DATA ASSIMILATION STATUS CROATIA

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Introduction

- Computer & domain & assimilation setup
- New from last WD
- Future plans

New Computer

VIHOR

- SGI UV 2000 (shared memory system)
- Numalink 6 interconnect
- 28 Intel Xeon E5 6core
- 2,9GHz 15MB
- cache CPUs with total 228 cores
- 608 GB RAM
- working disks 6.6TB
- Intel compilers version 13.1.0 20130121
- PBSPro, SGI management software, Fibre Channel, Gigabit etherneth

Model setup

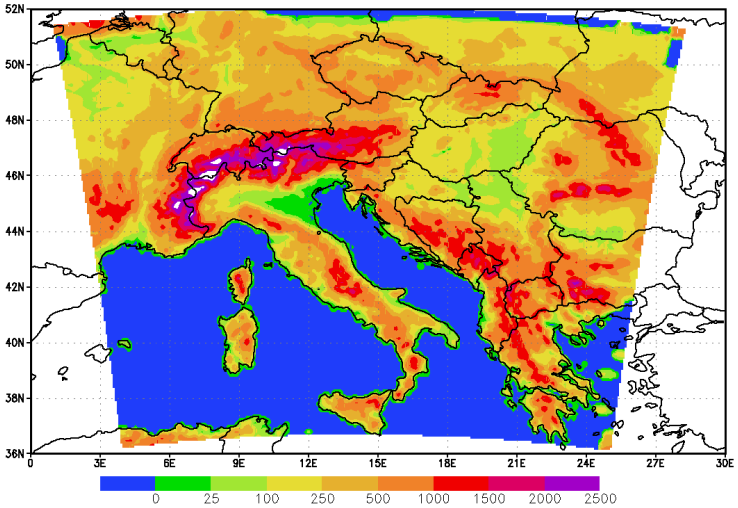
ALADIN HR domain

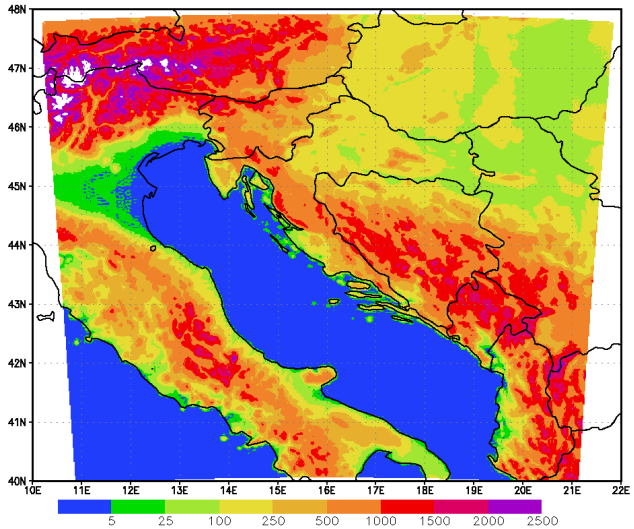
- 8 km horizontal resolution
- 37 levels, 229x205 (240x216) grid points
- 32T3: ALARO0-3MT, old radiation scheme, DFI
- 72 hours forecast, 1-3 hourly output

ALADIN HR22 domain

- 2 km horizontal resolution: 439x439 (450x450) grid points
- hourly 2 km dynamical adaptation up to 72 hrs @ 15 levels for 10 m wind forecast, model version AL29T2-mxl
- 24 hrs **2 km full NH** model run @ 37 levels, started from 00UTC 6h forecast, model version AL36T1, ALARO0 set-up (operational since July 2011.)

