

National Multi-Model Ensemble (NMME) Prediction Project

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It is well known the multi-model ensemble (MME) predictions for different time scales provide better skill. The utility of MME stems from the fact that predictions from different models tend to have different biases and errors (that are often complementary), and an MME approach, because of cancellation of compensating errors, leads to better predictions. With this philosophy in mind, a National Multi-Model Ensemble (NMME) project for improving the skill of seasonal prediction was initiated that involves various centers in the US – NCEP, GFDL, NASA/GMAO, NCAR, U. of Miami, IRI, and COLA. As part of the NMME project, real-time seasonal forecasts at different institutions are made on an agreed on schedule once a month, and further, monthly mean data for selected variables is collected at one place. Real-time seasonal forecasts initiated every month are also accompanied by a 30-year hindcast allowing one to (a) assess the skill of different prediction systems, and (b) develop skill-weighted methods for combining various seasonal forecasts. Forecast and hindcast data is also available to the research community via the IRI data library at:

<http://iridl.ldeo.columbia.edu/SOURCES/.Models/.NMME/>

and will enable further research in assessment of seasonal predictability and development of objective consolidation schemes.

NMME forecasts are now available routinely and are included in constructing Climate Prediction Center's operational seasonal forecasts over the US.