Highlights of the past year

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16 - 19 April, 2018
Towards optimal use of high-resolution observations and flow-dependent assimilation, also in nowcasting range

- 4D-Var coupled to full range of “operational” observations

- LTKF and hybrid EnVar research branches merged with trunk

- More attention for simulation setups for nowcasting

- Slant delay impact studies/inclusion

- Several non-NMS data sources looking very promising: NetAtmo, smart phones, ...

- SAPP: modern, easy-to-use tool for observations handling

See presentations in DA session
- Convection-related problems
  - Triggering not strong enough, structures too smooth, too much liquid and not enough solid precipitation
  - Studies: Multiple causes
  - Corrective actions focusing on surface aspects, interaction between shallow convection and cloud microphysics

- High resolution modelling workshop Dec 2017
  - Strong interest, also from applications side
  - Many activities already ongoing on local domains
  - Test beds, plan for experimentation

See presentations in PH and VER sessions
Surface analysis and modelling

- EKF: as good as or slightly better than OI when used in combination with “old” surface physics and conventional observations
- Experimenting with EKF + satellite surface observations
- Explore alternatives to (parts of) CANARI
- Test proposed combination of Surfex v8.1 schemes in Cy43h
- Work on coupled atmosphere-sea (wave) and coupled surface – hydrology modelling

See presentations in SU session
Probabilistic forecasting

- Implementation/monitoring of operational HarmonEPS suites (new additions: KEPS, IREPS)
- Making ensembles suitable in nowcasting range through e.g. overlapping windows cycling strategy
- Experimenting with SPPT, SPP and considering different pattern generators; introducing EPPES method to select sensitive parameters
- Intercomparison of different LBC perturbations (SLAF, 1h ENS, (adapted) clustering, random field): SLAF and ENS performance comparable

See presentations in EPS session
- HARP-v2 release => spatial verification

- starting with HARP-v3 development: integration of in-situ and conditional verification, more user-friendly interface

- Longer-term monitoring

- User meeting in Nov. 2018

See presentations in Verification session
Cy40h1.1.1 technical release: several large data assimilation, surface developments entering the Harmonie trunk

- Preparing Cy43h1-alpha and the move to GIT

- Modernizing/optimizing code/scripts within limited resources:
  * Start overhaul of parts of scripting system
  * Optimization of microphysics/EDMF code
  * Next: single vs double precision (Cy43)

See presentations in System session
Towards a single consortium

Convergence actions:

- 2017: Introduced new setup/process for rolling work plan process, linking R&D activities to consequences for common code

- 2018: start joint monitoring of actual activities

- 2018: Definition of mission and scope of joint consortium
Increasing operational cooperation in the HIRLAM world

Expanding operational cooperation:

MetCoop

NordNWP (orig)

NordNWP East (MetCoop +Baltic) and West (Dk, Ic, Ir, Nl)
So, both on the scientific and organizational side…

Plenty of things to work on together and to look forward to!

Have a good meeting and enjoy Toulouse!