Model setup





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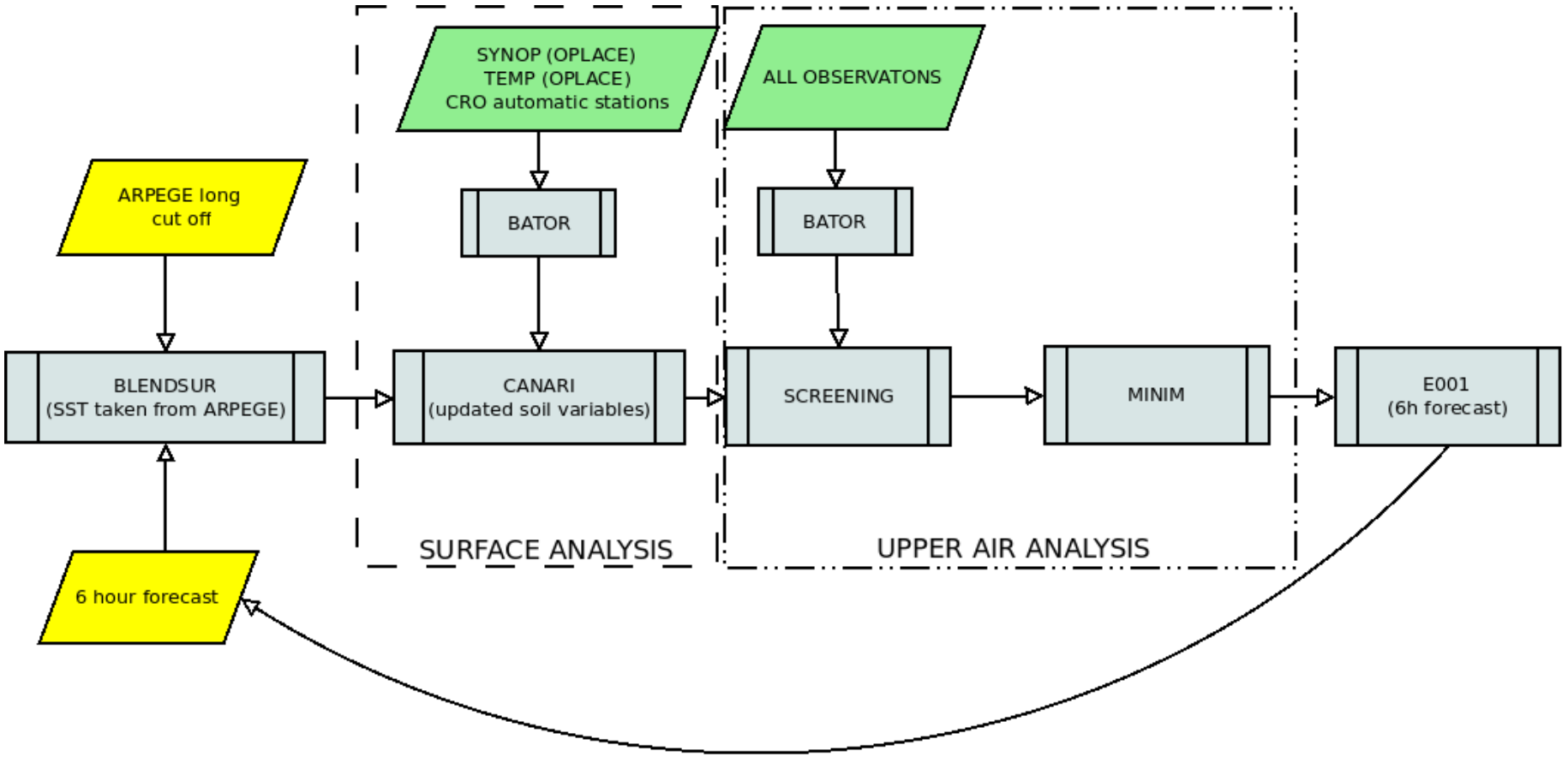
Assimilation cycle

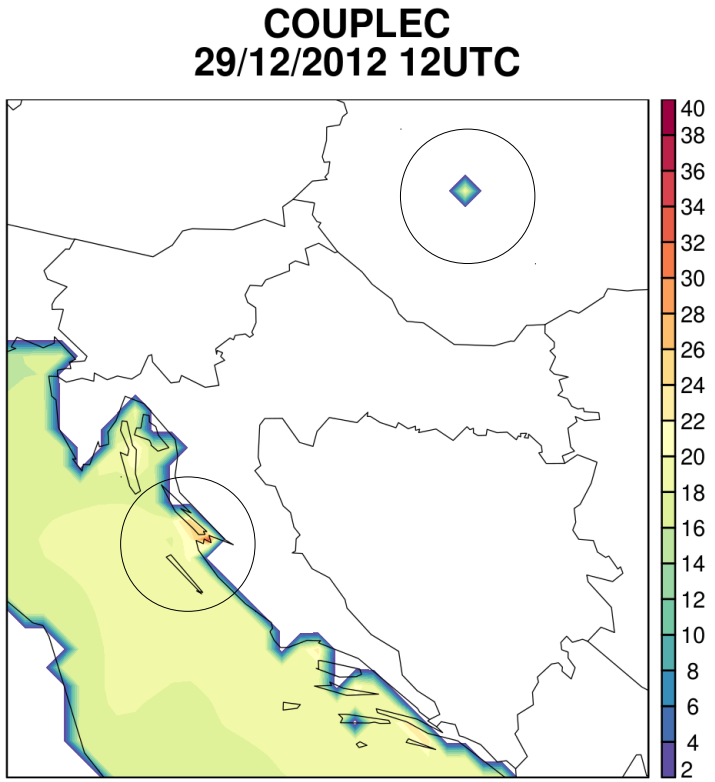


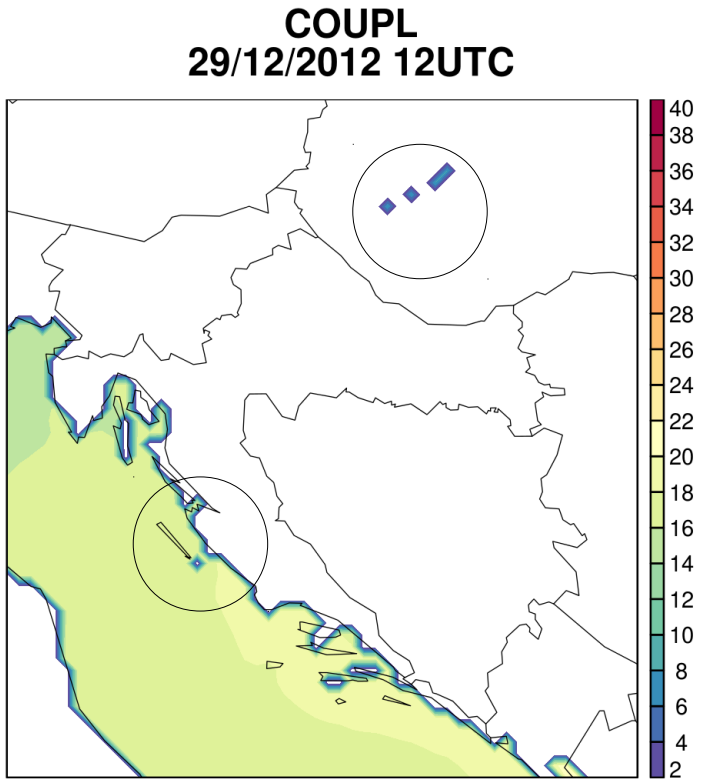
- Cy35t1: CANARI, BATOR, screening, minimization
- Cy32t3: e001, e927
- OPLACE: SYNOP, TEMP, AMV, AIREP, NOAA*, MSG

