

Impact of two different SST climatologies on North Atlantic re-forecastsTim LaRow[†];[†] Florida State University, USALeading author: tlarow@fsu.edu

Retrospective seasonal hurricane forecasts are examined using a two-tiered method with the Florida State University/Center for Ocean Atmospheric Prediction Studies atmospheric global spectral model. Two, four-member ensembles are developed using predicted sea surface temperatures anomalies determined from the National Oceanic and Atmospheric Administration's Climate Forecast System (CFS) Model from 1982-2009. The first ensemble uses the CFS SST climatology added to the CFS SST anomalies to form the full SST field. The second ensemble replaces the CFS SST climatology with the Reynolds Olv2 climatology to form the complete SST field. Examinations of the sea surface temperature linear trends within the global tropics reveals that the model SST trends are negative compared to the observed positive trend over this time period; this includes the Main Development Region. Despite the negative global tropical sea surface temperature trend from 1982-2009, a statistically significant positive hurricane trend is found using the SSTs developed from the Reynolds Olv2 climatology while no significant hurricane trend is found using the CFS climatology. Possible reasons for this will be discussed.