



Evaluation of regional climate simulation results against the high quality CM-SAF Satellite Products

A. Will, M. Woldt and E. Schaller

Environmental Meteorology, BTU Cottbus (will@tu-cottbus.de)

The CM-SAF unit, which is a group of EUMETSAT, provides the first 15km horizontal resolution climatological data (9.2005-4.2007) of high quality covering Europe for all components of the radiation budget TOA and at the surface, cloud properties and humidity content of the atmosphere. For each data set its absolute uncertainty is given. The products are derived mainly from Satellite measurements. Additional ground based observations and some few analysed data fields are needed for calibration and/or completeness of the data set.

In comparison here with, the model output of the regional model COSMO-CLM, which is a nonhydrostatic model for operational weather forecast and regional climate modelling, may be regarded as physically consistent. However, the simulated regional climate does not have to be the observed one.

We conducted a regional climate simulation over Europe for the period 2001-2007 with GME boundary conditions and horizontal resolution of 18km. The results of the direct comparison of all components of the radiation budgets TOA and at the surface, of cloud and of the humidity quantities between COSMO-CLM results and the CM-SAF products will be presented. The direct comparison provides the opportunity to identify model deficiencies for those variables, which have a small enough uncertainty in observations and to identify inconsistencies in the CM-SAF products. First results in this respect will be presented.