

14th ALADIN Workshop, Innsbruck, 1-4 June, 2004

LAMEPS Working Group Discussions

1. Status

Coordination:

- A LAMEPS working plan was prepared last year at HMS (with the help of Claude Fischer and Jean Nicolau)
- Based on this working plan a questionnaire was sent by András Horányi to all ALADIN coordinators
- Four countries answered: Belgium, France, Slovakia, Romania
- Information of LAMEPS plans in Austria

1.1. Lack of information of plans or no manpower

Belgium

- Interest on both theoretical and operational aspects
- Plans: ?

Manpower: (possible participant) Steven Vannitsem ?

Romania

- Downscaling of ARPEGE ensemble (PEACE) forecasts
- Generation of initial perturbation locally: breeding and/or system simulation

Manpower: Mihaela Caian

Slovakia

- Interest to obtain dynamical estimate of ALADIN forecasts' reliability

Manpower: (actually) no

1.2 Work has started

Austria

- Breeding
- Ensemble Transform Kálmán filter
- At present: theoretical preparation

Manpower: Yong Wang, Alexander Kann (+ connection with Penn. Univ, NCEP, Canada)

France

- ARPEGE based ensemble system (PEACE)
 - Targeted SVs
 - Operational from June (T358)
- Downscaling of PEACE with ALADIN + perturbation of physics

Plans:

- Perturbation of physics
- Specific initial condition perturbations (stretched SVs: res. of 100km in Europe)
- Development of validation
- Usage of EPS products by the forecasters (methodology to use EPS products on the short-range, gain enough experience)

Manpower: Jean Nicolau

Hungary

Working plan was prepared last year:

- Downscaling of ARPEGE ensemble forecasts with ALADIN - investigation of optimisation area and time (2004)
- ALADIN LAMEPS based on ALADIN native SVs (2005)
- Downscaling of representative members of clusters of ARPEGE ensemble members (like in COSMO's LEPS system) - planned in a later stage

What was done:

Installation and development of verification and visualization tools
Downscaling of ARPEGE ensemble forecasts has started:

Manpower: 1.5 manyear (Edit Hágel, Gabriella Szépszó)

2. Interest, resources

Worth to try:

- perturbation of physics (via namelists)
- perturbation of orography (envelope, no envelope)

Main interest: downscaling of PEACE forecasts with ALADIN

- experiments are needed
- problem: data transfer from Toulouse (11 forecasts)
size reduction is needed: compression the difference of the ensemble members fields
- in a later stage interest on an operation application
an idea: share the resources for data transfer and LAMEPS integration, the necessary LAMEPS fields are gathered and processed by a centre and only EPS products are disseminated to the involved countries

Harmonization of the research:

- Compare the results of different methods on common cases
- Downscaling of PEACE: common cases should be selected
 - Problem: different areas
 - PEACE outputs are not available for all the dates

Verification tools for ALADIN LAMEPS.

2. Methods

Planned methods (up to now):

- Downscaling of ARPEGE ensemble
 - ARPEGE ensemble members
 - Representative members of ARPEGE EPS clusters (super ensemble)
- ALADIN SV
- Breeding
- System simulation (perturbation of obs.)
- Ensemble transform Kálmán filter
- Perturbation of physics
- Question of LBC!!!

Other:?

- Multi model ensemble
- Multi analysis ensemble
- MOS