Activity. *Wea. Forecasting*, 30, 730–741, doi: 10.1175/WAF-D-14-00156.1

Davis, K. and X. Zeng, 2019: Seasonal Prediction of North Atlantic Accumulated Cyclone Energy and Major Hurricane Activity. *Wea. Forecasting*, 34, 221–232, <https://doi.org/10.1175/WAF-D-18-0125.1>

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Model Variable Trends





Zonal Pseudo-stress^(3/2)