# NWP in Croatian Meteorological and Hydrological Service

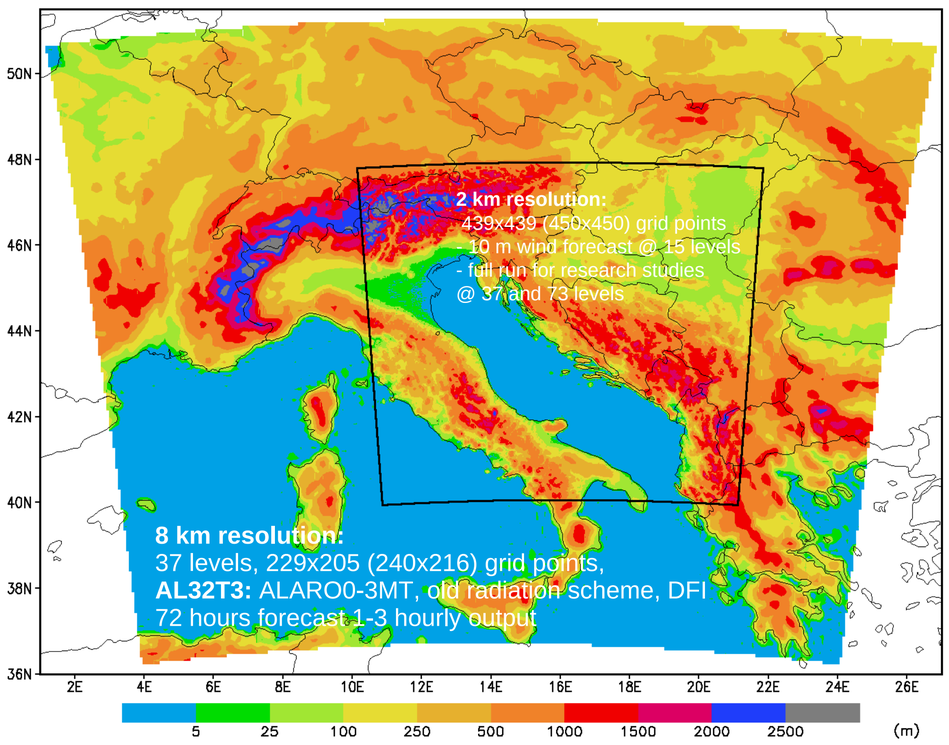
## Current status of the operational suite

### Computer
SGI Altix LSB-3700 BX2 Server with 48 Intel Itanium2 1.6GHz/6MB
96 GB standard system memory
2x146 GB/10Krpm SCSI disk drive, 1.6 Tb scratch disk
OS SUSE Linux Enterprise Server 9 for IPF with SGI Package
Intel Fortran & C++ compilers version 9.0.031
Queuing system (PBS Pro version 9.2.0.81361)
Main users: NWP, Air-quality modelling & Climate modelling

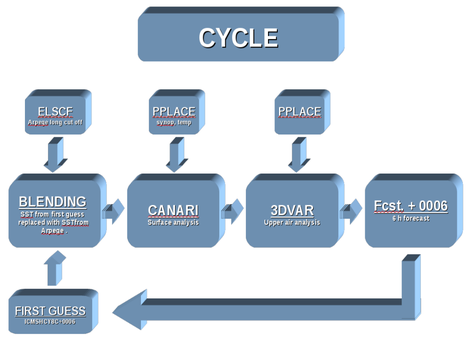
### LBC files and lines
global model ARPEGE, coupling frequency 3 hours
Internet and **RMDCN** through ecgate as backup from July 2006

### Products on Internet
http://prognoza.hr/karte_e.php?id=aladin&param=&it=
http://www.dhmz.htnet.hr/prognoza/karte_e.php?id=aladin&param=&it=

## Domains, model set-ups and forecast range




## Parallel suite




Cycling: 4 times per day
Production: twice per day at 00 and 12 UTC, 72 hours
Data: SYNOP, TEMP, SEVIRI (ch. 5 and 6),

