

Séminaire vendredi le 23 janvier 2015 11:00h / Seminar Friday January 23rd 2015
11:00h

Sujet/Subject : Progress and challenges in regional scale ensemble based data assimilation

Langue/language : Anglais / English

Conférencier/Lecturer: Fuqing Zhang (Pennsylvania State University)

Résumé/Abstract :

Despite the inherent limit of mesoscale predictability, there is still significant room for improving the practical predictability of severe weather and tropical cyclones through advanced data assimilation techniques, better use of existing or future observations, and improved forecast models. Ensemble-based data assimilation is a state estimation technique that uses short-term ensemble forecasts to estimate flow-dependent background error covariance and is best known by varying forms of ensemble Kalman filters (EnKFs). The EnKF has recently emerged as one of the primary alternatives to the variational data assimilation methods widely used in both global and limited-area numerical weather prediction models. In addition to comparing the EnKF with variational methods, I will try to review recent advances and challenges in the development and applications of the EnKF, including its hybrid with variational methods, in limited-area models that resolve weather systems from convective to meso- and regional scales.