

Interactive comment on “Assimilation of Soil Wetness Index and Leaf Area Index into the ISBA-A-gs land surface model: grassland case study” by A. L. Barbu et al.

Anonymous Referee #1

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This paper presents a good overview of a detailed piece of work carried out to assimilate two different datasets into a land surface model: soil moisture and leaf area index. The authors show that there is an advantage to assimilating both at once, as it provides more information on the water balance that the model is deficient in modeling itself that affects the carbon budget, namely the model has a delayed spring.

The paper is very detailed and correctly covers all aspects of this complex research. I think it is complete and explains all the challenges well. It would be a good paper for other researchers in the same field to follow.

I only have one comment that is relevant to the science and that is if the data being

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assimilated are incompatible with each other, for instance if the LAI is showing an increase and the model has reached a completely dry state. Could you add a comment about the possibility of conflicting information coming from these different data streams?

Interactive comment on Biogeosciences Discuss., 8, 1831, 2011.