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O-02. Alexander Baklanov: On-line integrated Enviro-HIRLAM system: strategy, current status and further developments

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The strategy of for developing new-generation integrated Numerical Weather Prediction (NWP) / Meteorological Model (MetM) and Atmospheric Chemical Transport Model (ACTM) systems, based on the HIRLAM/HARMONIE meteorological corner, is discussed on example of the online integrated Enviro-HIRLAM system. Advantages and disadvantages of on-line integration in comparison with, the more common, off-line coupling of MetMs and ACTMs are mentioned using Enviro-HIRLAM as a specific example.

Current progress in the Enviro-HIRLAM system development and its on-line coupled modelling applications is considered. Several sensitivity tests of off-line versus on-line coupling in Enviro-HIRLAM at DMI as well as verification versus the ETEX experiment are considered and results are discussed. The way of online integration modeling considering feedback mechanisms is more promising for the future and could be beneficial for model improvements in both communities: NWP and atmospheric environment / chemical weather forecasting. This paper was prepared as a starting point for further planning of the future joined HIRLAM/HARMONIE-ACTM integration and development activities.