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Under the direction of Dr. Stephen Lord, the EMC has developed computer models for weather, climate and air quality prediction with breakthrough performance, thereby providing to the Nation NOAA model guidance of unprecedented accuracy and reliability. Under his leadership, models providing operational hurricane track forecast guidance have accelerated improvements in the accuracy of model hurricane track forecasts over the past 5 years, allowing the NCEP Tropical Prediction Center to consistently exceed GPRA goals for hurricane landfall forecast error in the extraordinarily busy Atlantic and Gulf of Mexico region for 2004. In August 2004, a new Climate Forecast System (CFS), based on a global coupled ocean and atmosphere model, was implemented. For first time, this model approach was as accurate for El Nino forecasts as statistical models, heretofore considered the most accurate models. Also, in August 2004, under Dr. Lord's direction, a new model was introduced for air quality forecasting in the Northeastern U. S., thereby providing new NWS and Environmental Protection Agency (EPA) services for health and safety and paving the way for a National capability to predict air quality for the major urban areas throughout the United States. Each of these breakthrough achievements has been accomplished through Dr. Lord's efforts to broaden EMC's scientific partnerships with other agencies and his leadership toward the goal of producing the world's best forecast models with the most resource-efficient strategy.