

Moisture Impact on the Predictability of Numerical Model over China

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The performance of numerical model is apt to be affected by the local climate characters. So there is a lot of work that has been done about optimizing the model parameters and finding the source of forecast error.

A quite amount of territory of China is under a typical character of abundant moisture. This character is so important that many weather processes are strongly related to it. During some model verification, it is found that model skill is closely related to monthly variation, which may dictate the potential impact of moisture processes. So a comprehensive assessment is conducted to get a deeper understanding of moisture impacts on numerical models in the China region.

Results show that moisture-related model errors are significant in the main numerical models running operationally in CMA. Forecast errors of moisture are closely related to a bunch of other variables on different heights both in time and space.