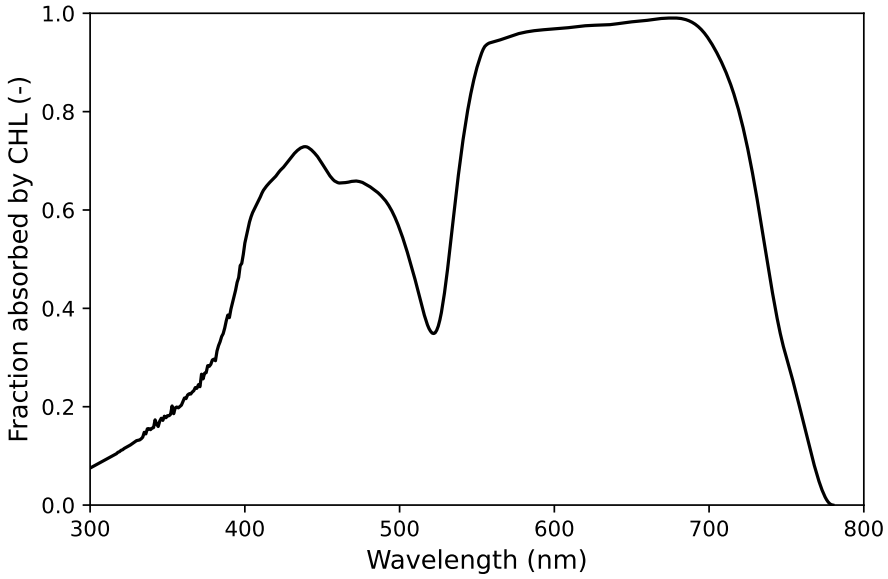

Figure S1: Fraction of UV and PAR absorbed by chlorophyll for a leaf with 40 μg cm^{-2} chlorophyll and 0.012 g cm^{-2} dry matter.

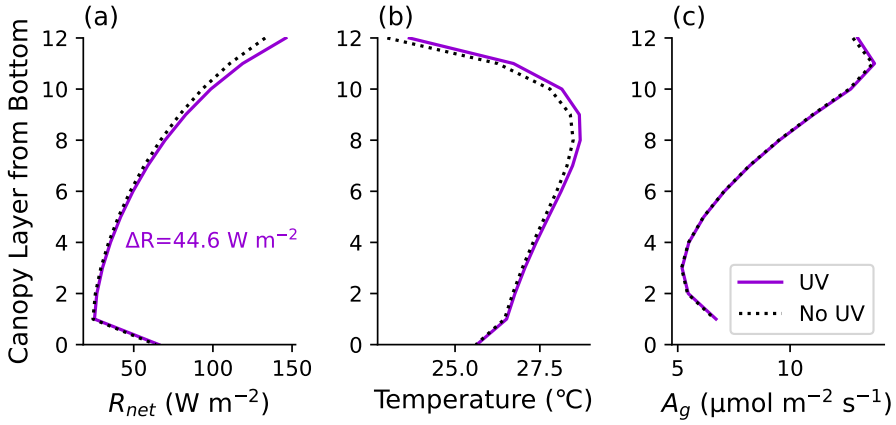

Figure S2: Implementing UV radiation in CliMA Land. This figure differs from the main text Fig. 3 in that we used the Johnson and Berry (2021) C3 model.