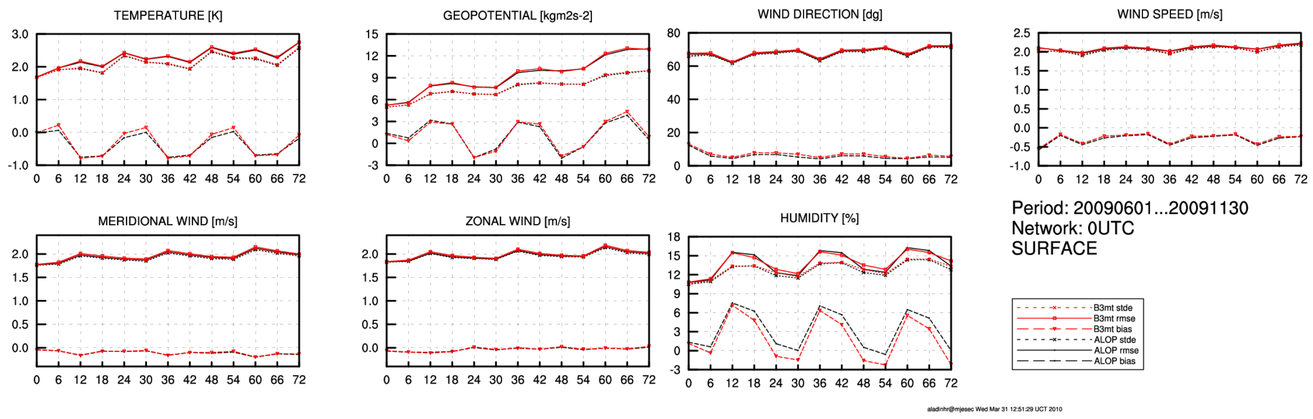
AIREP, GEOWIND (MSG 2),
NOAA (AMSU-A, AMSU-B)
Data source: PPLACE
B matrix: NMC method, 100 days
Verification: bias and root mean square error
Results of verification: mostly positive impact
Boundary conditions: ARPEGE long cut off analysis and forecast

## Developement and application activities

### Testing 3MT

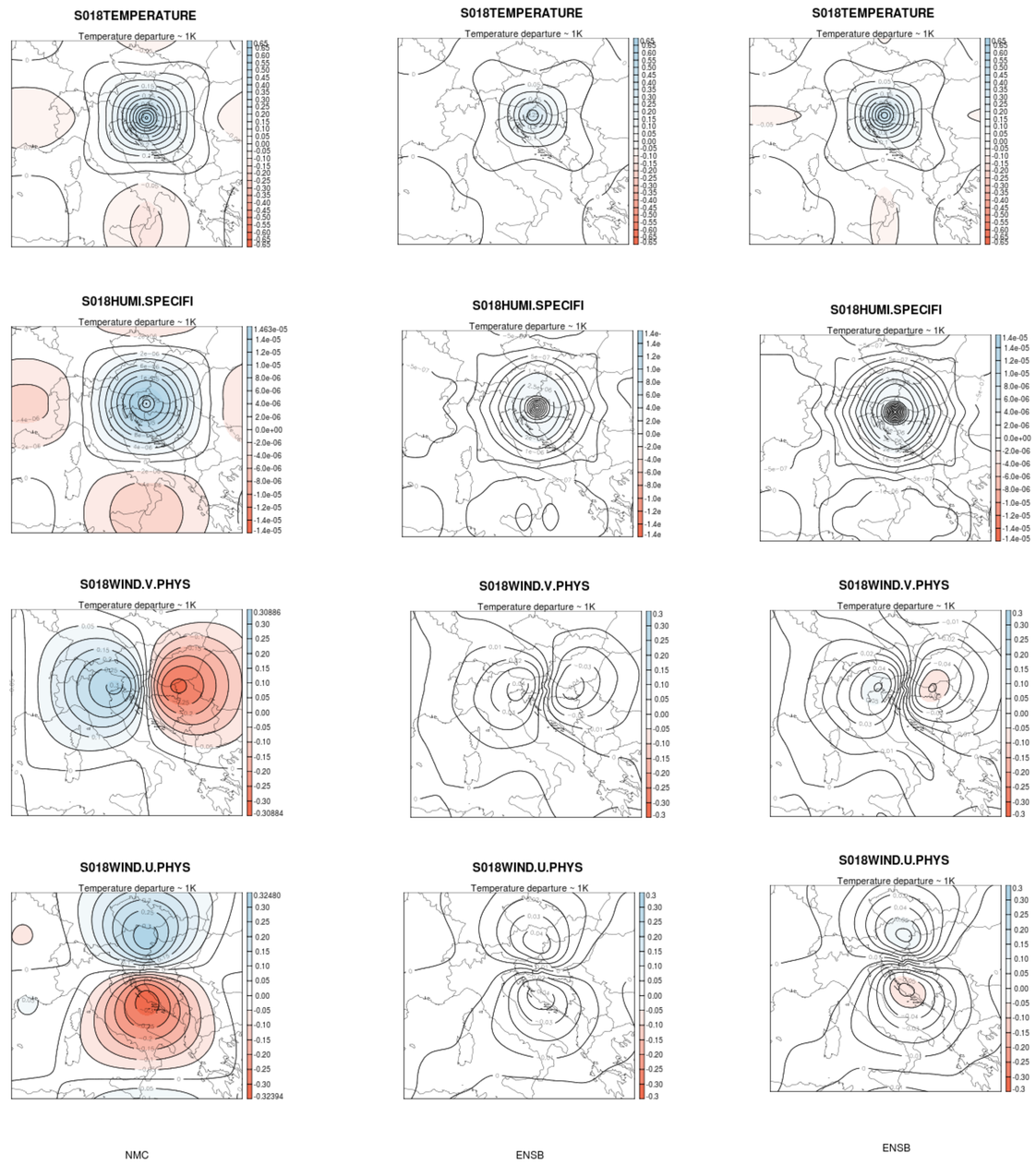
- 00 UTC runs: neutral impact
- 12 UTC runs: mostly negative impact

