

LiCoS: Linking Composition & Circulation on intermediate spatio-temporal scales (MiKlip)

Abstract:

LiCoS is one of the projects funded by the BMBF within the framework of the MiKlip (Mittelfristige Klimaprognosen), Module B (Process description and modeling) programme. It is the continuation of the DKRZ projects BM0861 and BM0869 from 2013. The main aim of LiCoS is to investigate to what extent meteorological versus atmospheric chemical factors limit climate predictability on timescales of years to decades.

During the coming year we want to test the sensitivity of climate to different emission scenarios using the EMAC global climate model with interactive chemistry included. The same model will be used to produce tropospheric ozone climatologies which will then be used in ensemble simulations using the MPI-ESM model in order to estimate its predictive skill via hindcast studies.

Furthermore we will continue our studies to improve our understanding how the representation of clouds and aerosols in the MPI-ESM limit climate predictability, with the aim to eventually improve these limitations and contribute these findings into the integrated decadal prediction system