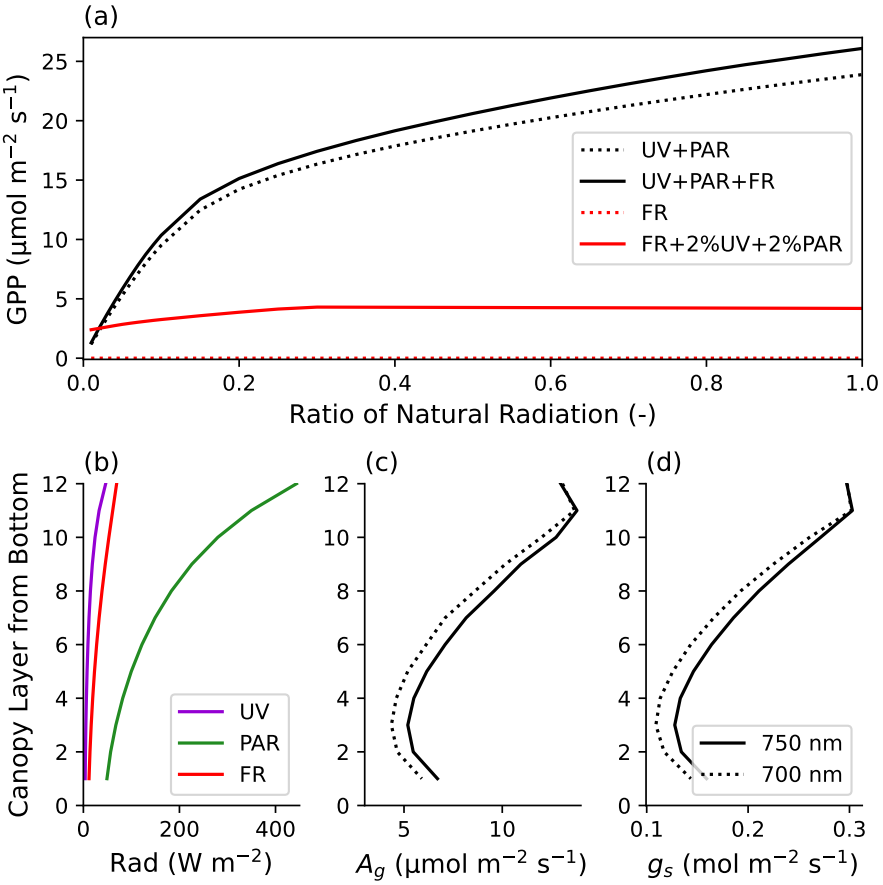

Figure S3: Accounting for FR contribution to PPAR in CliMA Land. This figure differs from the main text Fig. 5 in that we used the Johnson and Berry (2021) C3 model.

