Minutes of the meeting of COSMO WG7 (WG on Predictability and Ensemble Methods), virtual meeting, 2nd – 3rd September 2020.

2nd September

WG7 / APSU meeting, Chair: Chiara Marsigli, Room VR2		
11:00 – 11:10	All	Opening
11:10 – 11:20	Chiara Marsigli	EUMETET ensemble activities
11:20 – 11:35	Andre´ Walser, Marco Arpagaus	Highlights of the newly operational COSMO-1E and COSMO-2E
11:50 – 12:05	Christoph Gebhardt	Status of the migration to ICON-D2-EPS
12:20 – 12:35	Giacomo Pincini	Ensemble activities in Arpae
12:50 - 13:00	*All*	*COFFEE BREAK*
13:00 – 13:15	Andrzej Mazur	Status and activities in the frame of APSU-PP in IMGW (cntnd.)
13:30 – 13:45	Pavel Khain, Itzhak Carmona, Alon Shtivelman, Yoav Levi	Choosing the optimal sub-ensemble of boundary conditions: testing various options using the cluster analysis
14:00 – 14:30	All	Discussion (including APSU/PROPHECY)

3rd September

WG1 / WG7 joint meeting, Chair: Chiara Marsigli, Christoph Schraff, Room VR1		
14:00 – 14:10	All	Opening
14:10 – 14:30	Christoph Schraff, Hendrik Reich	Developments at DWD
14:45 – 15:00	Daniel Leuenberger	KENDA Activities at MeteoSwiss
15:15 – 15:30	*All*	*COFFEE BREAK*
WG1 / WG7 joint meeting, Chair: Chiara Marsigli, Christoph Schraff, Room VR1		
15:30 – 15:50	Martin Sprengel, Tobias Heppelmann, Christoph Gebhardt	Representation of model error in COSMO and ICON
16:05 – 16:25	Mikhail Tsyrulnikov, Dmitry Gayfulin	Progress with model error evaluation and modelling
16:40 – 16:55	Elena Astakhova, Dmitry Gayfulin, Mikhail Tsyrulnikov	Ensemble prediction experiments with AMPT including soil perturbations
17:15	*All*	*End of the meeting*

Minutes:

The main discussion items are here listed. The presentations can be found on the cosmo website, in the repository for WG7.

- At MCH, KENDA is now running in single precision. This has required to fix several issues in the code. In order to be able to have operational in COSMO-2E and COSMO-1E a newer cosmo version, the model needed heavy re-tuning, with activation of new available schemes. Since the SPPT scheme gave problems in some cases, a new switch for its selective activation has been implemented.
- At DWD it has been noted that the LHN is less effective in ICON-D2 with respect to COSMO-D2
- The new COSMO-IL-EPS ensemble is being developed at IMS. It runs at ECMWF. Several experiments have been performed on the Cluster Analysis of IFS-ENS members to drive the limited-area runs.
- At DWD has been found that the ensemble spread is smaller in the ICON-D2 version of KENDA. A work has been presented by C. Schraff where observation error has been introduced in the spread-error relation, since the inflation factor rho takes into account the observation error.
- A scheme to model the model error in the dynamics, the truncation error only, has been proposed by RHM.
- The AMPT scheme developed by RHM provides better results than SPPT, but the experimental period is quite small. The evaluation will continue once in ICON.
- Three different COSMO members plan to introduce model perturbation schemes in ICON, as part of the PROPHECY PP: DWD (SEM), MCH (SPPT or iSPPT), RHM (AMPT). Therefore effective coordination is needed between these tasks and with the DWD ICON developers, and in particular with G. Zängl. This should work in two way: DWD provides to the COSMO members the needed information to be able to perform the implementation efficiently, and the COSMO members keep the developers informed about the status of their work in ICON. The PP coordinator will take care of ensuring this link.