Geoscientific
Model Development
Discussions

Open Access

**Interactive
Comment**

Interactive comment on "Are vegetation-specific model parameters required for estimating gross primary production?" *by* W. Yuan et al.

Y. Cao

yfcao@umd.edu

Received and published: 23 December 2013

The authors conducted two model experiments for seven light use efficiency models in order to examine the reliability of simplified parameterization. The results did not showed significant differences in model performances of two sets of parameters. The results implied the vegetation-invariant set of parameters can be used at seven light use efficiency models, and which would help to improve the applicability of LUE models globally. In general, it is well-written and important for mapping global vegetation production as well as carbon uptake. I am concerned with several issues however, and detail these concerns in the following.

This study missed some vegetation types and to say the constant parameters globally. At Table 1, we would like to see the results at shrubland and savanna or others which

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper

have been included at FLUXNET datasets.

Table 1 shows the inversed parameters with the range values (after '$\pm$'. How to get the range values? According to the method, you select half sites to calibrate parameters, then you only can get one set of parameter, how to test the differences? The authors need added more details to explain the method clearly.

I am curious about the results that no significant differences at the two model experiments. Will the model performance impact the conclusion? Some papers already reported the low accuracy of GPP models, including the LUE models. It will be helpful to discuss this.

If these issues are all addressed it can be published.

————————————————

Interactive comment on Geosci. Model Dev. Discuss., 6, 5475, 2013.