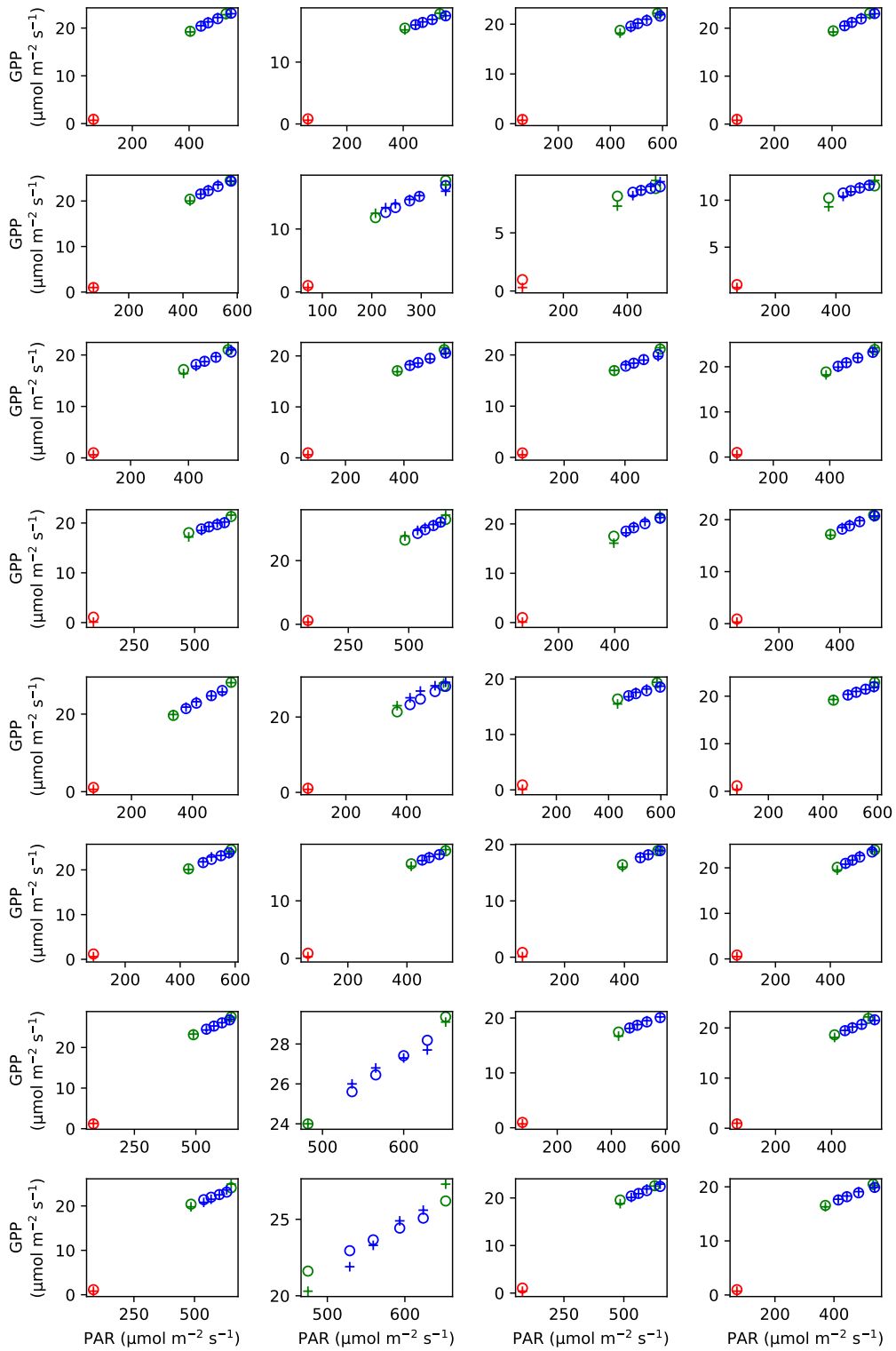

Figure S4: Comparison of modeled GPP to measured GPP per plant (data from Zhen and Bugbee (2020)). The C3 photosynthesis model used was the Farquhar et al. (1980) model.