  Additionally: Slovenian, Ogimet and Croatian automatic stations

Development from last WD

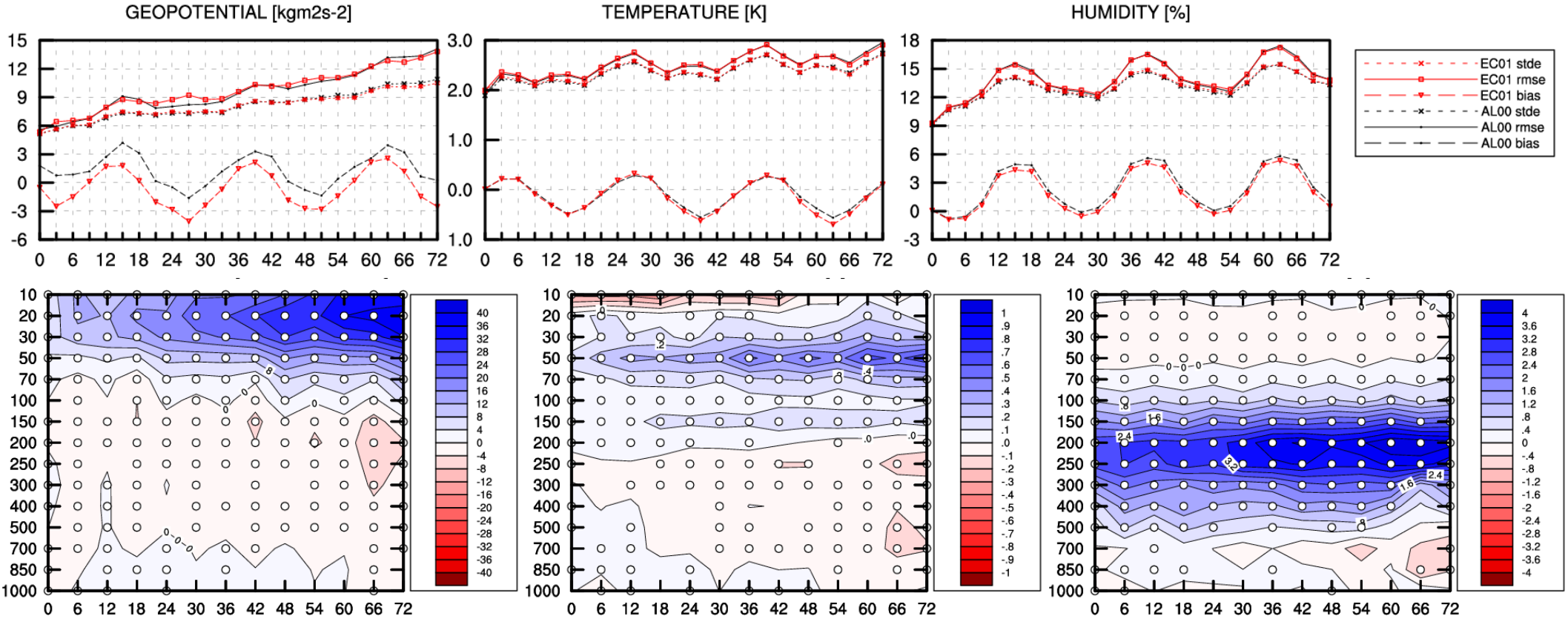
- **Coupling to ECMWF**
  - Big discrepancy in PROF/SURF/CLSTEMPERATURE values for lake areas (Balaton) and some coastal parts of AdriaticSea (near Zadar) between ARPEGE and ECMWF coupling files – solved (M. Mile)





