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Atmospheric Chemistry and Physics Discussions

Interactive comment on "The 'urban meteorology island': a multi-model ensemble analysis" *by* Jan Karlický et al.

Anonymous Referee #3

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This paper deals with urban-induced changes of specific meteorological variables and as such the authors introduce the urban meteorology island (UMI). A large ensemble of 24 model simulations with the WRF and RegCM regional climate models on European domain was performed to investigate various urban-induced modifications as individual components of the UMI. Overall this is an interesting paper with many results which mostly confirm already known aspects of urban areas. The following points need further clarification before paper can be accepted: 1. The fact that the results are achieved using a horizontal resolution of 9 km within the models needs to be mentioned more clearly in the abstract and conclusions. 2. The authors should also motivate why they have chosen the various combinations of physical schemes and possibly list some of the main physical characteristics of the respective schemes to improve readability.

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Discussion paper

3. Regarding the presentation of the urban results in section 3.2, a selection of those models who performed best in the overall evaluation would make much more sense. 4. What aspects of the study have been surprising for the authors? 5. Can the authors also give a recommendation for the combination of physical packages using either WRF or RegCM?

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