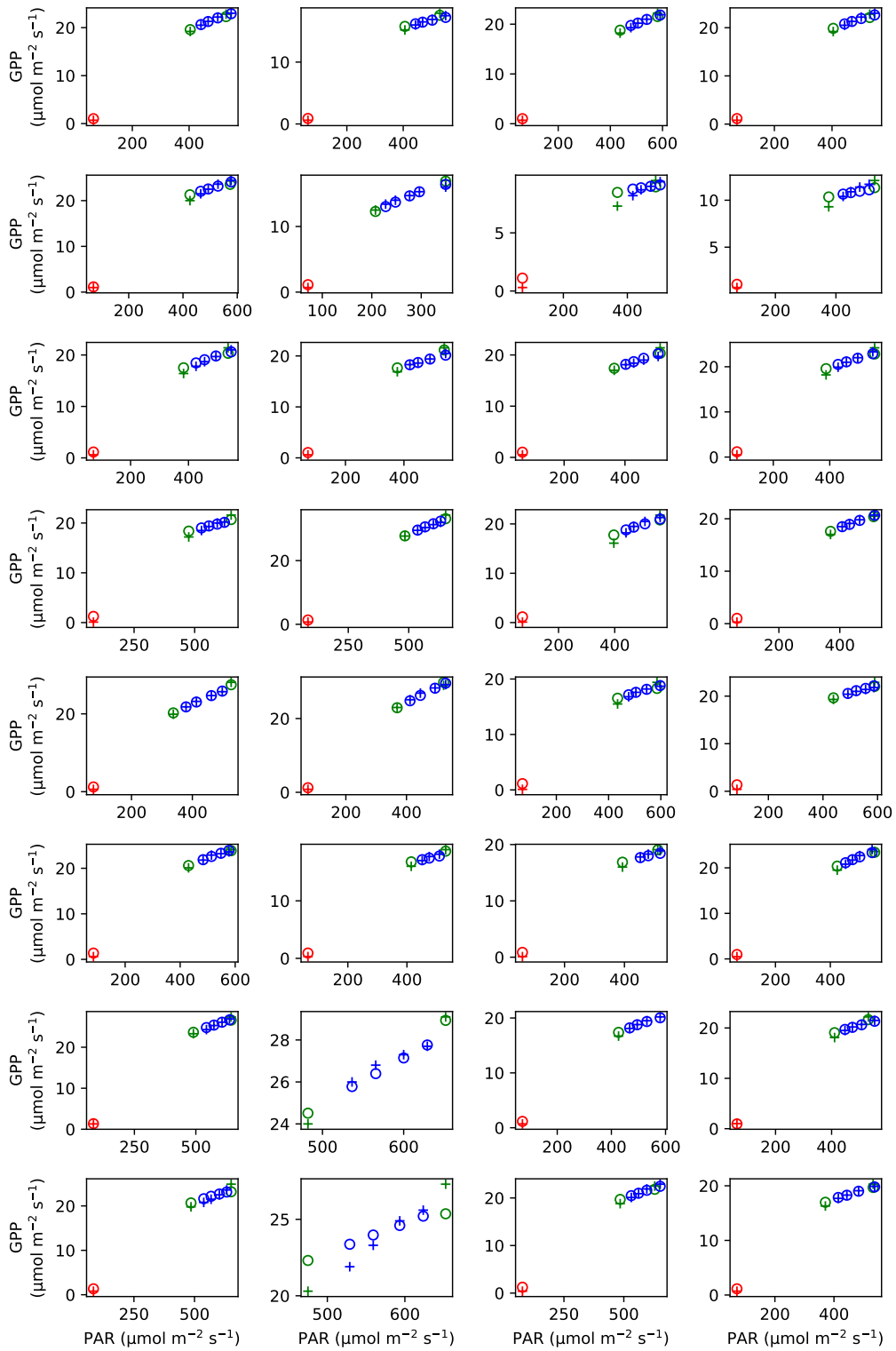

Figure S5: Comparison of modeled GPP to measured GPP per plant (data from Zhen and Bugbee (2020)). The C3 photosynthesis model used was the Johnson and Berry (2021) model.