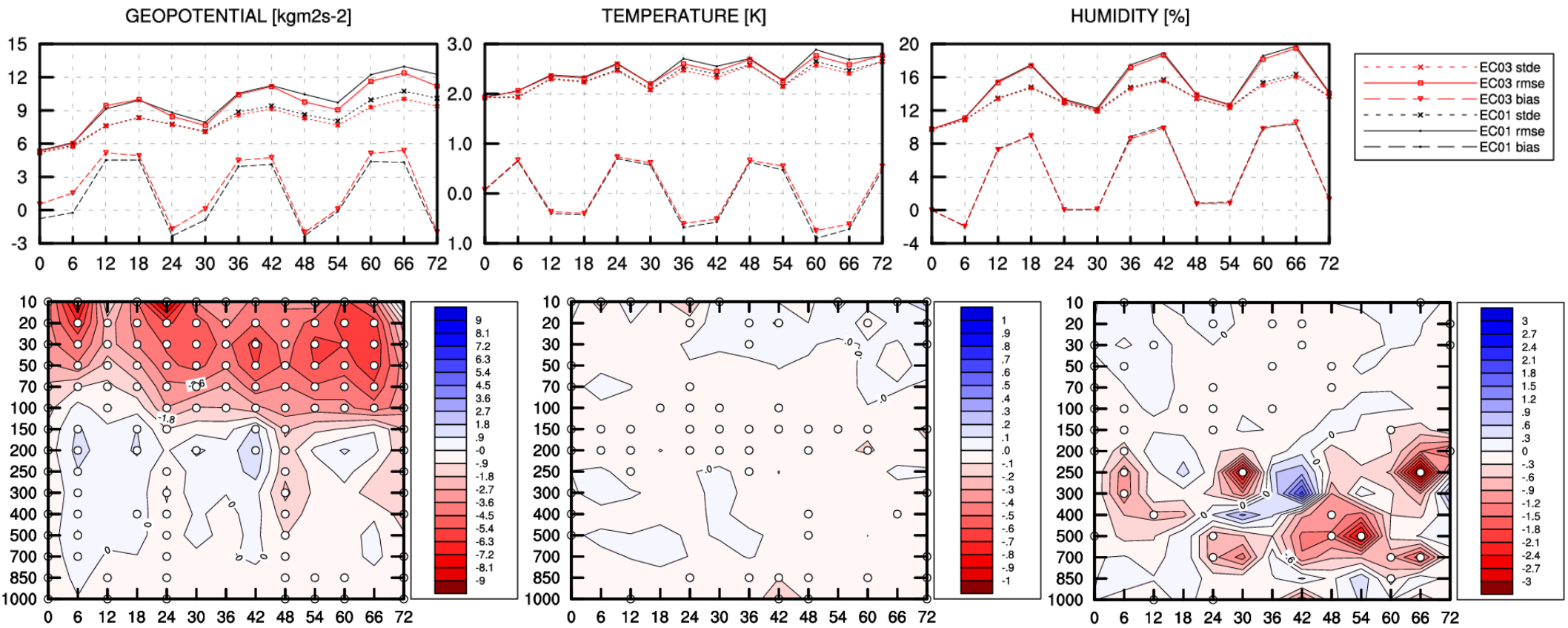
Development from last WD

- **Coupling to ECMWF**
  - Red ECMWF (lagged), Black ARPEGE; Redish: ECMWF better;
  - Period: 01.11.2011. - 01.11.2012.



Development from last WD

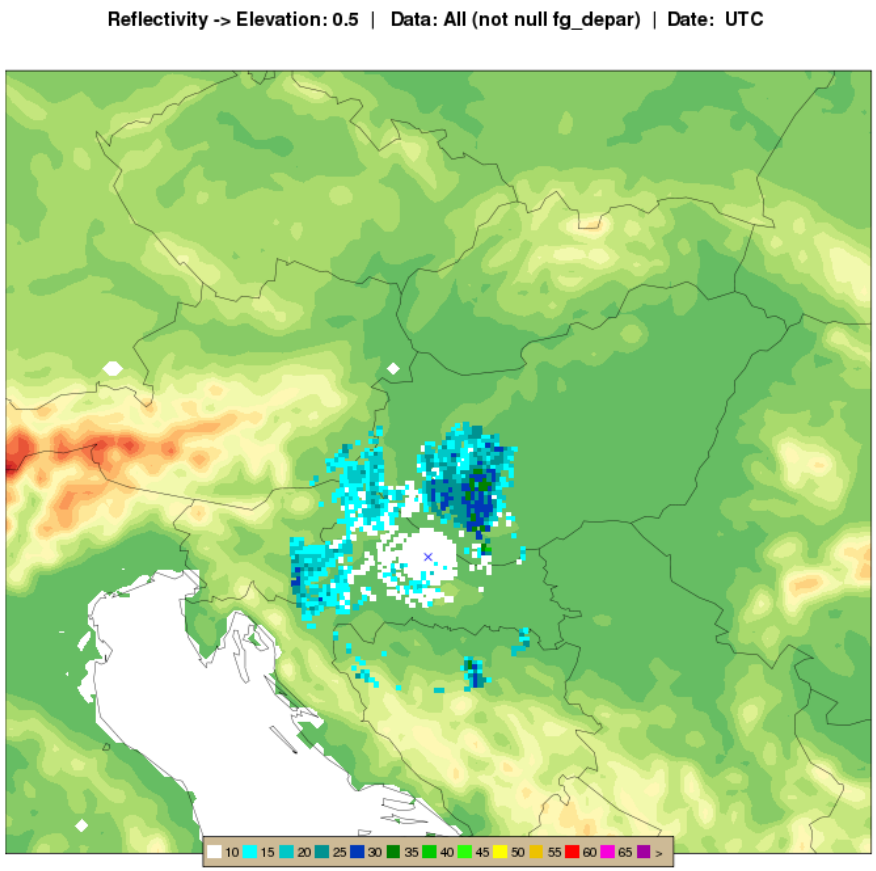
- **Coupling to ECMWF**
  - Red ECMWF (NON lagged), Black ECMWF (lagged); Redish: ECMWF NON lagged) better;

