

*Regional Cooperation for
Limited Area Modeling in Central Europe*



Spatially varying background error variances

Alena Trojáková, RC LACE DM



Aim of the talk is to present and discuss our plan regarding the use of spatially varying background error variances to get Your opinions and experiences

- **Introduction**
- **Preliminarily plan**
- **Open questions**

Use of spatially varying background error variances in ALADIN was shown beneficial by Strajnar (2008). In order to revitalize this interesting area of research we proposed a flat-rate stay to investigate possibilities of an implementation of necessary framework outside Meteo France.

- Technique is operational at Meteo France for ALADIN
- background error variances are derived from ARPEGE ENS_DA (AEARP)

- Investigate and/or check
 - scientific & technical implementation
 - scripts & namelist
 - variability of the AEARP derived variances in time & space
 - evaluate the impact on analysis and forecast for a short period
 - availability of the variances for remote use
- Guidelines and/or comprehensive package for remote installations is expected

- **Technical & scientific implementation**
 - any other report and/or paper ?
 - scripts & namelist modification ?
 - Strajnar (2008) used only grid-point vorticity variances and the specific humidity was allowed to be flow-dependent using an empirical formula, what is the current status in CY36 (CY38) ?
 - Is used operationally for AROME ? (any specificity ? e.g. grid-point q)
 - Why are variances in GP space ?
- **Background error variances**
 - technical & scientific generation of variances from AEARP (to test LAEF and/or other EPS system)
- **Any hint for our study is welcome !**