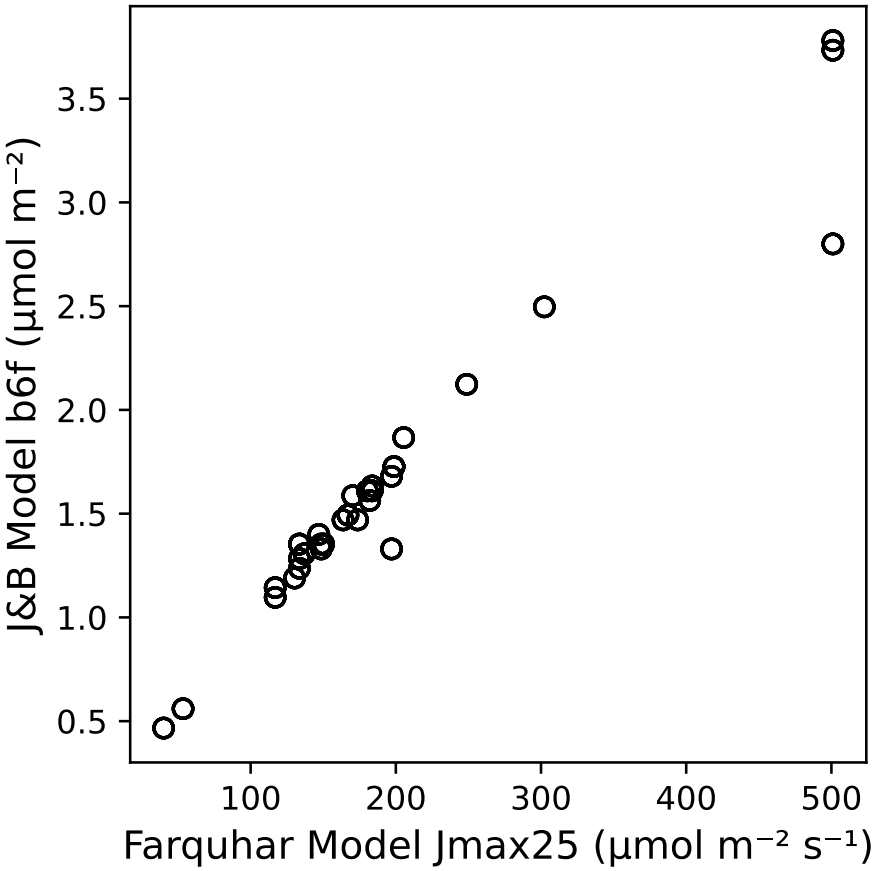

Figure S6: Correlation between the fitted J_{max25} for the Farquhar et al. (1980) model and b_6f for the Johnson and Berry (2021) model (data from Zhen and Bugbee (2020)).

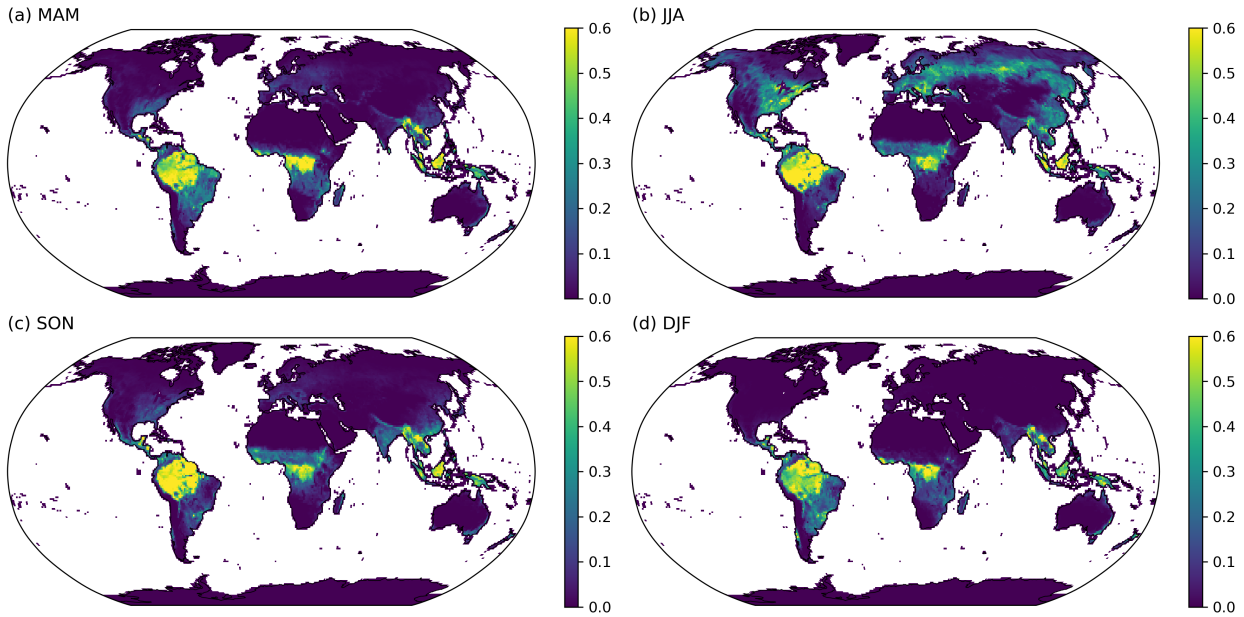

Figure S7: Seasonal changes of GPP when improving UV and FR representations in CliMA Land. **(a)** March, April, and May. **(b)** June, July, and August. **(c)** September, October, and November. **(d)** December, January, and February.

