NMME Phase-I Hindcast and Real-time Experimental Prediction Protocol

The CY2011 NMME experimental predictions have been made in real-time since August 2011. As part of the development of the real-time capability, the NMME partners agreed on a hindcast and real-time prediction protocol. Some of the key elements of this protocol include:

- Real-time ISI prediction system must be identical to the system used to produce hindcasts. This necessarily includes the procedure for initializing the prediction system. The number of ensemble members per forecast, however can be larger for the real-time system.

- Hindcast start times must include all 12 calendar months, but the specific day of the month or the ensemble generation strategy is left open to the forecast provider.

- Lead-times up to 9 months are required, but longer leads are encouraged.

- The target hindcast period is 30 years (typically 1981-2010).

- The ensemble size is left open to the forecast provider, but larger ensembles are considered better.

- Data distributed must include each ensemble member (not the ensemble mean). Total fields are required (i.e., systematic error corrections to be coordinated by MME combination lead, NOAA/CPC). Forecast providers are welcome to also provide bias-corrected forecasts and to develop their own MME combinations.

- Model configurations – resolution, version, physical parameterizations, initialization strategies, and ensemble generation strategies – are left open to forecast providers.

- Required output is monthly means of global grids of SST, T2m, and precipitation rate. More fields will be added based on experience and demand. It is also recognized that higher frequency data is desirable and this will be implemented as feasible.

- Routine real-time forecast data must be available by the 8th of each month.