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COSMO-CZ-SREPS – the first evaluation

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The study presents a first experiences with a new ensemble COSMO-CZ-SREPS. This short-range ensemble prediction system is computed on the Institute of Atmospheric Physics ASCR on the initial, lateral and boundary conditions from COSMO-SREPS ensemble. The COSMO-SREPS is a multi-model ensemble, driven by three deterministic global models: GME, GFS and IFS global model. The COSMO model is computed in five variants of physical parametrization on each of the global models and the horizontal resolution is 7km. The 16th member of the ensemble is integrated on the IFS model without changes in physical parametrization and it is called as control run. The COSMO-CZ-SREPS is integrated in 2.8km horizontal resolution on the domain covering the Czech Republic and near neighbourhood. The integration started at 0600UTC and finished at 2400UTC of the same day.
This study shows the results of QPF of several events with heavy convective precipitation or other severe convective phenomena. The spread propagation in the meteorological field is studied. The precipitation fields are verified by gauge adjusted radar measurement. The verification used traditional scores and modern spatial Fraction Skill Score and SAL techniques.
The ensemble COSMO-CZ-SREPS will serve as the base for ensemble spread-skill relationship assesment in the future.
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