Status report Data-Assimilation for LACE

Sabine Leroch

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1 T2.1

The program package for the calculation of the background errors was provided by HMS but not yet installed. This should happen within the next weeks.

2 T2.2

2.1 Observation Database (ODB)

The ODB package was installed on NEC using GMKPack. Own OULAN routines have been written to provide SYNOP, TEMP and AMDAR data for ODB from the local data base. A script creating the special OBSOUL format and running BATOR was implemented.

2.2 conf. 701 Canari

The model configuration conf. 701 was installed on NEC. An appropriate script was written to run Canari, where the Czech namelist configuration has been adopted. OI is only carried out on land, over sea the ARPEGE SST is used. The accuracy of the Canari analysis files were checked with test case files provided by the Czech weather service.

3 T2.3

3.1 Verification of surface fields

A parallel suite was set up to run an OI assimilation cycle for the surface parameters. There are 0, 6, 12 and 18 o'clock runs giving the initial state for ALADIN AUSTRIA which in turn provides the background (the 6 hour forecast) for the OI. The parallel run was established in the middle of July. First comparisons have been made between the parallel run (EX11) and the operational one (OPER) after a two weeks equilibration period. Figures 1 and 2 show the errors with respect to gauge measurements averaged over nine austrian SYNOP stations sites for a forecast range of up to 72 hours and a verification period of one month. The performance is similar to the one given in the presentation "Analysis and diagnostics" given by A. Trojakova and G. Bölöni at the HIRLAM/AAA workshop on surface DA (first verification plot).
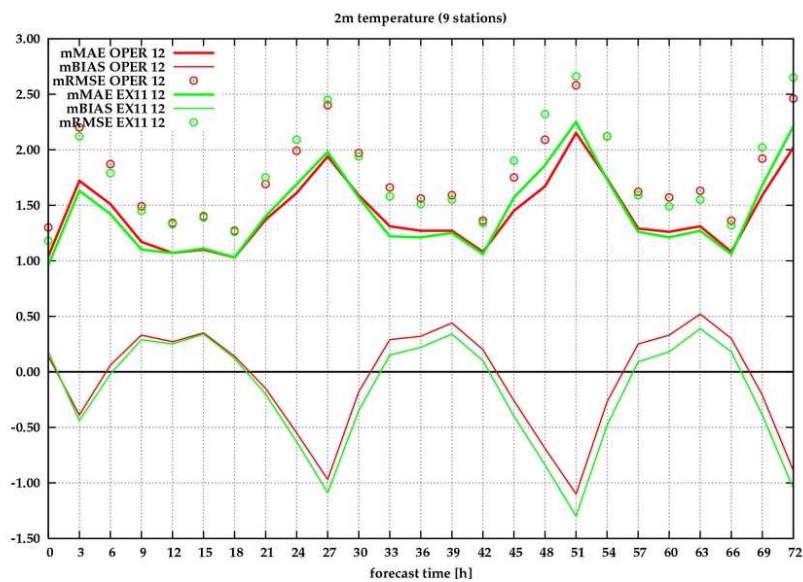
Figure 1: Verfication of $2m$ temperature

Figure 2: Verfication of $2m$ relative humidity