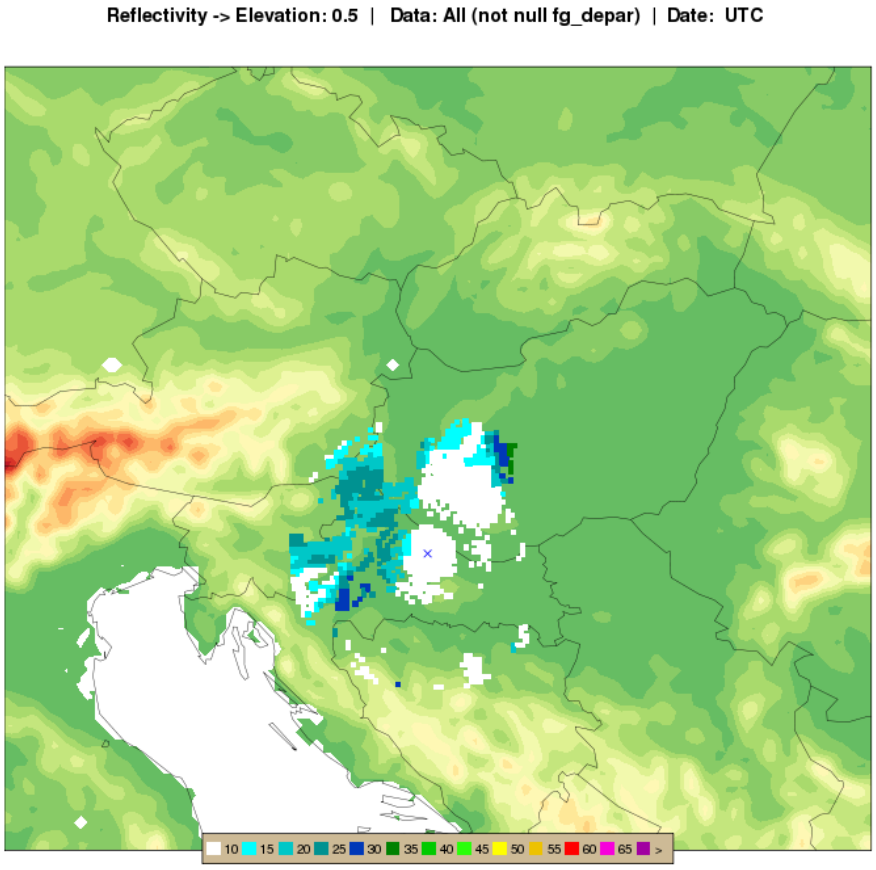


Radar data assimilation

Status

- Tehnically working with ALARO (8km) for both reflectivity and radial wind (cy36t1)





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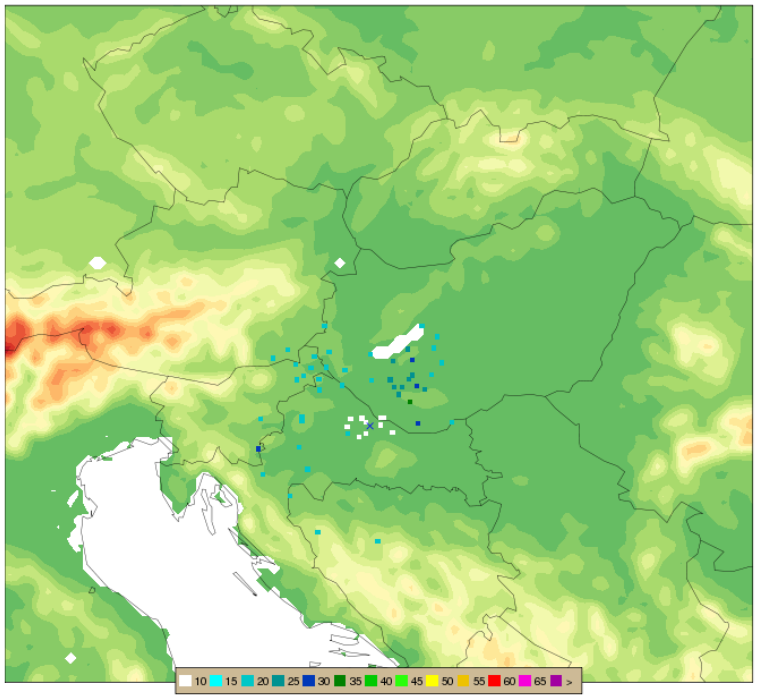

