



## **Overview of Chinese GRAPES Data Assimilation System**

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The development of data assimilation system of Global and Regional Assimilation and Prediction System (GRAPES in short) which is Chinese new generation operational numerical weather prediction system completed in recent years is reviewed in this paper, including the design scheme and main characteristics. GRAPES adopts the variational approach with stresses at application of various remote sensing observational data. Its development path is from three dimensional to four dimensional assimilation. It may be implemented with limited area or global configurations. The three dimensional variational data assimilation systems have been operational in the national and a few of regional meteorological centers. The global four dimensional assimilation system is in pre-operational experiments, and will be upgraded. After a brief introduction to the GRAPES data assimilation system, results of a series of validations of GRAPES analyses against the observation data and analyses derived from other operational NWP center to assess its performance are presented.