Deutscher Wetterdienst

Numerical Weather Prediction at DWD

Global model GME

Grid spacing: 40 km

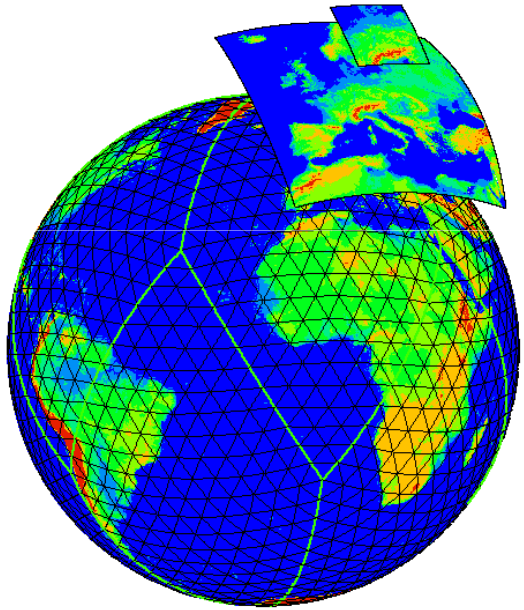
Layers: 40

Forecast range:

174 h at 00 and 12 UTC

48 h at 06 and 18 UTC

1 grid element: 1384 km²



COSMO-EU

Grid spacing: 7 km

Layers: 40

Forecast range:

78 h at 00 and 12 UTC

48 h at 06 and 18 UTC

1 grid element: 49 km²

COSMO-DE

Grid spacing: 2.8 km

Layers: 50

Forecast range:

21 h at 00, 03, 06, 09,

12, 15, 18, 21 UTC

1 grid element: 8 km²

GME 30 km / L60

- Grid spacing reduced from 40 to 30 km.
- Number of layers increased from 40 to 60.
- Number of gridpoints increased from 14.7 to 39.3 Mill.
- Time step decreased from 133.33 s to 100.00 s.
- Cost of model increased by a factor of more than *four*.
- Uppermost model layer moved from 10 hPa to 5 hPa.

- *Prognostic precipitation* scheme (as in COSMO model) but without advection of rain (q_r) and snow (q_s). q_r and q_s will serve as lateral boundary conditions for the COSMO-EU model, too.

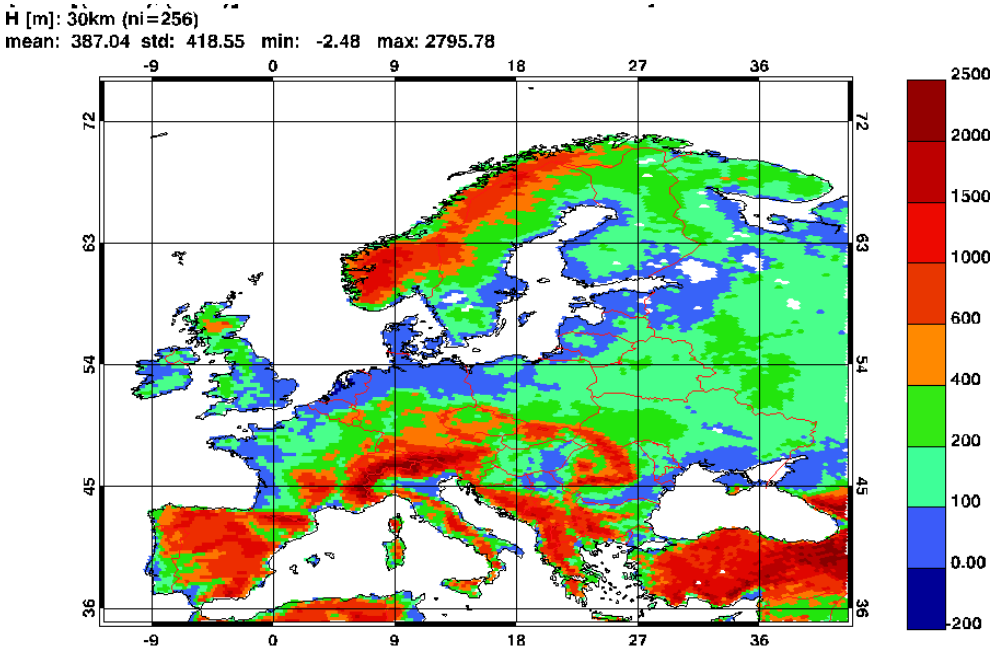
- Variational soil moisture assimilation scheme (*SMA*).