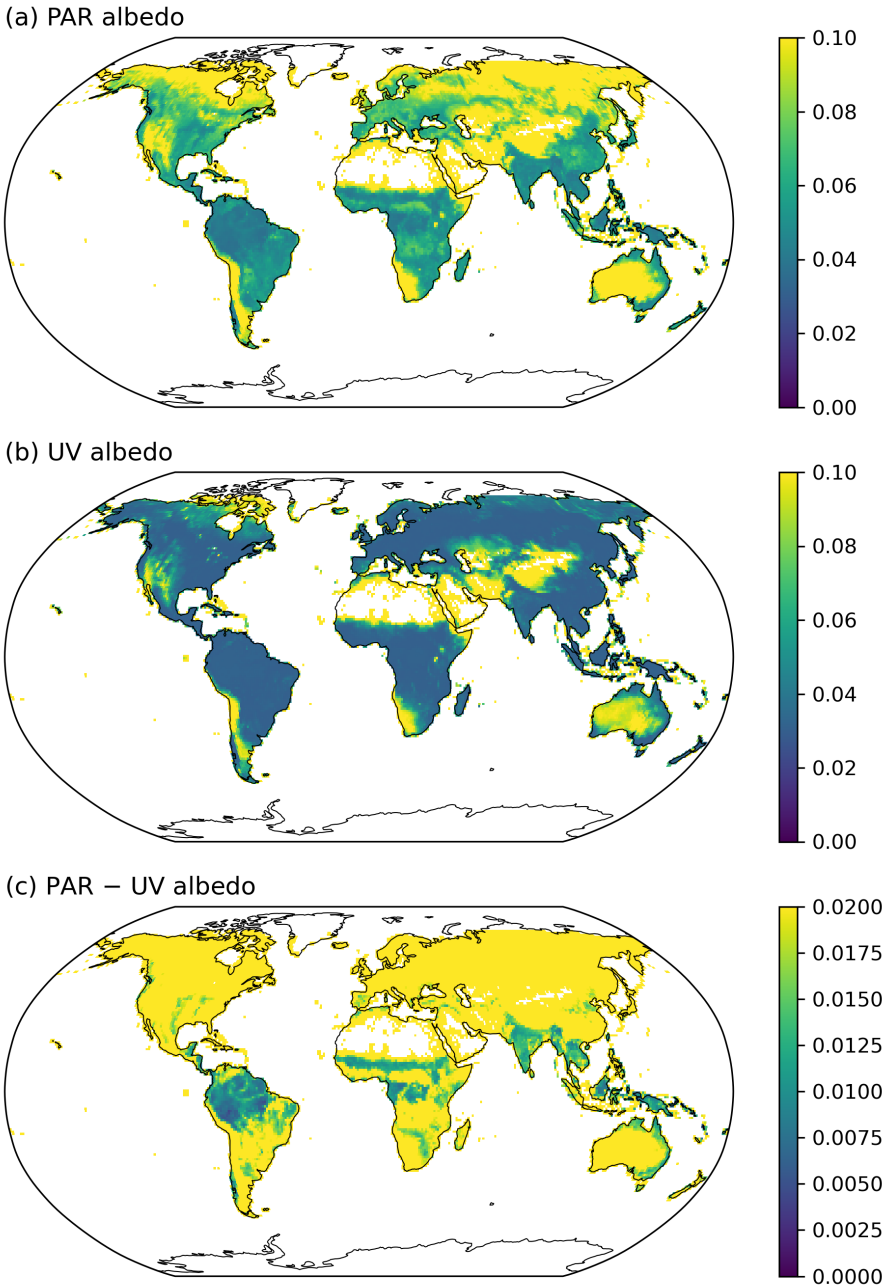

Figure S8: Surface albedo computed using annual mean CHL and annual maximum LAI. **(a)** PAR albedo. **(b)** UV albedo. **(c)** Difference between PAR and UV albedo. This figure differs from the main text Fig. 9 in that panel c has an upper bound of 0.02 instead of 0.1.

References

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