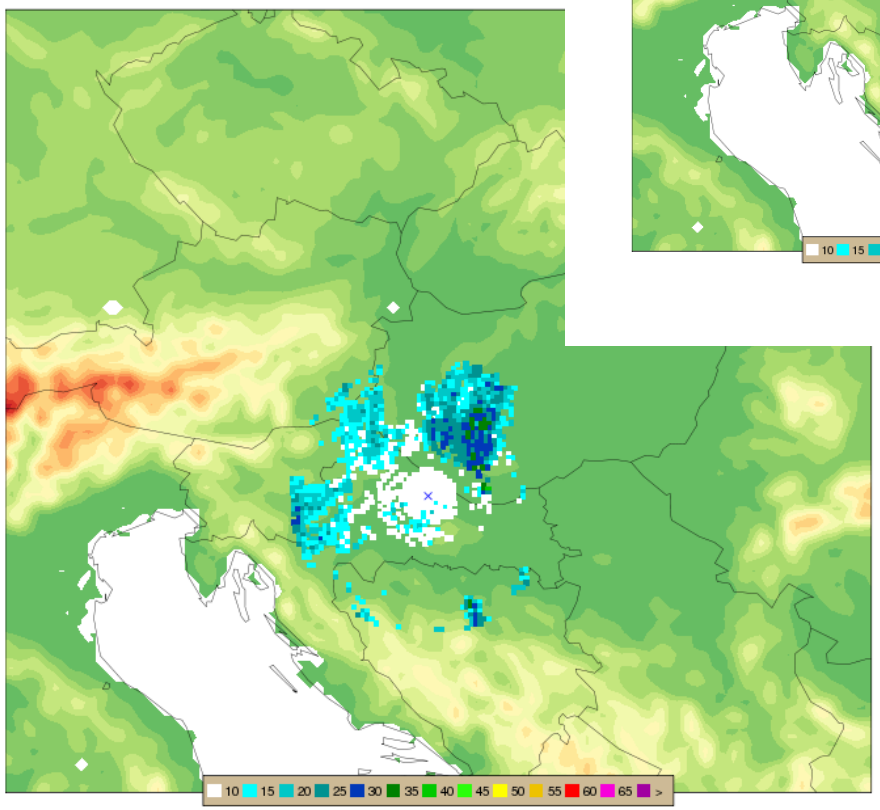

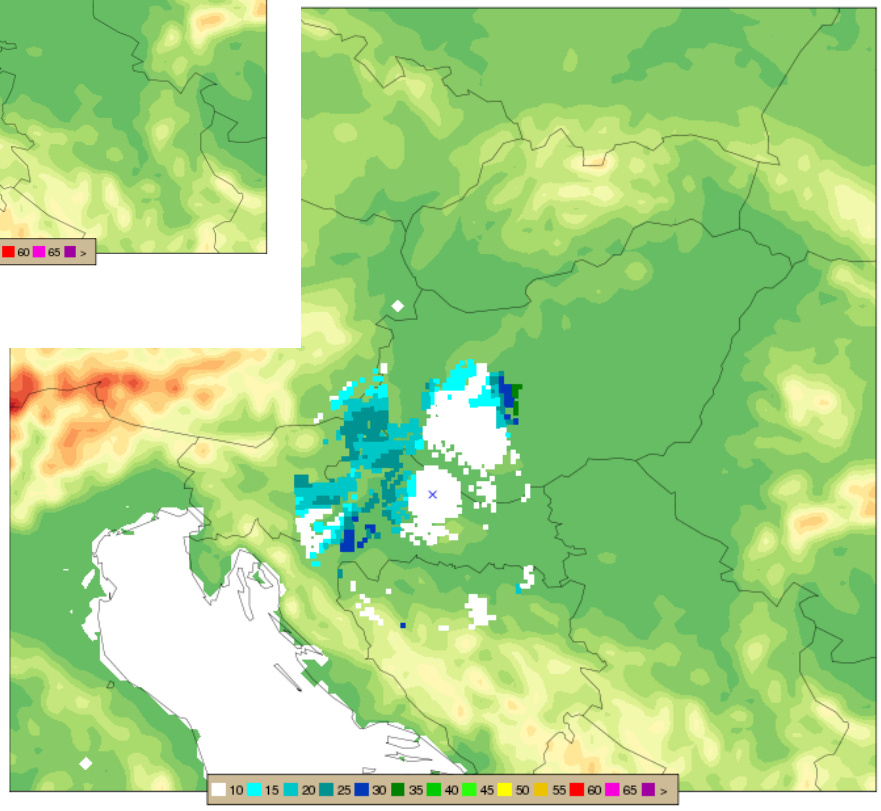

Working

Radar data assimilation

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