

Main outcomes of HMG-CSSI meeting

Data assimilation and use of observations

- Close interaction/cooperation on **radar preprocessing**, QC, assimilation experiences and data exchange. Involvement of OPERA?
- Same on observation impact studies more in general, emphasis on radar/GPS/satellite surface data
- BUFR2ODB: shared ambitions but how to realize in practice?
- Anticipate OOPS impact on B-matrix/hybrid 3D-VAR ETKF work, try to avoid double work
- RUC and spinup
- New surface spatialization tool: work planned in EURO4M context, possibly intensify efforts?

Ensemble forecasting

- Product definition?
- Verification/assessment:
 - Joint experimentation on convection-permitting scales
 - Operational verification GLAMEPS - LAEF
- Convection-permitting ensembles: basic plans, how to evaluate, how to combine?
- Cooperation GLAMEPS-LAEF-MF:
 - Conv permitting ensemble research/setup
 - Verification/calibration/post-processing aspects (methodology, comparison of results)
 - Possibilities for combination of operational G-L ensembles
 - Something else?

System

- Phasing: more and earlier upstream preparation / practical arrangements
- Surfex governance through steering committee
- Code optimization: more coherent efforts
- Define RAPS benchmark extension and code optimization work plan
- It is of interest to experiment with new architectures (e.g. GPGPU's) where possible
- OOPS: intensify participation of non-MF, non-ECMWF LAM people in preparation meetings?
- Interoperability and verification programmes: finish what was promised, little ambition for extensions

Validation, verification and post-processing

- Verification tools: need to extend
- Diagnostic tools: make them work everywhere (e.g. MUSC, DDH, ...)
- Range of post-processing products: need to extend?
- Access / digitization of radar / sat data for validation

Proposal: Set up common task force for this area

Dynamics and physics

- LBC project: need for 1h questioned (except for extremely rare storms)
- Extension zone/Boyd: discuss practical phasing aspects, documentation
- Phys-dyn interaction: 2d order accuracy coordination required
- Radiation comparison studies: area for cooperation?
- Convergence actions planned for 2011
- Climate modelling/chemistry: intensify/facilitate contacts between communities in HIRLAM/ALADIN countries