

We changed the manuscript in all points which we described in our previous responses to the referees. This includes mainly a more extensive description of the model in particular of the heat and water processes, in both the manuscript and the supplement. Several sentences were rephrased and added according our previous responses and several references were added.

The objectives were rephrased to make to meet the request of adding hypotheses. A detailed and systematic screening of data, model performance and posterior parameter distributions was made. In this study, we have been able to identify major hypotheses that can be tested in the next step. The step in this study was to evaluate the usefulness of model and data to describe the major variability of carbon fluxes. Both the model (theory) and the data are with errors and the uncertainty approach is useful to identify gaps in both. We have used a simple approach to avoid too many uncertainties with correlation between various factors to find the degree of explanation for a certain model structure uncertainty.