



Extended Priority Project CALibration of the COSMO MOdel CALMO

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Motivation

- Many research groups and operational centers are moving towards (convection-permitting) kilometric resolutions, thus there is a particular interest for re-calibrating a high-resolution configurations.
- The use of an objective method such as the one applied in Bellprat et al. (2012b) is highly attractive due to its efficiency, wide calibration range and transparency.



Project extension

Project ends in 09.2015, instead of 12.2014

The focus is on the COSMO-1 calibration to show the **benefit** of the method for calibrating COSMO-NWP. In a second step, once the benefit of the method has been assessed, the focus is on the **optimization** of the method.



Actions proposed Tasks

- Preliminary work (e.g. acquire computing resources) (Task 1)
- Adaptation of the existing method for NWP applications (Task 2)
- Assessing the usefulness of the calibration method (Task 3)
- Define optimal methodology in terms of computing time and quality gain (Task 4)
- Documentation and dissemination of results (Task 5)





Main deliverable

- Provide an objective and practicable methodology, incl. tools, that can substitute expert tuning for calibrating NWP models.
- Provide the associated technical and scientific documentation.
- Understand the sensitivity of the NWP model quality with respect to the unconfined model parameters.



CALMO Tasks

- **Task 0: Administration and support** (*continues....*)
- **Task 1: Preliminary work** (*1 new sub Task added*)
 - 1.4: Consolidation of CALMO methodology
- **Task 2: Adaptation of the method** (*2 new subTasks added*)
 - 2.6: Modifications on the meta-model
 - 2.8 Data thinning policy and application
- **Task 3: Assessing the usefulness of the calibration method** (*subTasks modified*)
 - 3.1: Application of the method using COSMO-1
 - 3.2: Analyse results
- **Task 4: Practicability of the method**
- **Task 5: Documentation**
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Contributing Scientists

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(in addition, support from MeteoSwiss will be provided as needed)



Any suggestions, comments, remarks?

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