



Highlights and the start of a new phase

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Workshop/ASM 2016, Lisbon

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Preparing for HIRLAM-C (2016-2020) ...



- ...An external review
- ...Council agreement on new high-level strategy 2016-2020
- ...A new MoU
- ...A new management group
- ...Strategy meeting April, Toulouse

Highlights of the past year (a personal view)

- ✓ **Data assimilation and use of observations:**

Operational implementation of various new hi-res observation types; extension of impact studies to 4D-Var; coming of age of 3D-Var/LETKF

- ✓ **Forecast model:**

Radiation intercomparison and radiation – cloud – aerosol studies; The preparation and evaluation of the many new components in Cy40h1; Surfex-v8

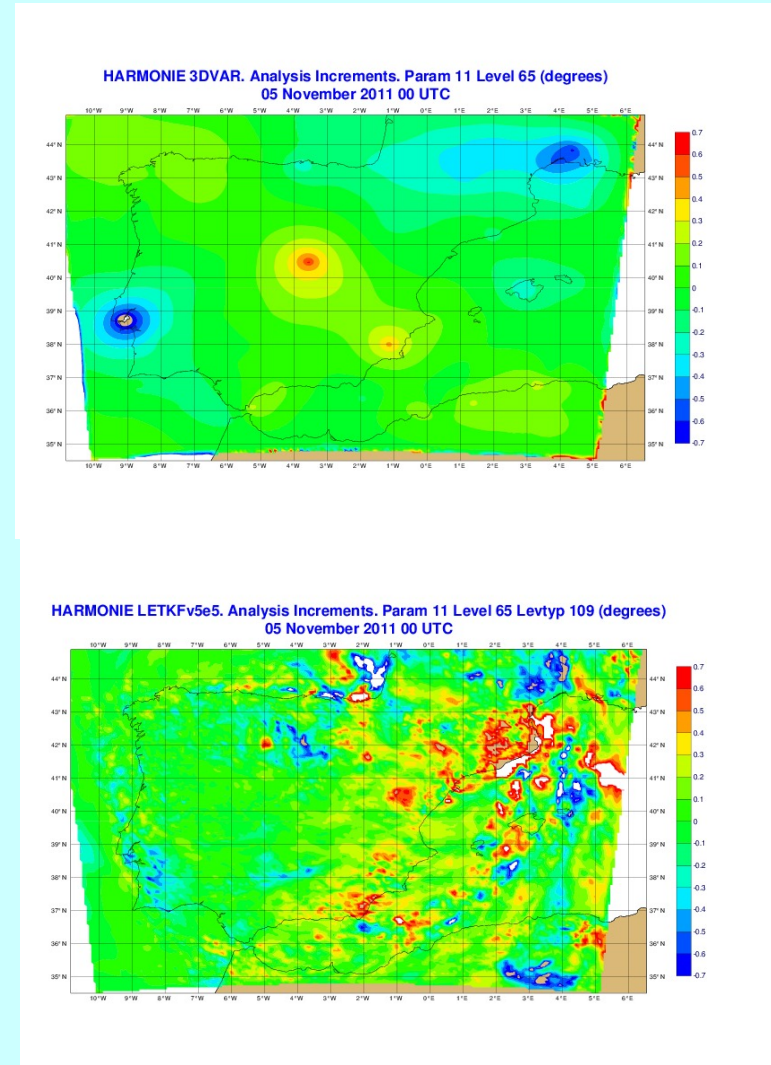
- ✓ **GLAMEPS/HarmonEPS:**

Preparations for operational introduction of GLAMEPS-v3 and several local HarmonEPS suites; improved calibration on widening range of parameters

- ✓ **Discussions on Harmonie for climate**

Towards greater flow-dependency and optimal use of high-resolution observations

- Assimilation of ATOVS, radar, GNSS, Mode-S, scatterometer, IASI, GPS RO ... being made operational
- Quality control assessment of radar data
- Scatterometer/ GNSS slant delay operators
- 4D-Var impact studies
- 3D-Var/LETKF: from first setup to experimentation
- Surface analysis: the challenge of introducing more advanced DA schemes to enable greater use of satellite data



Forecast model developments

- The introduction of a new turbulence scheme and adaptations in the radiation and microphysics schemes
- Continuation of the work on interaction between radiation, microphysics, clouds and aerosols
- The testing of cubic and quadratic grids
- Working on a consistent surface module+assimilation setup, starting experimentation with ISBA-DIFF soil scheme

Probabilistic forecasting

... HarmonEPS: introduction and testing of various new types of perturbations (EDA, physics, surface)...

