

Interactive comment on “The inter-annual variability of Africa’s ecosystem productivity: a multi-model analysis” by U. Weber et al.

Anonymous Referee #3

Received and published: 2 December 2008

I find this an accomplished piece of work which looks at the important but overlooked topic of c-cycle across the African continent, and identifies the importance of IAV in plant production. I would recommend publication after revision.

In particular, reasons for the different DGVM responses should be discussed, for example, LPJ, LPJ-GUESS and ORCHIDEE have common elements yet their responses are quite different. It should be mentioned that most models including some applied here do not perform well in water limited regions (see Morales et al., Global Change Biology).

Minor comments:

P 4037 line 21 are the models really different?

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper



P4042 ~line 20 we do not know global GPP or NPP, modify the sentences accordingly to say "assuming a global GPP of 120 PgC/yr"; plus add a reference for the figure. Likewise I do not think one can say based on the Cramer et al., 1999 results that two models may overestimate NPP.

P 4041 & P 4045 GPP and TER do not appear to be defined when first used.

P 4045 line 27, JULES in capitals.

P 4047 line 10; reference Morales et al., 2005

P 4047 line 17; radiation limiting inner tropical productivity is not a new finding. Please reference Nemani et al., Science, 2003.

P 4048; we find only small areas with light limitation from the analysis using satellite data; Is this not opposite to Nemani et al. ?

Figure 2 The atmospheric inversions exclude fire emissions. However LPJ includes fire; is these therefore directly comparable ?

Figure 5 IAV GPP for ORCHIDEE and LPJ-GUESS look identical; is there an error in the graphics program?

Interactive comment on Biogeosciences Discuss., 5, 4035, 2008.

[Full Screen / Esc](#)[Printer-friendly Version](#)[Interactive Discussion](#)[Discussion Paper](#)