Title: Spatial variability of precipitation annual cycles
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Abstract: This thesis enquires into the spatial variability of precipitation annual cycles and its representation by regional climate models. Goal is to find suitable metrics that could describe spatial character of the precipitation field and consequently evaluate model results. For complete understanding the issue, there is an introduction to modeling with regional climate models and also parameters of the precipitation in the Czech Republic. The main part of the thesis is an application of different methods of descripiton on the results of the regional climate models (including the Czech model ALADIN) and CRU data. Results of the models are compared to observed data transferred into the regular grid. Each method is applied on the model results and assessed with regard to advantages and disadvantages. The metrics that were found useful are recommended for the further evaluation of the spatial variability of precipitation annual cycles. The ALADIN model seems to be quite successfull, weak points are only modelling of the precipitation in spring and the effect of the continentality and oceanity on the precipitation annual cycles.

Keywords: regional climate model, annual cycle of precipitation, metrics, model assessment