OVERVIEW OF OPERATIONAL ACTIVITIES AT DHMZ

The most of the work since last LSC meeting was done on establishing and validation of the e-suite. The CY43T2-bf10 based e-suite (assimilation+production) was established on 1st of October 2020, with the aim to replace currently main operational configuration at $\Delta x=4$ km (ALADIN-HR4). The domain size (480 x 432 points), truncation (quadratic), number of vertical levels (73), etc. is kept the same. The baseline version initialized GFL fields (convective, microphysical and turbulent) as zeros. Afterwards they were cycled throughout the period 23.11-10.12., which included the appearance of long lasting fog, freezing rain and intensive cyclone with heavy precipitation. The impact was found positive (surface and upper air) for moisture related parameters (e.g. specific and relative humidity) and to smaller extent for temperature. Jk impact was also tested as positive for upper air parameters.

Since 1st of December 2020. the precipitation type and visibility module was included into e-suite. Several freezing rain events were nicely reproduced, including very localized and short lasting case near the Slavonski Brod (2nd of December 2020.). In parallel, the case study verification framework based on Python tools was being developed.

There is also ongoing work on non-hydrostatic CY43T2-bf10 based configuration at $\Delta x=2$ km, which should replace the dynamical adaptation (ALADIN-HRDA). Testing is in progress and first results are very promising.

At the beginning of 2021. a change/optimization in the procedure for coding automatic and synop stations into OBSOUL file is introduced.

Post-processing activities include operationalization of the neighbourhood method and adaptation of analog-based method for parallel execution.