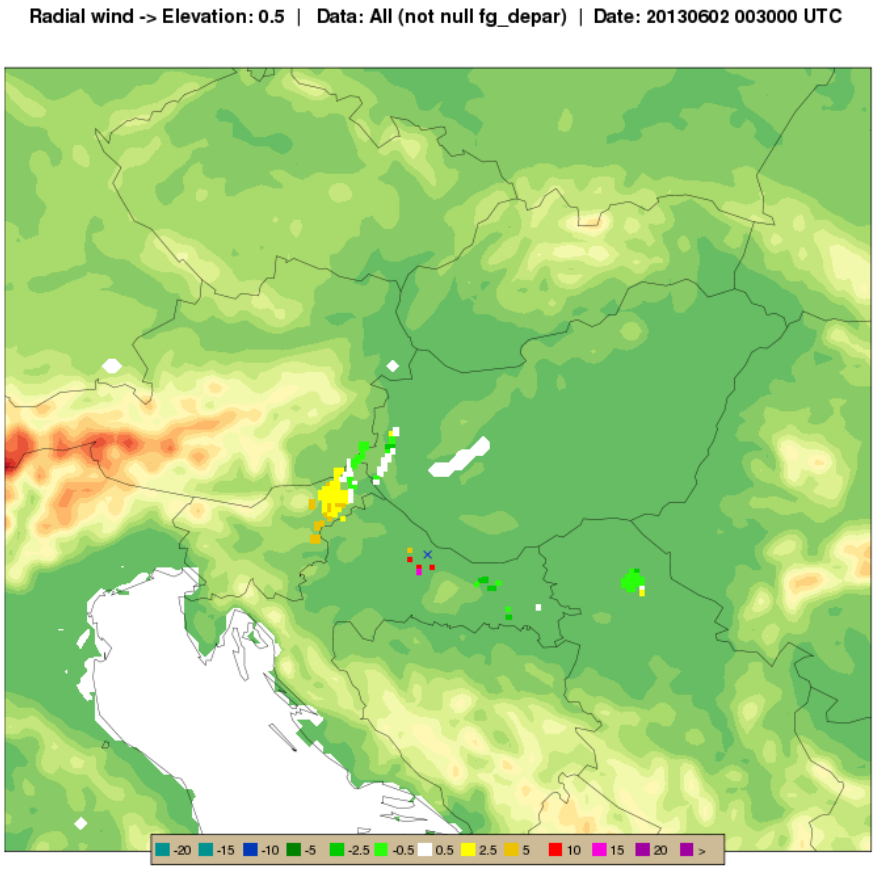
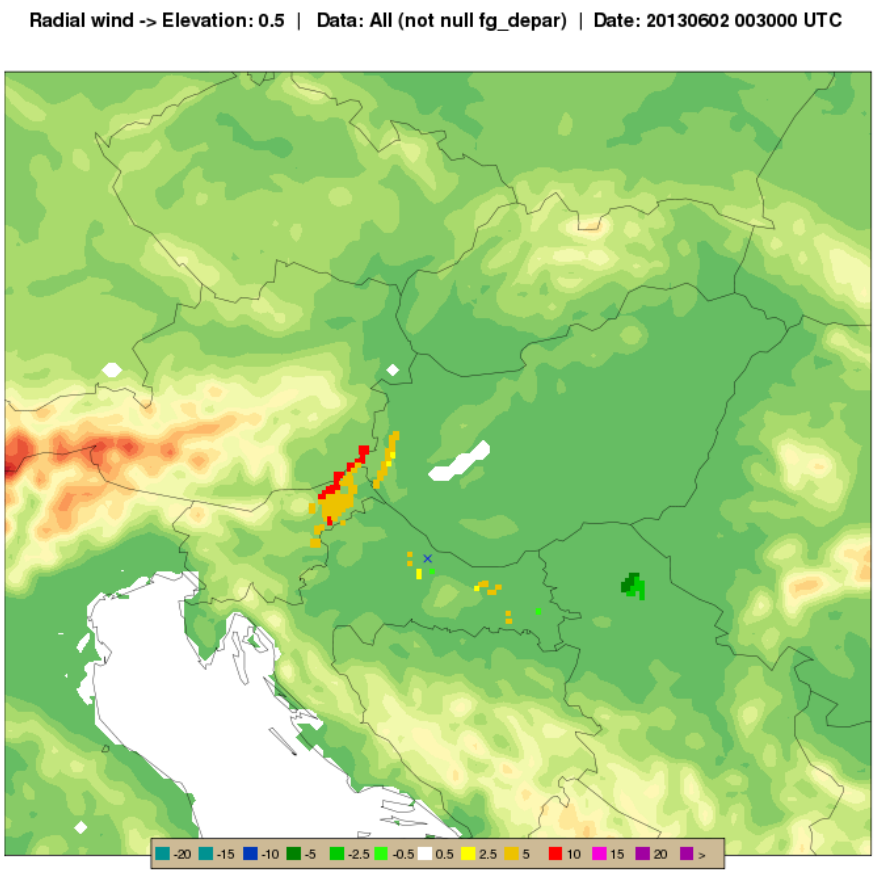
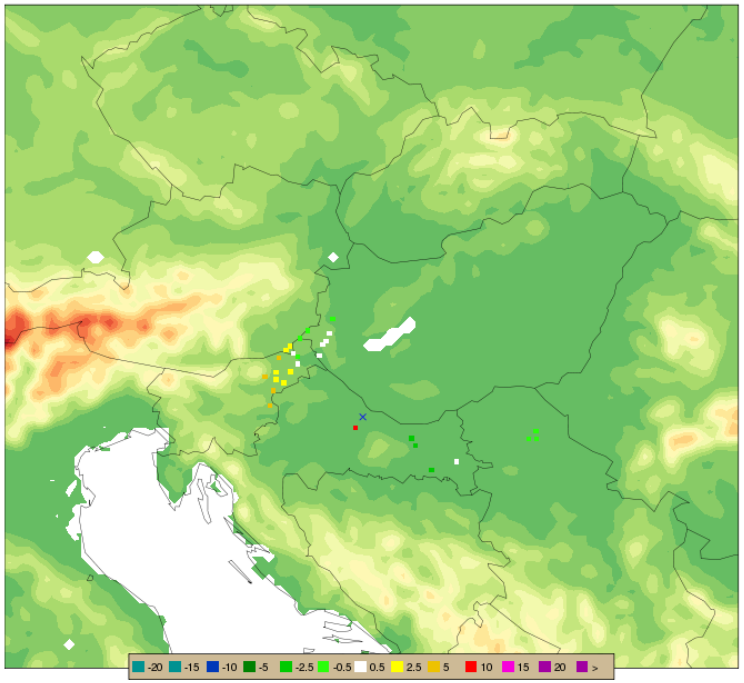


