LACE
nwp central europe

Data assimilation in RC LACE

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Outlook of the presentation

- Summary of DA setups at RC LACE
- OPLACE
- Recent results
- Radar data assimilation
- 3rd LACE DA working days

Summary of DA setups at RC LACE

AU: CANARI & 3DVAR, ALARO 9 km/60l, ENS B (test)
CANARI at 4.8 km/60l, (oper.)
IO for surface & 3DVAR, AROME 2.5km/60l (test)
CZ: CANARI & DFI blending, ALARO 4.7km/87l
HR: CANARI & 3DVAR, ALARO 8 km/37l, NMC B
HU: CANARI & 3DVAR, ALARO , ENS B
- experiments with AROME
RO: CANARI & 3DVAR, ALARO (parallel)
SK: CANARI & DFI blending, ALARO 9km/37l (oper.)
SI: CANARI & 3DVAR, ALARO 4.4KM , ENS B
surface blending: CANARI over land & ARPEGE over sea

OPLACE

- SYNOP
- AIREP
- Windprofiler
- GEOWIND
- TEMP
- NOAA-15 HIRS
- NOAA-16 HIRS
- NOAA-17 HIRS
- NOAA-18 HIRS
- NOAA-15 AMSU-A
- NOAA-16 AMSU-A
- NOAA-17 AMSU-A
- NOAA-18 AMSU-A
- NOAA-15 AMSU-B
- NOAA-16 AMSU-B
- NOAA-17 AMSU-B
- NOAA-18 AMSU-B
- MSG-2 SEVIRI
- DRIBU
- METOP: IASI, AMSU-A, AMSU-B

Recent results

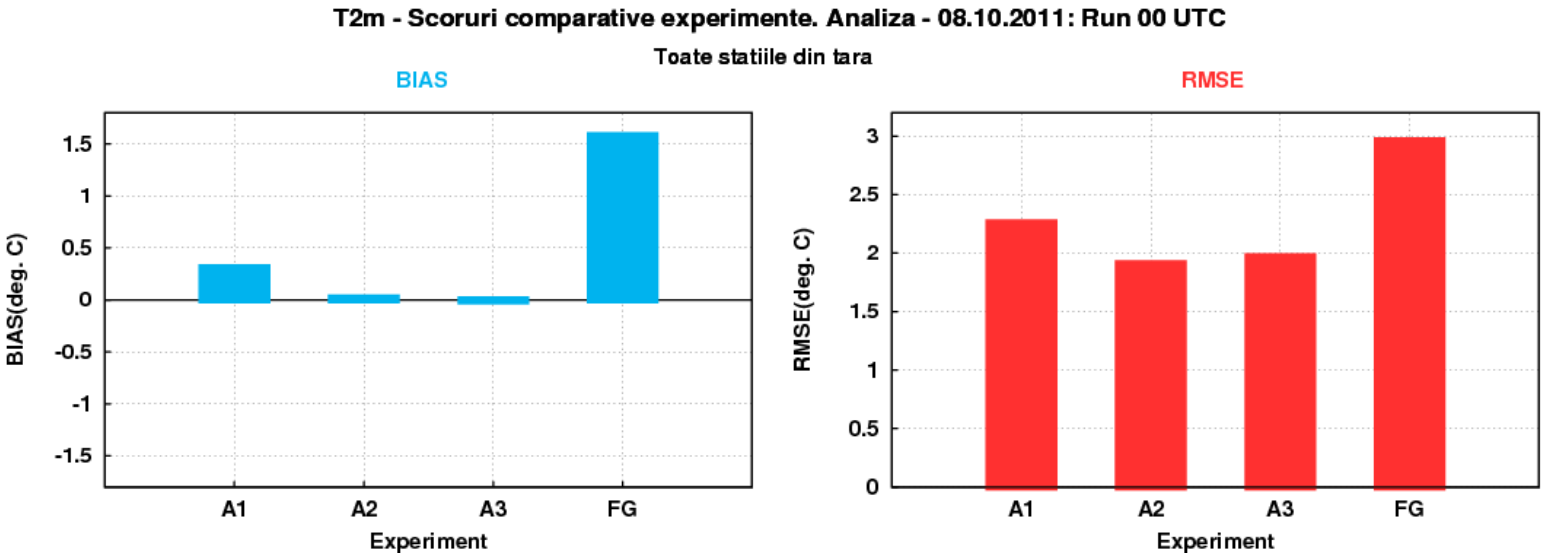
IASI

- Available in OPLACE
- First impact study didn’t show desired impact; better channel selection should be fined.
- In Slovenia
  - subset of 366 channels used and monitored for a period of about a month
  - variational bias correction most effective over land and for channels in band 1 (8-15 **µm**)
  - DFS shows overall impact of IASI is comparable to AMSU

