Towards closing the gap in NOAA's seamless suite of Forecast products: Prospects of "useful" Predictions for Weeks 3 & 4?

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In NOAA's seamless suite of forecast products spanning weather and climate starting from hours through days, weeks, months, seasons and years, we now have official forecast products in all time spans except in the so called "3-4 weeks forecast hole" time period. While every effort continues to be made by researchers and forecasters alike to fill this void, reliable and useful forecasts in this 3-4 weeks' time period has always remained a major challenge.

Forecasts for actual temperature and rainfall for every specific day up to 7 days or so, and then for averaged time periods such as for 6-10 days and week 2 (days 8-14) are among the most used of NOAA's weather forecast products. On a daily basis, there is a great need from average public to businesses alike, for a forecast, or some sort of weather guidance for upcoming weeks 3 and 4 for all sorts of planning purposes. However, at present, the conventionally accepted evaluation measure such as traditional "anomaly" (from some reference climatology) correlation coefficient for say, 2m-Temperature or rainfall for weeks 3 and 4, on the average is very low (0.0-0.25). This has remained low for the past few decades.

In this talk, I propose an alternative approach to making and evaluating forecasts for weeks 3-4 period, since this period is neither weather nor climate. It will be shown that these newly forecast metrics are highly skillful, as compared to traditional measures. Results will be presented for T2m and rainfall forecasts for weeks 3 and 4 using NCEP's latest state of the art Climate Forecast System's Version 2's (CFS V2) 45day ensemble forecast runs available since 1999. Historical skill scores and examples of recent successful forecast cases will be shown. With an open mind we will explore the potential usefulness of these forecasts for weeks 3 and 4. A test website showing these forecasts and skill scores in real time, on an experimental basis for public to see, will be shown.