Synchrony of African rainforest solar induced chlorophyll fluorescence and environmental factors

Russell Doughty[1*], Michael C. Wimberly[2], Dan Wanyama[2], Helene Peiro[1,3], Nicholas Parazoo[4], Sean Crowell[5], Moses Azong Cho[6]

[1]College of Atmospheric and Geographic Sciences, University of Oklahoma, Norman, OK, 73019, USA
[2]Department of Geography and Environmental Sustainability, University of Oklahoma, Norman, OK, 73019, USA
[3]Netherlands Institute for Space Research (SRON), Leiden, The Netherlands
[4]Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA 91109, USA
[5]LumenUs Scientific Solutions, LLC, Oklahoma City, Oklahoma.
[6]Precision Agriculture Research Group, Advanced Agriculture and Food, CSIR, Pretoria, South Africa

Correspondence to: Russell Doughty (russell.doughty@ou.edu)

Table S1. Mean annual total precipitation and standard deviation of monthly total precipitation in 2019-2021 for 11 African tropical evergreen broadleaf ecoregions.

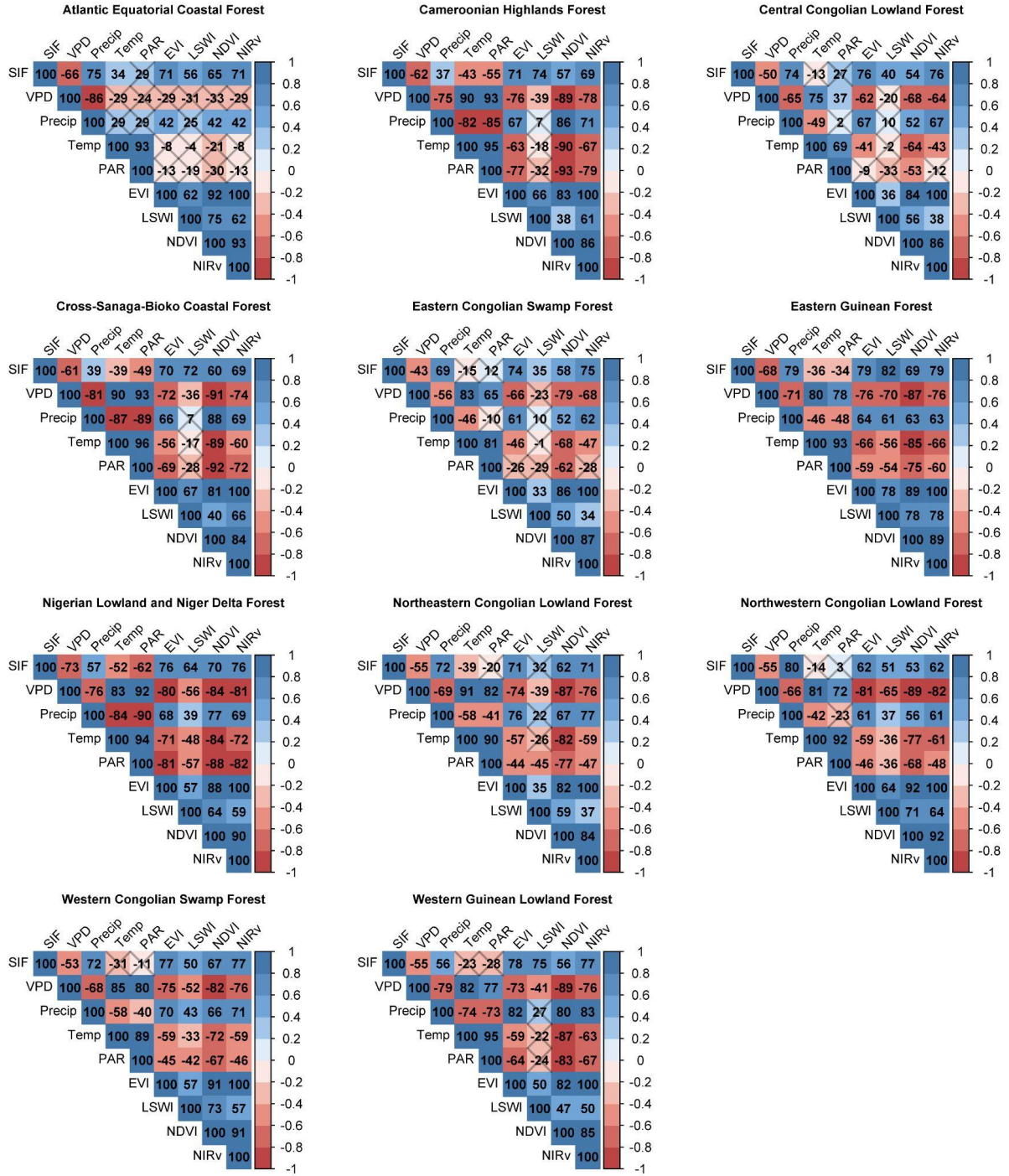| Forest Ecoregion	Mean annual precip.	Standard deviation of monthly total precip.
West Africa moist tropical forest		
Cameroonian Highland	2648 mm	163 mm
Cross-Sanaga-Bioko Coastal	2609 mm	152 mm
Nigerian Lowland and Niger Delta	2922 mm	177 mm
Western Guinean Lowland	2450 mm	120 mm
West Africa tropical forest		
Eastern Guinean Forest	1544 mm	81 mm
Central Africa tropical forests		
Atlantic Equatorial Coastal	2147 mm	100 mm
Central Congolian Lowland	1793 mm	45 mm
Eastern Congolian Swamp	1799 mm	44 mm
Northeastern Congolian Lowland	1803 mm	45 mm
Northwestern Congolian Lowland	1650 mm	63 mm
Western Congolian Swamp	1638 mm	49 mm

