

Project: **677**

Project title: **Evaluierung der Atmosphärenchemie in MECO(n)**

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Report period: **2016-01-01 to 2016-12-31**

The activity plan for this project for the year 2016 was split into four parts:

1. (UP) Upgrade of the MECO(n) system to the newest COSMO version (v5.3)
2. (TS) Test simulations
3. (SVAT) Implementation of the "Community Land Model" (SVAT-CLM) as a COSMO/MESSy submodel
4. (COMP) Comparison of the performance of COSMO/MESSy including SVAT-CLM with the COSMO-CLM²

Here, part 1 and 3 are the technical development parts and 2 and 4 the respective (test) simulation, which can only be performed, if the technical developments are finished.

Due to maternal leave, part 3 and 4 have not been tackled at all in 2016. The project had to be shifted to 2017.

The upgrade of the MECO(n) system (part 1) is ongoing. The newest COSMO model version provided by the DWD is the (beta-)version COSMO v5.4b. It contains some important additional features, so that we decided to switch directly to COSMO v5.4b instead of COSMO v5.3.

Due to the switch in positions (Uni Mainz to Uni Bonn) less time was available for this work. Furthermore, the refactoring of the code with respect to the new blocking structure of the physics package is more complex as expected priorly. For both reasons, the development work is still ongoing and thus, the test simulations could not yet be performed and we expect that the code will not be ready for the test simulations before the beginning of 2017.