DAskit : BELGIUM

DAskit progress in Belgium

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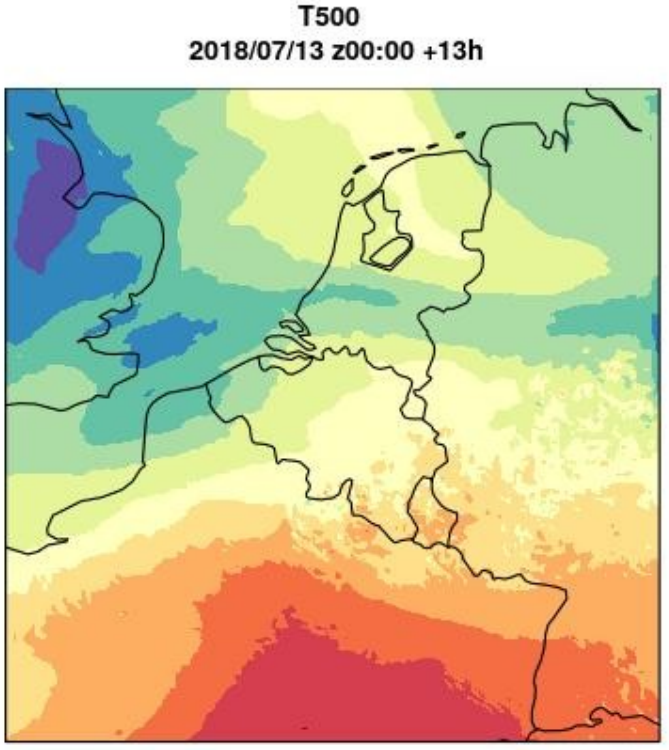
Basic set-up

- CY43t2 (bf9 = export)
- Arome (Alaro+Surfex also planned)
- 1.3km, 576 x 576, 87 levels
- Tstep=45”
- Hourly coupling to Alaro-4km run (downscaling from Arpège)
- 6h cycle, CANARI + OI_MAIN (no 3d-Var)
- Currently only 1 forecast/day (00h)
- 12 day experiment July 13-25 (still spinning up...)

domain



Observations

- GTS-SYNOP-BUFR
- simple python library for BUFR processing:
  - parse all incoming BUFR messages
  - build an index of all available data (SQLite)
  - in this index: GTS corrections, additions etc.
  - at “assimilation time”: extract all indexed fields from the original BUFR and write to one single BUFR-OBS file for DA.
  - useful until more powerful tools are installed

Data flow 1: observations

- -3/+3h time window
- BUFR data read directly by BATOR to make ODB.

Data flow 2: Cycling

- COLD START: .sfx initialised from ISBA coupling files.
- 6h forecasts as first guess (2 files: atmospheric and surfex)
- SST’s updated from nesting ALARO-4km model during CANARI/OI-MAIN
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Surface DA

- CANARI with OI_MAIN inline.
- SST is updated from LBC's (from Alaro-4km)
  The +00 LBC is renamed SST_SIC
  SURFTEMPERATURE modified at sea:
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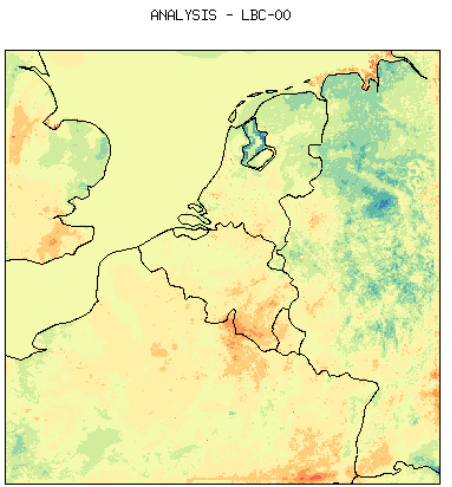

Status

- Development slow due to HPC problems
- Cycle appears to be running stably
- Full validation still to be done (awaiting harp v3!)
- Some namelist details probably need more attention