

Interactive comment on “Impacts of grid resolution on surface energy fluxes simulated with an integrated surface-groundwater flow model” by P. Shrestha et al.

Anonymous Referee #2

Received and published: 31 July 2015

This manuscript reports on numerical experiments with a hydrological modelling system that couples CLM3.5 at the land surface with ParFlow in the subsurface. The model was set up for a 325 km² sub-catchment of the Rur River in Germany. For numerical experiments, grid resolution was varied between 120 and 960 m changing mainly topography and landuse. These changes significantly affected simulated results for soil moisture, soil temperature and surface energy fluxes. Differences of model outcomes varied for all grids resolutions suggesting that even at resolutions finer than 100 m differences may occur. Implications for earth systems modelling are discussed. The paper is well written end explained and should be accepted as is.

C2921

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 12, 6437, 2015.

C2922