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Multi-Objective calibration of the SVAT scheme TERRA/LM

K.-P. Johnsen, S. Huneke and H.-T. Mengelkamp

Institute for Coastal Research, GKSS Research Centre Geesthacht GmbH, Geesthacht, Germany (johnsen@gkss.de)

We analyze the potential of the multi-criteria parameter optimization method to describe the area averaged surface fluxes of a typical heterogeneous mid-European landscape with the SVAT (=soil vegation atmosphere transfer) scheme TERRA of the Lokalmodell of the Deutscher Wetterdienst. We applied the MOSCEM-UA (Multi-objective shuffled complex evolution algorithm) of the Universities of Arizona and Amsterdam and identified parameter of a standalone version of TERRA to calibrate and validate the model with data of the recently finished LITFASS-2003 experiment. As objective function we used a modified Nash-Sutcliffe measure with optimum at 0. We compare the objective function for the area averaged surface fluxes with that of the heat fluxes for different land classes of the LITFASS-2003 area as well as with the fluxes estimated using default parameters.