LAM activities in Austria

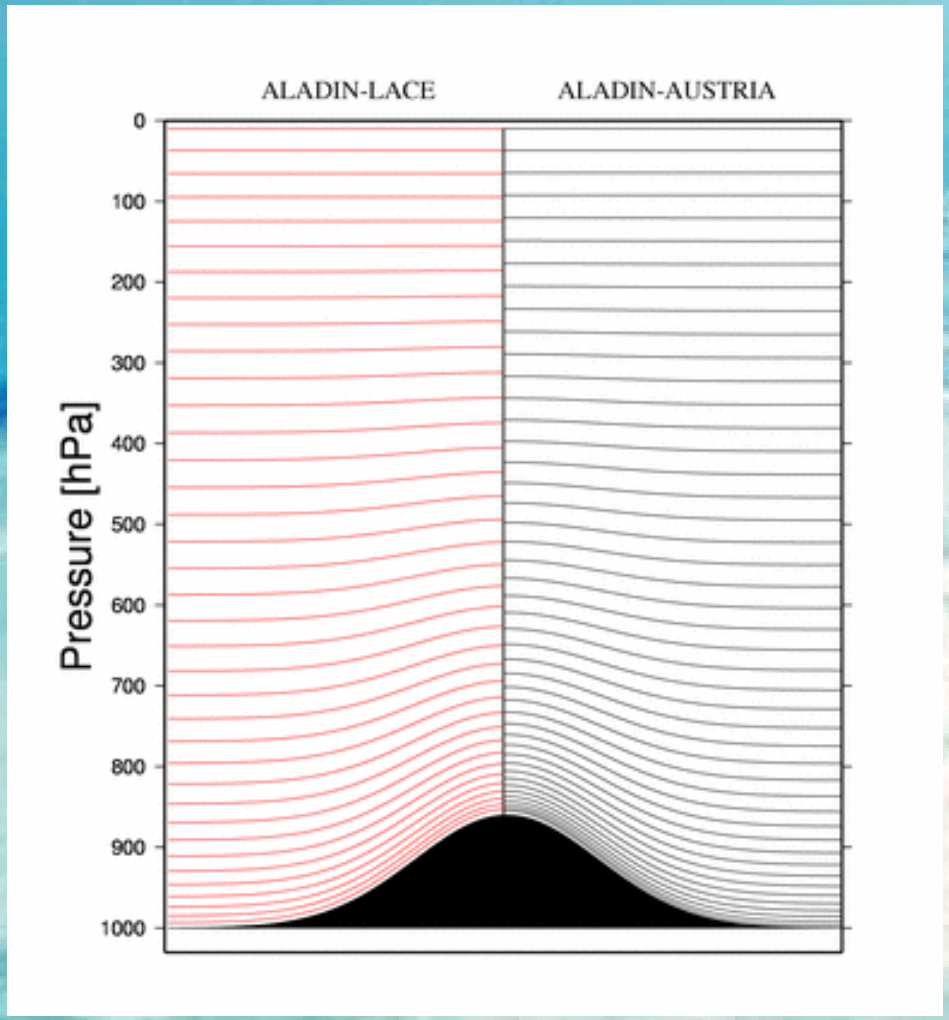
The new operational system
ALADIN-AUSTRIA

The benefits of Aladin-Austria

Old system: ARPEGE → LACE → VIENNA

New system: ARPEGE → AUSTRIA

- Simplification of operational procedure
- More efficiency of CPU capacity
- Horizontal resolution + domain size + additional vertical levels



Vertical levels in Aladin-LACE (37) and Aladin-AUSTRIA (45)

Verification

- Upper air fields
- Surface parameters

→ Visit the poster!

- Installation of model version Al25t2.
- Installation of model verification tool.
- Computer upgrade from 20 to 28 CPUs.

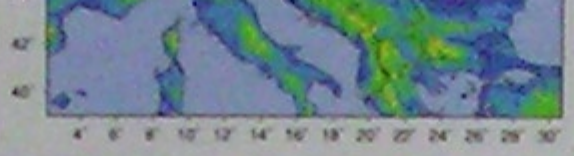


Figure 1: ALADIN-LACE domain and topography

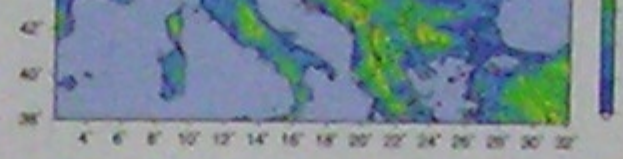


Figure 2: ALADIN-AUSTRIA domain and topography

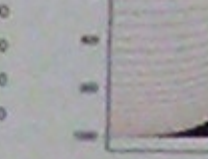


Figure 3: Verti
LACE (37) and A

ation of upper air fields

erational implementation of the new system Aladin-Austria, e has been run and verified against model analysis (12h- egarding the domain means of BIAS and RMSE of 500hPa, both models (AUSTRIA & LACE) behave similarly s +24 hour forecasts; Figure 5: RMSE +48 hour forecasts). egarding the bias at forecast range +24 hours, a slight using Aladin-Austria is observed.

Figure 4: Bias for Geopotential 500hPa, 24h-forecasts, the values indicate domain means. Blue line: ALADIN-AUSTRIA, Red line: ALADIN-LACE.

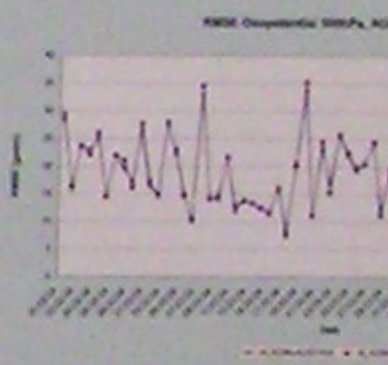


Figure 5: RMSE for Geopoten
forecasts, the values indicate do
line: ALADIN-AUSTRIA, Red line

ation of surface fields

The verification of surface fields is done for several parameters including MSL-Pressure, 2m Temperature, 10m W major Austrian cities. The verification compares the forecast skills of Aladin-Vienna and Aladin-Austria showing Bias & 2m-Temperature, both BIAS and RMSE are reduced with Aladin-Austria (reduction of relative error up to 10%), erro not differ much between Aladin-Austria and Aladin-Vienna (Figure 6, left column). The forecast skill at stati Temperature, MSL-Pressure and windspeed is shown in Figure 6 (middle and right column).