Biogeosciences Discussions

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Comment on bg-2022-50

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Community comment on "Excess radiation exacerbates drought stress impacts on canopy conductance along aridity gradients" by Jing Wang and Xuefa Wen, Biogeosciences Discuss., https://doi.org/10.5194/bg-2022-50-CC1, 2022

Stomatal conductance (gs) of all co-existing species plays a significant role in transpiration and carbon uptake photosynthesis at ecosystem level. This study investigates the interactive effect of environmental stressors and biotic factors on canopy gs, through an experiment conducted through three plateaus in China. Bulk leaf $\delta^{18}O$ organic matter is affected by gs based in steady-state leaf water ^{18}O enrichment and is widely used by plant eco-physiologists to infer the spatial and temporal variation in gs. The manuscript is well rewritten and the topic is useful for canopy gc simulating at different scales.

The author should clarify why the radiation exhibited negative effect on gs, however, temperature exhibited positive or no effect on gs in different regions. Generally, radiation may influence plant gs through its influence air temperature, thus, the consistent effect of radiation and temperature on gs may be more reasonable.