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

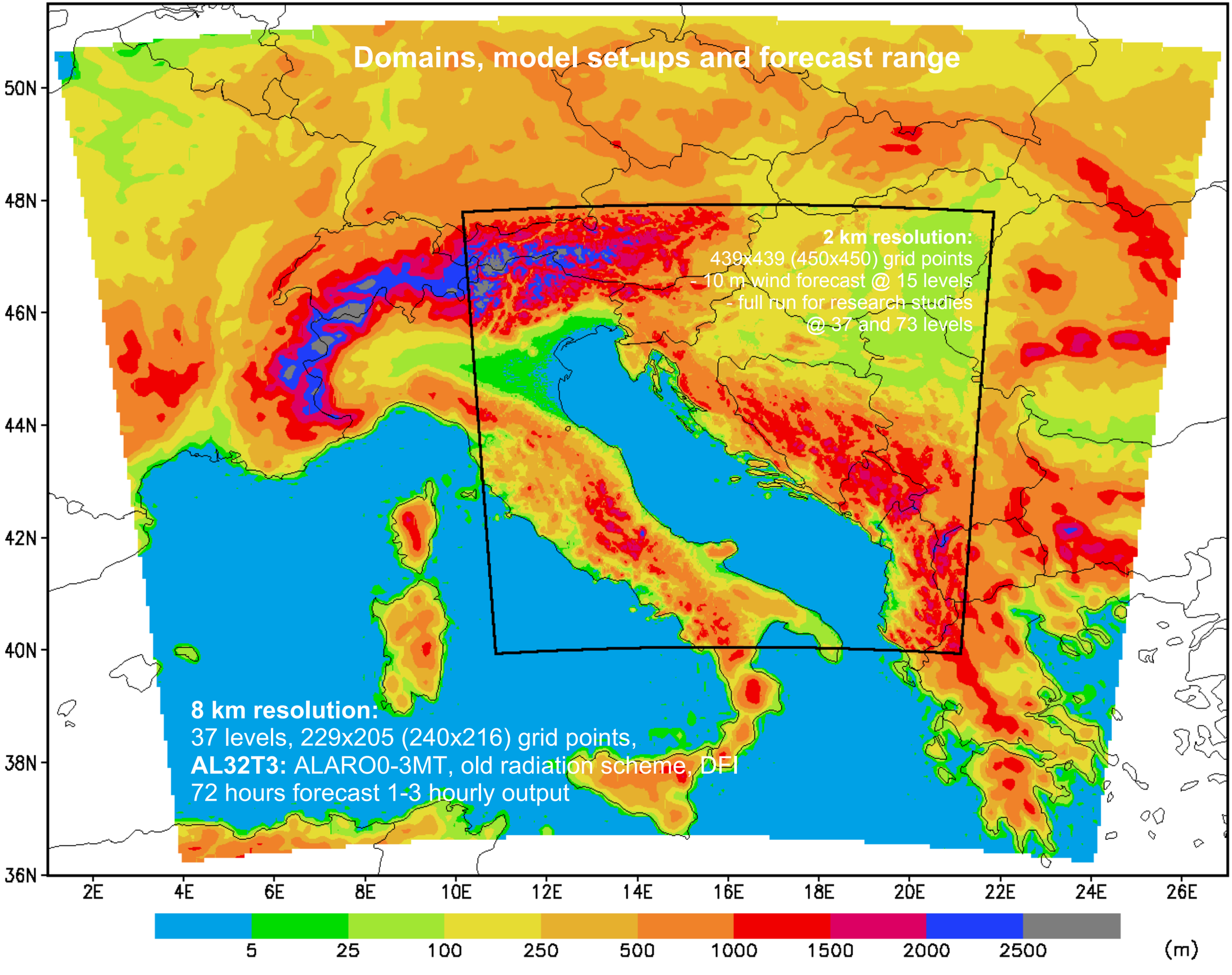
LBC files and lines

- global model ARPEGE, coupling frequency 3 hours
- Internet and **RMDCN** through ecgate as backup from July 2006

Products on the Internet

- http://prognoza.hr/karte.php?id=aladin&param=&it=
- http://prognoza.hr/tri_karta.php?id=tri&param=Zagrebacka&code=Zagreb

Domains, model set-ups and forecast range



The operational suite

- the operational suite uses one model version AL32T3 with the physics set-up nicknamed Alaro0-3MT since the end of February 2008 @ 8 km horizontal resolution,
- one huge 2 km domain is used for the 10 m wind dynamical adaptation,
- production of the ALADIN meteorological input for RODOS dispersion model.

Changes since the the last EWGLAM

- the computer has doubled the number of CPU and memory,
- new model version AL35T1 and porting tool-gmkpack are ported,
- porting of visualization and post-processing tools to the new visualization machine are finally done,
- the pre-operational assimilation parallel suite is experimenting with cycling, DFI of the surface OI and 3DVar using different datasets,
- impact of 3MT is being tested for the 8 km resolution forecast,
- different options for horizontal diffusion, Non-Hydrostatic dynamics and increased number of levels for the high-resolution dynamical adaptation are being tested, results are promising and most likely will be implemented in new operational version.

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.