ECPC's Weekly to Seasonal US Forecasts

John Roads, Shyh Chen, Masao Kanamitsu

Experimental Climate Prediction Center Scripps Institution of Oceanography UCSD, 0224 La Jolla, California 92093 jroads@ucsd.edu ph: 858-534-2099 fax: 858-534-8561 http://ecpc.ucsd.edu/

The Scripps Experimental Climate Prediction Center (ECPC) has been making experimental, near real-time global forecasts since Sept. 27, 1997 with the NCEP global spectral model (GSM) used for the reanalysis. These global forecasts are augmented over a few regions (US, SW, CA, BZ) with a higher resolution regional spectral model (RSM). Images of these forecasts, at daily to seasonal time scales, are routinely posted on the World Wide Web and digital forecasts products are provided on the ECPC anonymous ftp site to interested researchers. These forecasts are increasingly being used to drive various application models.

Roads et al. (2001, BAMS, 82, 639-658) previously described this forecast system, as well as the skill of the global forecasts. The purpose of this talk is to describe the corresponding forecast skill of the US regional model and to contrast it with the global model US forecast skill for a few standard meteorological outputs including: temperature, precipitation, relative humidity, wind speed, soil moisture, and planetary boundary layer height. As will be shown, the regional model forecast skill is at least comparable to the forecast skill from the global model. A major RSM advantage is its ability to better forecast extremes, as demonstrated through standard NCEP threat and bias scores. Perhaps more importantly, the higher resolution RSM provides a more convincing background regional climatology, which is useful for developing a better outreach to the application community.