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Title: After a Decade Are Atlantic Tropical Cyclone Gale Force Wind Radii Forecasts Now Skillful?

Journal: *Weather and Forecasting*

Short Abstract: The National Hurricane Center (NHC) has a long history of forecasting the radial extent of gale force (or 34-knot) winds for tropical cyclones in the Atlantic basin out to 72 h. These are referred to collectively as gale force wind radii forecasts. These forecasts are generated as part of the 6-hourly advisory messages made available to the public. In 2004 NHC began a routine of post-analysis or "best tracking" of gale force wind radii that continues to this day. At approximately the same time, a statistical wind radii forecast, based solely on climatology and persistence, was implemented so that the NHC all wind radii forecasts could be evaluated for skill. This statistical wind radii baseline forecast is also currently used in several applications as a substitute to or to augment NHC wind radii forecasts.

This investigation examines the performance of the NHC gale force wind radii forecasts over the last decade. Results presented within indicate that NHC's gale force wind radii forecasts have increased in skill relative to the best tracks by several measures, and now significantly outperform statistical wind radii baseline forecasts. These results indicate that it may be time to re-investigate whether applications that depend on wind radii forecast information can be improved through better use of NHC wind radii forecast information.

Certification:

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