Recent results

National SYNOPs

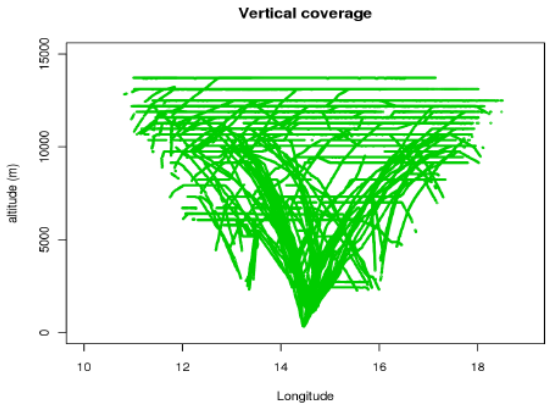
- Software is made.
- Experimental collection of data was done.
- RU: impact study



Recent results

Mode S, wind and temperature

- Experiments in Austria And Slovenia
- In Slovenia
  - 8 month data from Ljubljana airport,
  - verified against soundings and AMDAR,
  - quality of wind and temperature data is good.
  - The first assimilation experiments showed neutral impact on classic scores.



Recent results

Case study

- HU: added vertical correction term in CANARI beckground statistics for T2m and RH2m.
  - positive impact on T2m (especially between 500 – 1500 m),
  - mslp slightly worse,
  - other parameters are neutral.
- HR: trying to get better results by changing parameters in CANARI (ongoing)

Recent results

Surface analysis

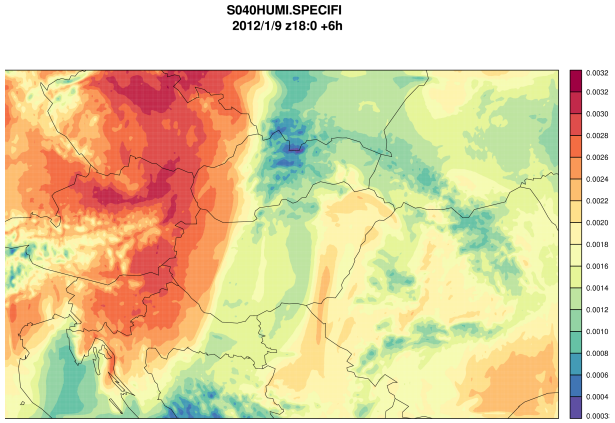
- AU: added vertical correction term in CANARI background statistics for T2m and RH2m.
  - positive impact on T2m (especially between 500 – 1500 m),
  - mslp slightly worse,
  - other parameters are neutral.
- HR: trying to get better results by changing parameters in CANARI (ongoing)

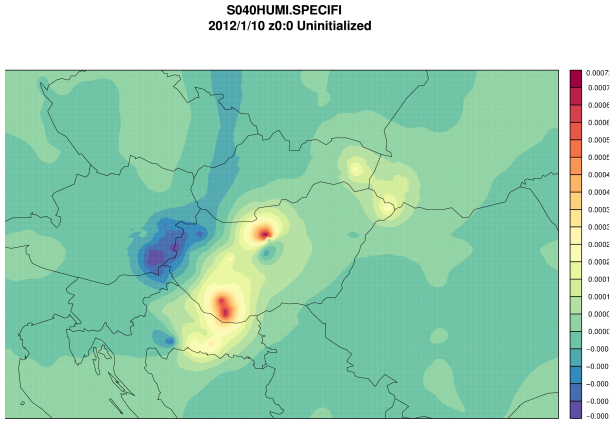
Radar data assimilation

- CONRAD-RC
  - C++ classes for handling radar data.
  - Purpose: to enable easy and fast implementation of local radar format.
  - Used in CONRAD for data input.
- Quality control: not yet decided, but most probably BALTRAD QC.
- Exchange of data: not decided.
- Radar data collection period: 1 May – 30 June.
- Data will be examined in Hungary, screening with radar data tested.

Radar data assimilation

- AU: test of data assimilation for AROME (ongoing).
- HR: tests for ALARO.
  - Obs. operator for reflectivity will be developed.
- HU: AROME was tested.





3rd LACE DA working days

- 18-21 June 2012 CHMI Prague
- First draft of agenda

1. day
   Fulfillment of the tasks from the last workshop.
   National reports.
2. day
   National reports, continuation.
   Discussion of national reports.
3. day
   New data sets with special emphasis on radar data.
   Radar data session.
   Discussion of the plan for the next five years.
4. day Discussion of the plan for the next five years.

- ALADIN , HIRLAM are invited to participate.