Evolution of scores with forecast range



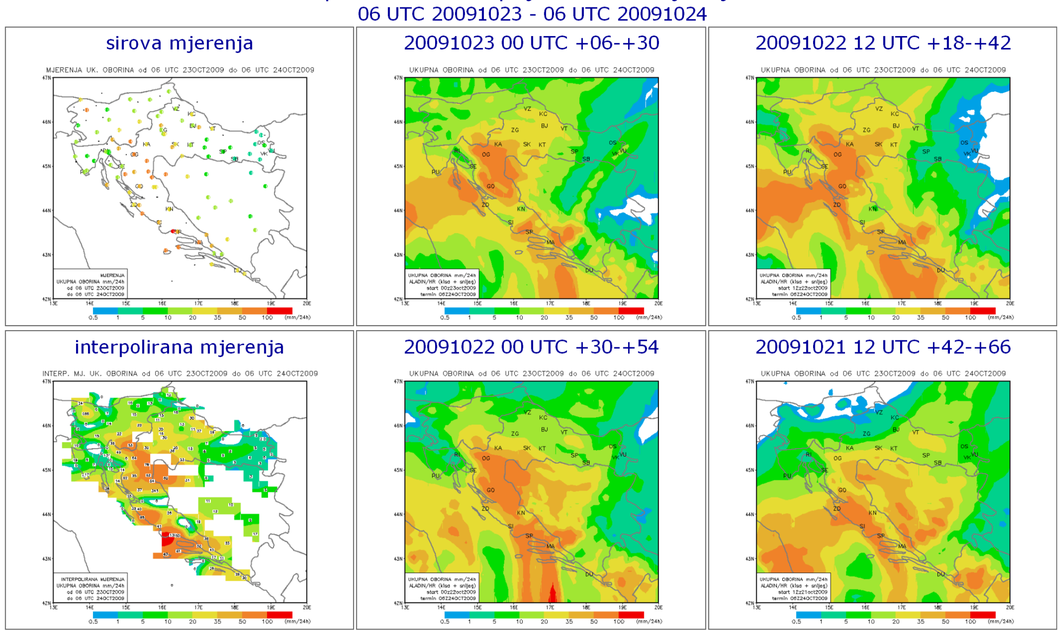

### New B matrix: ensemble B matrix

Single observation experiment - temperature innovation ~1°C at 500hPa




24h accumulated precipitation and analysis

Usporedba 24 satnih polja oborine sa mjerenjima
06 UTC 20091023 - 06 UTC 20091024




## Planed new set-up for (pre-)operational suite

- before the end of the year or in January: changing of model version to AL35Tx, implementation of Alaro including 3MT scheme,
- first half of 2010.- assimilation quasi-parallel run and start of operational assimilation suite in Zagreb,
- second and third quarter of 2010.- coupling with IFS, with assimilation suite different surface schemes are not any more problem,
- second half of 2010.- 24 hrs. NH full 2 km quasi-parallel run.