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Comment

Interactive comment on “Modelling LAI, surface water and carbon fluxes at high-resolution over France: comparison of ISBA-A-gs and ORCHIDEE” by S. Lafont et al.

Anonymous Referee #1

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General comments:

This paper is a profound comparison of modeled LAI distributions and LAI maps from EO. It is clear and well structured. Its special quality lies in the combined application and analyses of land-surface modeling and remote sensing parameter retrieval. This integrative approach is very challenging and based on state-of-the-art methods and models. However the paper stops with the comparison of results and does not give answers what we can learn from it. This does not mean it is not worth publishing or reading, but it raises more questions than answers.

The paper describes the observed facts and tries to explain the quantified differences.

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These differences are often tremendous. The spatial correlations are mostly very weak. Even pure model outputs using the same input of land cover types and meteorological forcing produce variations of GPP of 60% (annual value). My conclusion from this is that these land-surface models are still too unconsolidated to use them for uncertainty assessments and I would not dare to make any management decisions based on these model outputs. From my perspective, this field of research still needs a long way to go, but at least this is a good first step.

Technical comments:

- Fig. 1, 3, 5 and 9 are too small, please enlarge the individual maps.
- Please check the colors of Fig. 6. Is it true that Orchidee is this time the red graph? If yes, I would propose to change it to blue, since all other plots are the same way.
- Would it be possible to add the EO based LAI annual cycles in Fig. 6?

Interactive comment on Biogeosciences Discuss., 8, 7399, 2011.

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8, C3292–C3293, 2011

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