

Raw observation files ('rof') as alternative input template in KENDA

H. Reich, J. Keller, H. Anlauf, C. Schraff, R. Potthast

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Outline

- ▶ Motivation
- ▶ Changes in dace-code and namelists
- ▶ first applications
- ▶ Summary, Outlook
- ▶ additional remarks

Motivation

- ▶ **rof: raw observation files**
- ▶ simple way to assimilate “new” observation data
- ▶ cdfin-files (read by MEC/ILAM-ONLINE) many “definitions” necessary (local,WMO)
- ▶ MEC with ekf-files: **no checks done!**
- ▶ some kind of rof's already in use (NETATMO,SKIS), but via 'fdb_files' in MEC (developed for fof-files from nudging), **only a few checks are performed**

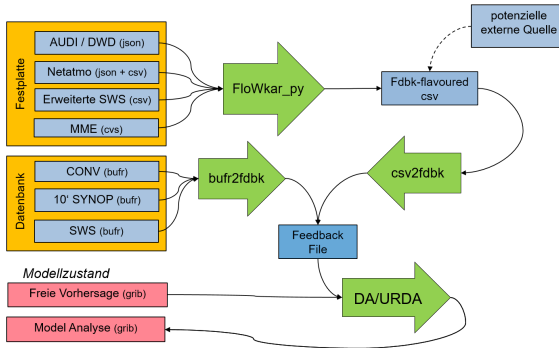
Motivation

- ▶ → new rof-mode in dace for applying (more) checks (e.g. height check, reliability checks on data)
- ▶ only for dace operators
- ▶ tool (python) to produce rof's; up to now: many tools...
- ▶ work in progress; e.g. plev has to be specified for all obs-types (for localization in LETKF), checks for some SYNOP obs

code and namelist changes

- ▶ new flag for MEC namelist (rof_files)
- ▶ only tested for AIREP, SYNOP currently

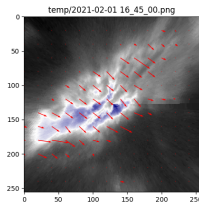
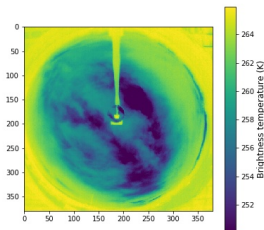
```
&observations
  !fdb_files      = 'rofSYNOP.nc'
  rof_files       = 'rofSYNOP.nc'
  dace_obs_op     = 'SYNOP'
/
```



- ▶ processing of observations via feedback-files up to now
- ▶ 'Feedback File' is now rof-file, one script to obtain the file

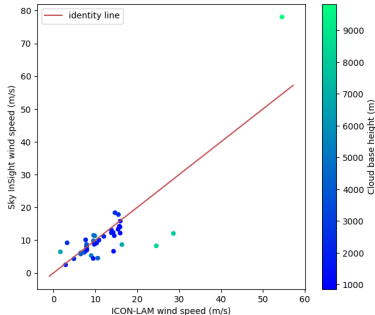
First application: SKIS

- SKIS: SKy InSight Winds, wind obs derived from camera using optical flow technology



SKy InSight: 2.35 m/s, Radar Wind Profiler: 2.44 m/s

First application: SKIS



- SKIS now assimilated via rof's, allows to apply checks

Summary and Outlook

- ▶ new mode (file type) for assimilating observations implemented
- ▶ only for dace-operators, SYNOP/AIREP so far
- ▶ other observation systems follow (PILOT,...; not planned for TEMP)
- ▶ to do: plevel, some obs for SYNOP
- ▶ first tests running

additional remarks

- ▶ MWR operational at MCH
- ▶ done using 'MEC light' (datool?)
- ▶ → no operational releases for datool!
- ▶ use of dace operators in the future: what has to be implemented?