



**NATIONAL CENTERS FOR ENVIRONMENTAL PREDICTION (NCEP)  
ENVIRONMENTAL MODELING CENTER (EMC)  
COLLEGE PARK, MD**

**Dr. Michael Farrar, Director**  
<http://www.emc.ncep.noaa.gov/index.php>

**MISSION**

Maintain, enhance and transition-to-operations numerical forecast systems for weather, ocean, climate, land surface and hydrology, hurricanes, and air quality for the Nation and the global community, and for the protection of life and property and the enhancement of the economy.

**VISION**

With our partners, to be the world's best and most trusted provider of numerical forecast systems for weather, ocean, climate, land surface and hydrology, hurricanes, and air quality.

**WHAT WE DO**

EMC produces a numerical modeling suite that provides forecast guidance from short-range, high-resolution to seasonal systems that incorporate the practices of data assimilation, modeling physics, coupling, and dynamics, construction of ensembles, and intelligent post-processing of observational data sets. The numerical weather prediction models that EMC produces are the numerical guidance foundation that all forecasts are built upon.

**EMC PRODUCT SUITE**

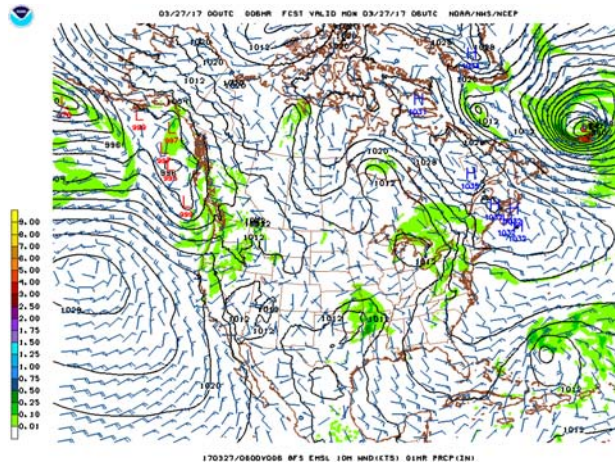


Figure 1: Sample GFS Forecast Map

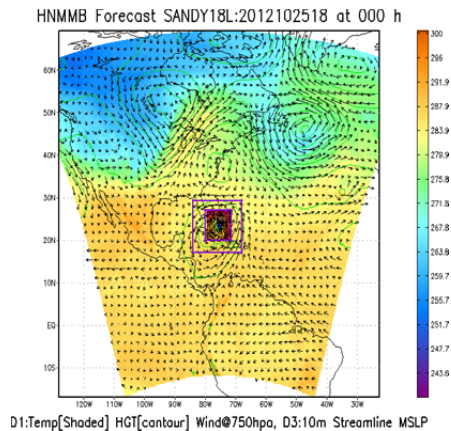


Figure 2: Sample Hurricane Forecast Map

**GLOBAL FORECAST SYSTEM (GFS)**

**GLOBAL ENSEMBLE FORECAST SYSTEM (GEFS)**

**REGIONAL MESOSCALE MODELS**

North American Model (NAM), HiResWindow, RAP/HRRR

Short Rang Ensemble Forecast (SREF), RTMA/URMA

**MARINE MODELS**

Ocean (RTOFS, BASED ON HYCOM)

Waves (BASED ON WAVE WATCH III)

**HURRICANE MODELS**

HWRF, HMON

Waves (based on Wave Watch III)

**CLIMATE MODELS**

Climate Forecast System (CFS)

National Multi-Model Ensemble (NMME)