



CNRM, UMR 3589

## **SEMINAIRE CNRM**

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### **THE PROCESSES ON GRAPES REGIONAL DATA ASSIMILATION**

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**en salle Joël Noilhan**

#### Résumé :

The development and recent improvements of the regional GRAPES (Global/Regional Assimilation and Prediction System) 3DVar system will be presented in this talk. A unified global/regional 3DVar system which shares the same framework and observation operators for global and regional assimilations has been rebuilt with flexible horizontal Arakawa-C grid and height-based terrain following coordinate in the Center for Numerical Prediction and Research (CNPR). The conventional observations and GPS precipitation water, cloud derived winds, and radar VAD winds are assimilated in the regional 3DVar system. The 3DVar analysis qualities are improved through background error covariances, cloud analysis, bias correction scheme for radiosonde humidity profiles and variational quality control scheme et al.. The performances of GRAPES RAFS system (Rapid Analysis and Forecast System) will be presented as well.