Atlantic Equatorial Coastal Forest

Cameroonian Highlands Forest

Central Congolian Lowland Forest

Cross-Sanaga-Bioko Coastal Forest

Eastern Congolian Swamp Forest

Eastern Guinean Forest

Nigerian Lowland and Niger Delta Forest

Northeastern Congolian Lowland Forest

Northwestern Congolian Lowland Forest

Western Congolian Swamp Forest

Western Guinean Lowland Forest

Figure S1. Pearson's correlations in percent ($r * 100$). X means the correlation was not significant at the $p < 0.05$ level of significance.
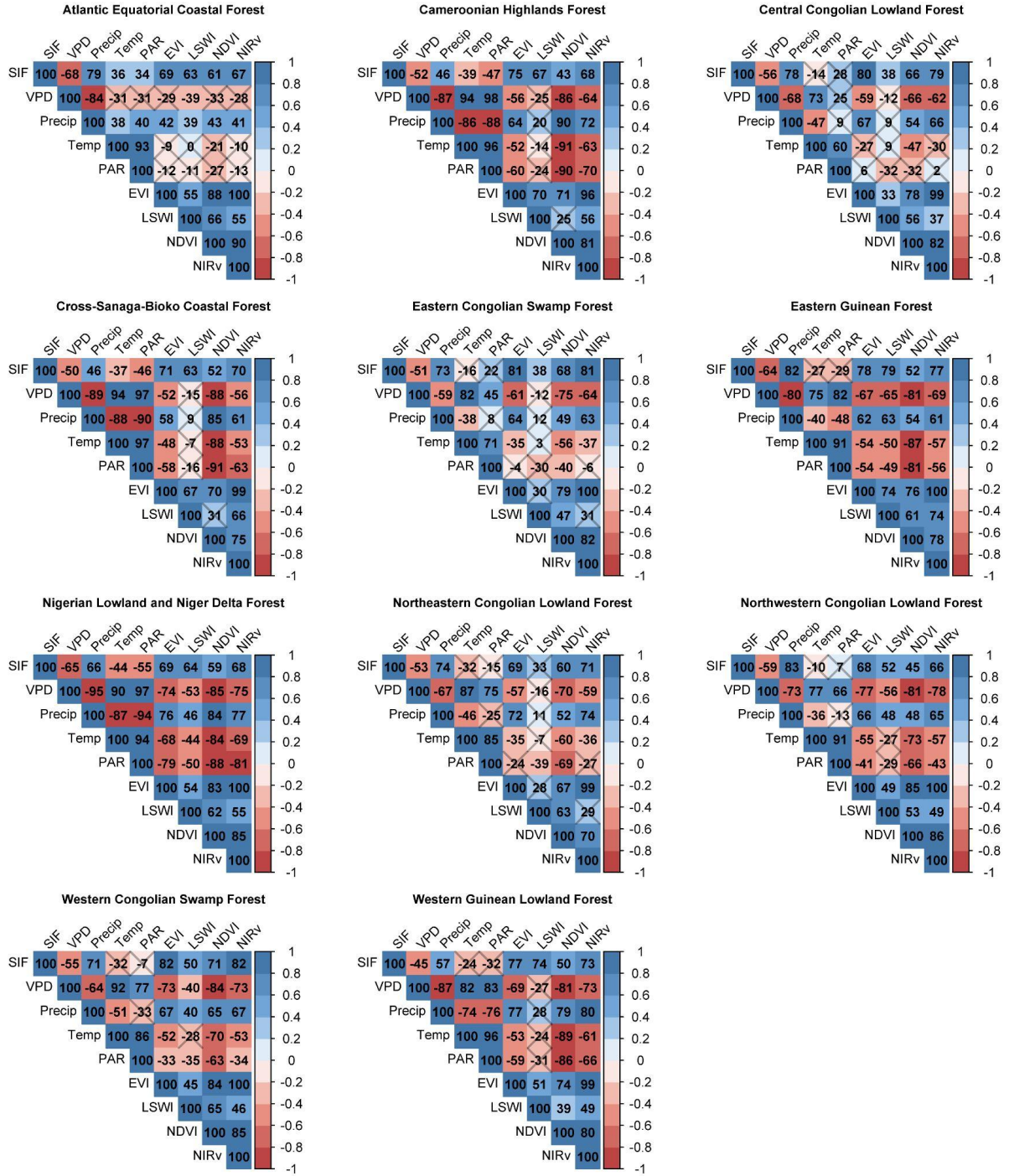
Figure S2. Spearman's correlations in percent ($r * 100$). X means the correlation was not significant at the p < 0.05 level of significance.
