

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.

S. Otto

sebasotto@gmx.de

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Dear Authors,

I would like to note merely that, with respect to the radiative transfer scheme applied,

1) the formula of Goudriaan's G-function approximation $G = \phi_1 + \phi_2 \mu$ is not correct. It holds $G = \phi_1 + \phi_2 |\mu|$.

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2) the usage of Goudriaan's G-function approximation is not the best one in my opinion. There are better approximations of Dickinson and deRidder. Moreover, there are exact formulas of G for various standard leaf normal distributions functions (spherical, uniform, planophile etc.). Why aren't they applied?

Since the G-function is (not only) part of the solar exponential term of the radiative transfer equation, small deviations (e.g. due to inaccuracies) in G can have a big impact on the transported radiation, photosynthesis calculations and so on. How do both facts influence the results of your work?

Best regards,
Sebastian Otto

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