

Interactive comment on “Effect of vegetation on the Late Miocene ocean circulation” by G. Lohmann et al.

Anonymous Referee #2

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This is an interesting study of the effects of vegetation on the global hydrological cycle and in turn ocean circulation. The manuscript is well written and the figures are useful in conveying the major results of the study. There are a few more figures/diagnostics that would aid in convincing the reader of the conclusions. I recommend the manuscript be accepted once these results have been included in the current work.

Specific Recommendations:

1. On page 5, description of figure 1. It would be of great value for the authors to include with figure 1, the change in surface albedo due to the change in vegetation. This is an important forcing factor to the results and would aid in interpreting the overall results.

2. On page 6, section 3.1. The hydrological changes are only discussed in terms of changes in E-P. Much of the discussion is on the shifts in moisture transport. In this regard it would be of great value to add a vector plot of $\mathbf{v}q$, where \mathbf{v} is the 850 hPA velocity vector. These vectors could be overlain on the divergence of $(\mathbf{v}q)$, which would show regions of moisture divergence/convergence.
3. On page 10, the authors indicate that changes in the subtropical winds play an important role in their results, yet these changes are not shown. It would of value to include a figure of the changes in these winds.

Interactive comment on Clim. Past Discuss., 2, 605, 2006.

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