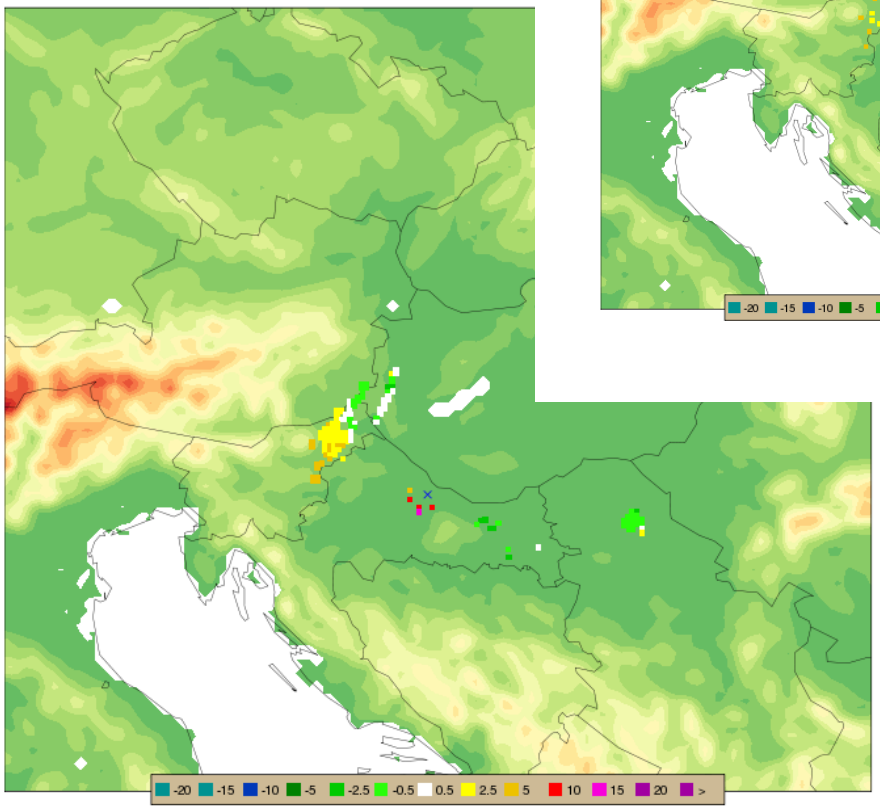


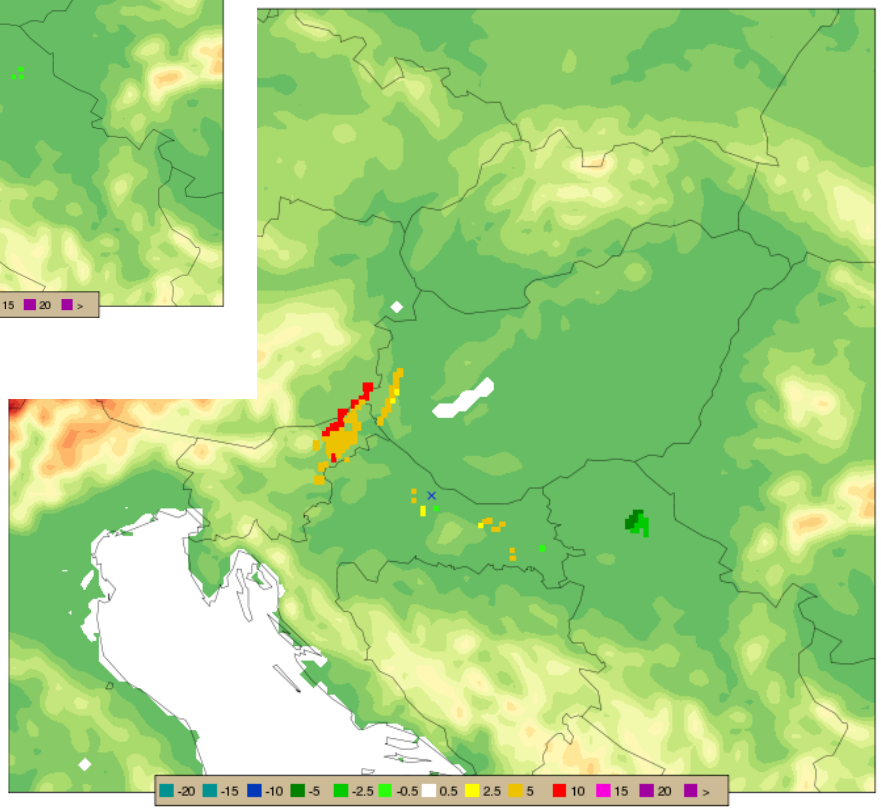
Radar data assimilation

Status

- Tehnicall… …both reflectivity and radial…







Future plans

- Go to cy38
- Test ensemble B matrix (seasonal)
- Tuning of B matrix
- Radar data assimilation
- Assimilation at 2km (4km?)