## Abstract "COSMO-CLM simulations with 2-way Nesting" (LS Umweltmeteorologie, BTU Cottbus)

This DKRZ-project is part of the BMBF-project MesoTel. MesoTel aims to improve the accuracy of the planetary scale dynamics and of the deterministic forecast of seasonal means over Europe by taking into account the feedback of the meso-beta-scale dynamics on the hydrostatic large to planetary scales. In particular, the relevance of the meso-beta-scale dynamics for the development of extremely growing Rossby wave trains shall be investigated and a contribution to our understanding of the mechanisms determining the interannual to decadal predictability shall be made. Hereto the recent versions of the non-hydrostatic COSMO-CLM, which is a model system for operational NWP and regional climate modelling (RCM), and of the global atmosphere-ocean circulation model (AOGCM) ECHAM6/MPIOM shall be coupled and applied.

The standard configuration of the MiKliP models is planned to be similar to the CMIP5 configurations of ECHAM/MPIOM and COSMO-CLM for Europe. The configurations are the low resolution 0.165L40 (COSMO-CLM) configuration and the high resolution 0.110L50 configuration. Here the first number gives the horizontal resolution in units of angular degrees and the second number gives the number of vertical levels in an approx. 30km high atmosphere.

The simulations planned in 2012 are the "present day interannual runs" with COSMO-CLM using LR and HR configuration with ERAinterim and ECHAM6/MPIOM boundary conditions. The simulation aims to investigate the quality of the storm and RWT development in the limited area model and its comparison with the results of the global data used as IBCs. A configuration similar to the operational system of MiKliP shall be used throughout the study. Two-way coupled simulations are planned at the end of 2012 or beginning of 2013.