The Development of Global Ensemble Forecast System (GEFS)

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NCEP Global Ensemble Forecast System (GEFS) is currently running at T190L28 (approximately 73km resolution) with GFS v8.0. This system was implemented in NCEP operation since February 23, 2010. It has demonstrated the improvement from long retrospective experiments for past years. Recently, as the starting of 2010 tropical cyclone season, the GEFS shows a strong capability to predict tropical cyclone comparing to other numerical guidance. The development plan for next GEFS has been designed as 1) Using latest GFS model (v9.0, July 2010), 2) Increasing horizontal resolution from T190 to T254 (about 55km) for first 192 hours, 3) Increasing vertical resolution from L28 to L42 for all 16 days forecast, 4) Improving initial perturbation method and 5) Improving current STTP (Stochastic Total Tendency Perturbation) algorithm. A retrospective experiment has been planned for new GEFS which are for summer hurricane season and winter storm season. The preliminary results will be presented.