

## Minutes of the technical meeting on KENDA (also task 1 of COTEKINO PP), Offenbach, 28<sup>th</sup> November 2013

### Participants:

Christoph Gebhardt (DWD), Florian Harnisch (LMU), Amalia Iriza (NMA), Daniel Leuenberger (MeteoSwiss), Francesca Marcucci (CNMCA), Chiara Marsigli (ARPA-SIMC), Tiziana Paccagnella (ARPA-SIMC), Roland Potthast (DWD), Hendrik Reich (DWD), Christoph Schraff (DWD), Lucio Torrisi (CNMCA), Martin Weissman (LMU).

### Minutes:

The meeting started with few presentations, followed by discussion.

Presentations:

- Florian Harnisch: Latest results on using KENDA ICPs
- Amalia Iriza: NEFFprove
- Hendrik Reich: Tools at DWD to evaluate KENDA experiments

The main discussion points were:

- NEFFprove
- Tools for KENDA evaluation
- KENDA set-up
- Idealized tests

### Florian Harnisch's presentation.

Available on MCH wiki page (see below)

Comments: among others, a test with addition of perturbed parameters in the KENDA ensemble is also shown. The impact on the spread is small but it is suggested that this may be due to the case selected, which is mainly synoptically driven.

Future plans: use new COSMO version, 1-hour cycling, test 40 KENDA-ensemble members (time lagged)

Discussion followed:

The multi-step localization is implemented in the code but not tested yet.

It is still not clear if `adaptive_rho` and `adaptive_R` should be used together or if they should be alternative.

### Amalia Iriza's presentation.

Available on the MCH wiki page (see below)

Discussion:

It is not possible to verify the `fof` files yet.

Amalia will implement the possibility to set the model domain coordinates.

### Hendrik Reich's presentation.

Available on the MCH wiki page (see below)

The new `lmstat` code (fortran code) is in preparation. It will read the output grib files and it will produce the complete `fof` files, with all the analysis fields interpolated on the observations. These complete `fof` files will be verified with NEFFprove.

The observational error (`R`) is written both in the `ekf` and in the `fof` files.

It is proposed to carry out the further testing on KENDA in a coordinated way between LMU, DWD, MCH and ARPA-ER, using cases falling in the testing period of the Ewelyne Project (August and December 2012). Daniel informed that LBCs from IFS ENS are also available (archived by MCH) in the period 25 July 2012 - 25 August 2012.

## OSSE.

Martin and Florian propose to use a model state old by 12 hours as initial state of the control run, in order to make the difference similar to the observational (?) error.

Chiara and Tiziana propose to set, in the control run, the humidity of the initial state to the 10% of its value, at all levels. This “extreme” test is meant to assess how much KENDA can bring back the model to the realistic state.

It is proposed to use the OSSE for testing the difference between running KENDA with 20 and 40 members.

### **Actions.**

- Explore the usefulness of another technical KENDA meeting in Munich during the Symposium, to be decided by mid January
- Chiara and Tiziana will provide the spectra code, with documentation
- Amalia will update the NEFFprove code. The code should be put under `svn` as part of the KENDA package
- Send the ppts to the ENDA mailing list (done)
- Chose one week for the common testing (in the period from 1 to 25 August 2012)
- Daniel will send the info on the MCH wiki page, where the ppts can be put (done, see <https://wiki.c2sm.ethz.ch/Wiki/ProjKENDApub>)
- All: subscribe to the COSMO ENDA mailing list