

Interactive comment on “Modeling stomatal conductance in the Earth system: linking leaf water-use efficiency and water transport along the soil-plant-atmosphere continuum” by G. B. Bonan et al.

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Authors reply to: Interactive comment on "Modeling stomatal conductance in the Earth system: linking leaf water-use efficiency and water transport along the soil-plant-atmosphere continuum" posted by E. Blyth

This is an excellent paper that needs to be published. The ideas in it are very exciting. We have been waiting a long time to break away from the Ball-Berry method of linking photosynthesis and transpiration and their links to soil water stress. The assumptions

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in the Ball-Berry method have dominated the Land Surface Models used in climate modelling and depend on a difficult to calibrate link between stomata and humidity deficit that I think is not entirely mechanistic. For such an important aspect of the earth system, it is really important to explore new ways of solving the riddle and this paper describes a very promising avenue. The paper is well written and would allow other researchers to try the ideas out. I urge that the paper is published forthwith.

Response: We thank Eleanor for her endorsement of this manuscript.

Interactive comment on Geosci. Model Dev. Discuss., 7, 3085, 2014.

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