

MEGHÍVÓ

A Magyar Tudományos Akadémia Meteorológiai Tudományos Bizottság
Légkördinamikai Munkabizottsága és a Magyar Meteorológiai Társaság
Légkördinamikai Szakosztálya tisztelettel meghívja

2011. január 25-én kedden 14 órai kezdettel tartandó közös előadóülésére,
melynek témája az ún. Ensemble Transform Kálmán-szűrő eljárás légköri
adatasszimilációban való alkalmazása lesz.

Az előadóülés programja:

Adamcsek Edit: **The application of the Ensemble Transform Kalman
Filter technique at the Hungarian Meteorological
Service**

Jelena Bojarova: **The hybrid Ensemble variational data assimilation
scheme in HIRLAM**

Az előadások kivonatait alább mellékeljük.

Az előadás helyszíne: OMSZ, földszinti Díszterem
Budapest II., Kitaibel Pál utca 1.

Az előadásra minden érdeklődőt szeretettel várunk!

Horányi András és Szintai Balázs
az MTA MTB Légkördinamikai Munkabizottsága nevében

Szépszó Gabriella és Bölöni Gergely
az MMT Légkördinamikai Szakosztályának nevében

The application of the Ensemble Transform Kalman Filter technique at the Hungarian Meteorological Service

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The provision of the best background error estimates for data assimilation is crucial to derive the best initial conditions for a numerical weather prediction model. Using the Ensemble Transform Kalman Filter (ETKF) method the background error statistics can be estimated from a forecast ensemble, which is generated by integrating the model initialized with the ETKF analysis perturbations. The error growth implied by the background forecast ensemble, which is measured with the forecast differences, characterizes the reliability of the actual background. The resulting background errors were examined at the Hungarian Meteorological Service (HMS). In the talk, the Ensemble Transform Kalman Filter method is described, and the first results are presented

The hybrid Ensemble variational data assimilation scheme in HIRLAM

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A hybrid variational ensemble data assimilation scheme has been developed on top of the HIRLAM variational data assimilation. It provides the possibility of applying a flow-dependent background error covariance during the data assimilation at the same time as full rank characteristics of data assimilation are preserved. Following Lorenc (2003) the hybrid formulation is based on an augmentation of the assimilation control variable with weights to be assigned to a set of ensemble perturbations. A number of real observation experiments and observing system simulation experiment were conducted in order to understand properties of the hybrid scheme. The sensitivity of the hybrid scheme to various parameters, such as frequency of the ETKF rescaling and assumptions on the smoothness and variability of the local weights assigned to ensemble perturbations, is investigated. The hybrid variational-ETKF data assimilation scheme, in its optimal settings, outperforms the 3DVAR Variational Data assimilation scheme, as measured by forecast verification scores.