Interactive comment on “Spatial heterogeneity of satellite derived land surface parameters and energy flux densities for LITFASS-area” by A. Tittebrand and F. H. Berger

Anonymous Referee #3

Received and published: 17 December 2008

The paper investigates to what extent estimates of energy fluxes are affected by sensor resolution. It compares estimates of energy budget components derived from Landsat ETM, MODIS and AVHRR for 20 August 2002. The differences between estimates from these three instruments are small, possibly smaller than the overall error. Some spatial variation in energy fluxes was found.

This is a useful initial study; and there several ways in which this study could be expanded. When looking over time the spatial component may become more important (e.g. during a period of drought) and discrepancies between estimation methods may become larger.
The results could be used as inputs to a land-surface model to investigate further the effects of spatial variation on the calculation of fluxes. Validation of diurnal variations with flux tower data would be an interesting extension as well. There is potentially a lot of useful science that could come out of this study.

There are some minor comments, the paper could be more concise and the abstract could start with the research aims and objectives.

Interactive comment on Atmos. Chem. Phys. Discuss., 8, 16219, 2008.