

***Interactive comment on “Simulating carbon exchange using a regional atmospheric model coupled to an advanced land-surface model” by H. W. Ter Maat and R. W. A. Hutjes***

**H. W. Ter Maat and R. W. A. Hutjes**

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Reply to Anonymous Referee #1

We thank the reviewer for his constructive comments. They were of great help in the revision of our paper which we believed significantly improved the quality of the paper.

The textual comments are being dealt with and corrected where needed. The other comments are briefly discussed below.

The referee raised three major issues:

1) the authors removed all subjective wording considering the performance of the model. Also, a statistical analysis is included as part of the validation (tables 4-6)

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giving more quantitative information on the goodness of fit.

2) We improved the aircraft data processing trying to answer this question. Data have been spatially aggregated to estimate their uncertainty related to random errors and surface heterogeneity, and those uncertainty figures have been used to improve data interpretation. For details, see modified text at lines, and modified figures.

3) This is a good recommendation that will be taken into consideration for future assessments.

Considering the minor issues the authors decided to leave figures 15 and 16 as they are in the original manuscript. The reasoning behind this is that the control simulation is taken as the point of departure.

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