... Improved calibration of larger set of screen-level parameters...

... Preparations for GLAMEPS-v3 and local operational HarmonEPS suites...

2015/16 – MetCoOp Convective Permitting Ensemble Prediction System

New Swedish HPC («Frost») & Norwegian HPC (“Vilje”)

Configuration:

- ✓ Model cycle 40
- ✓ AROME-MetCoOp domain
- ✓ AROME control run ~ AROME-MetCoOp (except for cycle)
- ✓ ALARO physics control run
- ✓ 8 AROME members
- ✓ Lead times: control runs: +66hr, members: +36hr.
- ✓ 2,5km or 3,1km?
- ✓ Perturbations: IP & LBP from SLAF (or ECMWF-ENS), perturbations of physics
- ✓ Cut-off: 1hr 15min. Delivery: 2hr 15min.
- ✓ Cycling, members: 6 hourly, control runs: 3 hourly.



Daily test runs autumn 2015, operational runs 2016

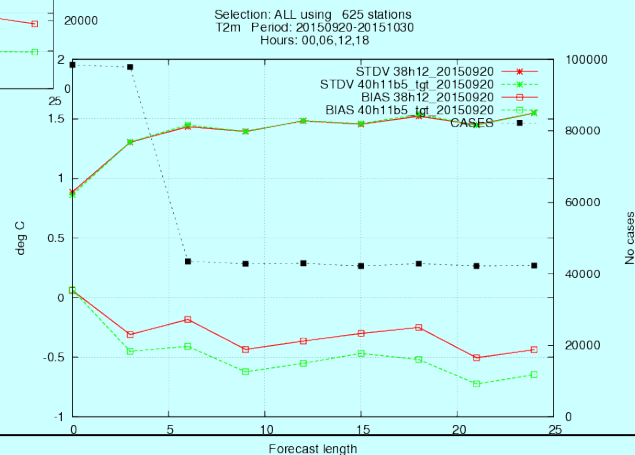
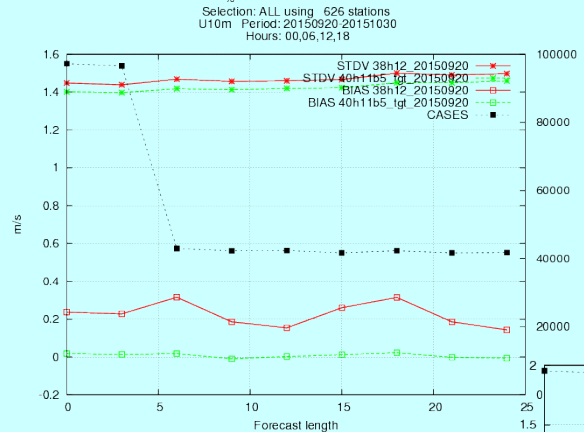
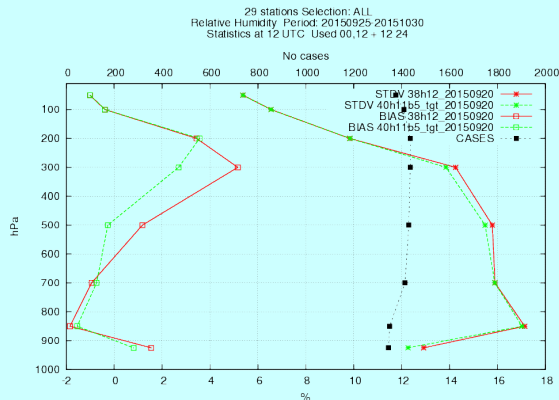


MetCoOp

SMHI



Validation, verification and system aspects



Extensive validation/
verification and release of
Cy40h1, preparations for
Cy43T1

Harmonie-climate

Scientific documentation of
Harmonie model/analysis
system: publications in
preparation

Towards a single consortium



Convergence actions:

- data policy discussions: getting closer to a new A-H Agreement
- joint strategy meeting 26-28 April
- definition of canonical model configurations and common code; code architects
- actions towards achievement of single repository
- consider revision of steering bodies

So, both on the scientific and organizational side...

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



Have a productive and fun meeting!