

Verification of real-time forecasts by the Korean Integrated Model (KIM)

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The Korea Institute of Atmospheric Prediction Systems, KIAPS, is developing a new global forecast system for the operational use, on the 9-year project from 2011 to 2019. Since the second phase of the KIM (v2.0) began semi real-time operation in July of 2015 with the cubed sphere NWP model and fully coupled data assimilation system, lots of new or advanced techniques for physics, dynamics, and data assimilation have been developed. Among this progress, the medium range forecasts of KIM have been evaluated to examine the model performance and systematic bias. Standardized statistical verification is conducted against analyses and observations (e.g., sonde and precipitation observation). And more validation for surface and upper atmospheric variables against in-situ observation and the global analysis/reanalysis data measures the initial and forecasts bias. Besides this quantitative verification, the subjective verification complements the weakness of the objective verification aforementioned and it assures the ultimate usefulness of the model which is providing forecast guidance to the operational forecasters. The overview of the whole KIAPS verification system with some results will be presented.