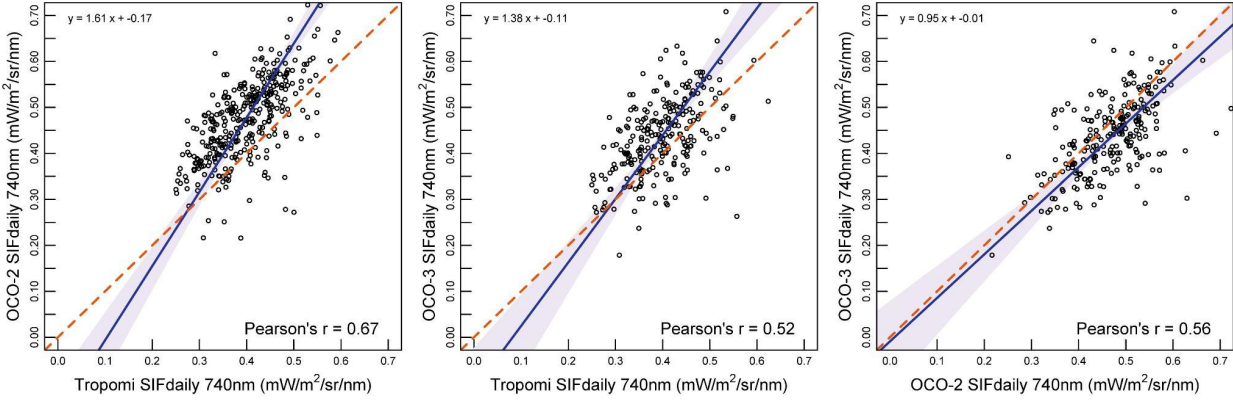
Figure S3. Cross-sensor comparisons using Deming regressions of the monthly mean SIFdaily from all 11 ecoregions in Fig. 5.
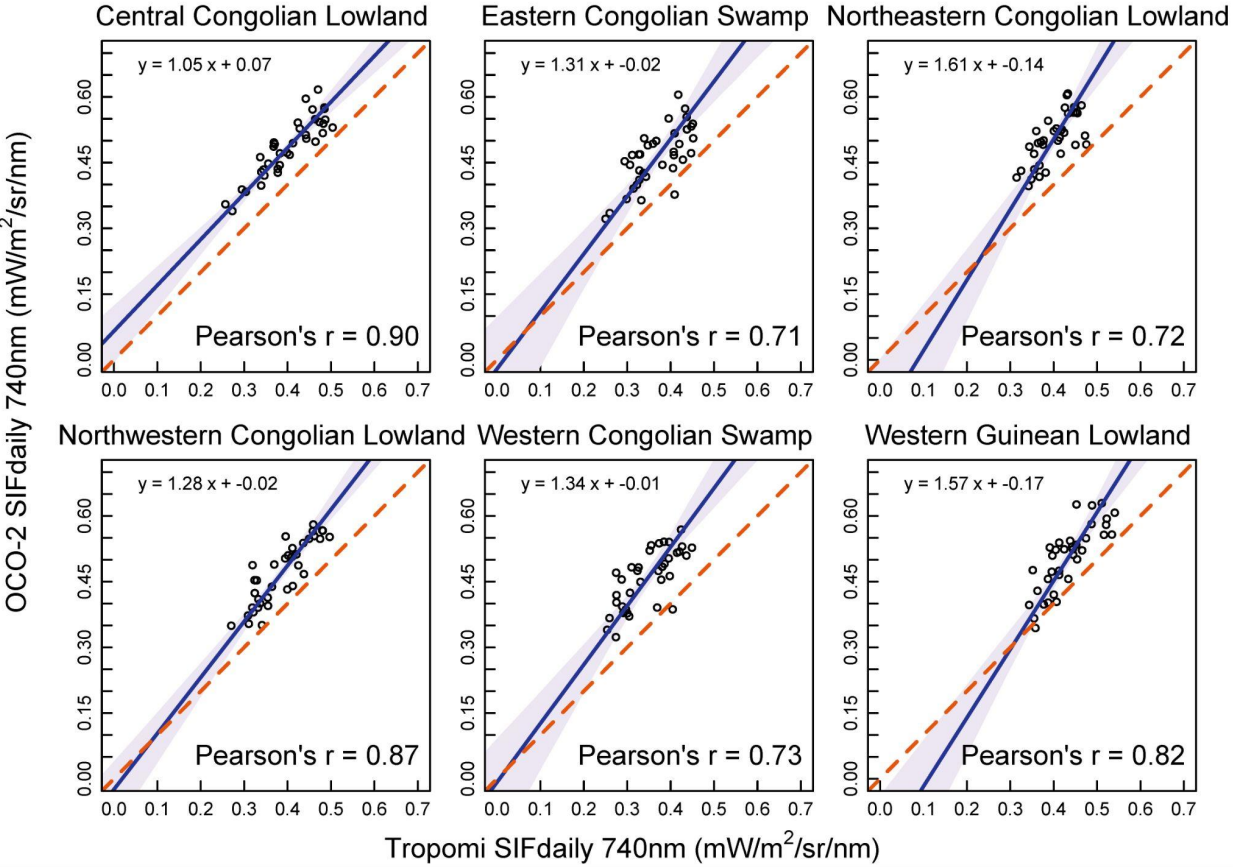

Figure S4. Cross-sensor comparisons using Deming regressions of the monthly mean SIFdaily from all 11 ecoregions in Fig. 4.