- Runs on 2 nodes (32 CPUs) of NEC SX-9.

- Parallel run started on 23rd September 2009, model will be fully operational in December 2009.

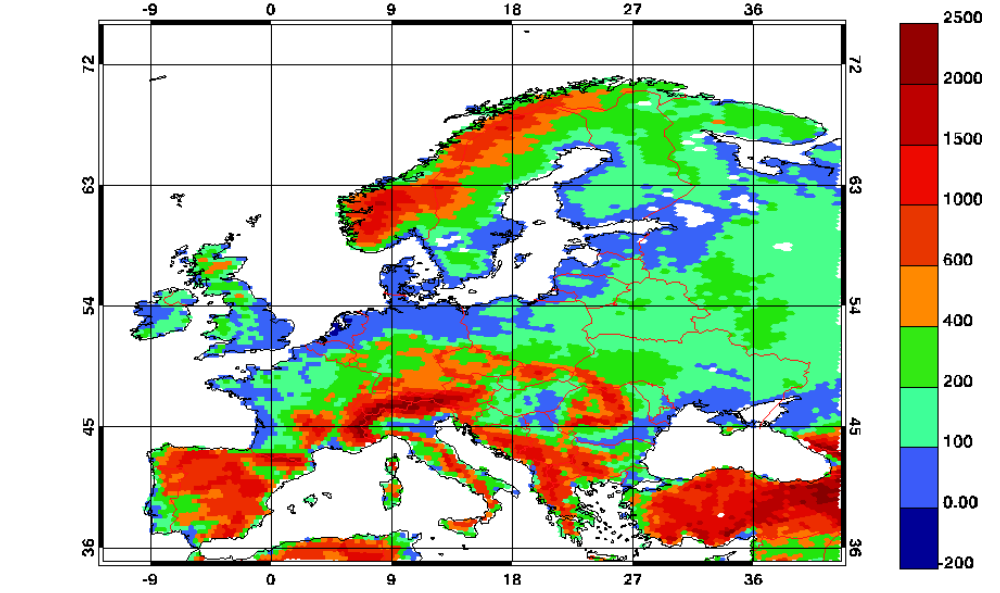
30 km

Max: 2796 m



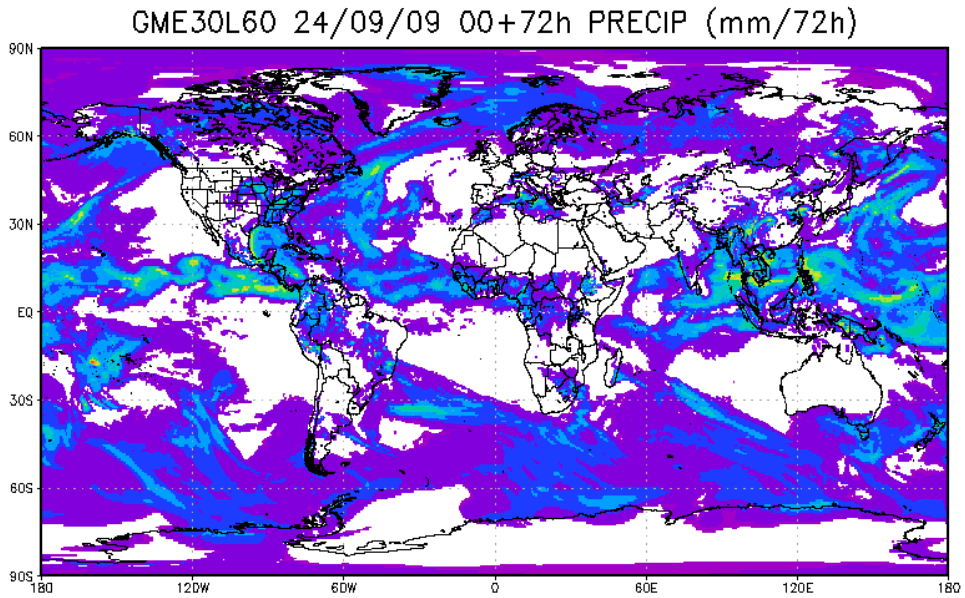
40 km

Max: 2551 m



0.50 <= FR_LAND 1010100 0000 0 1 999 DWD /uwork1/hfrank tmpdir.lnvar.l192a <= 1.00

30 km / L60



40 km / L40