

Thank you for your time and for the constructive comments that have helped us further improve the manuscript. We agree that the manuscript increased substantially in length and detail during the major revision as additional analyses and explanations were incorporated. In response, the authors have reviewed the manuscript throughout and shortened several sections, including the Results, Discussion, and Conclusion. As a result, the main manuscript has been reduced from approximately 34 to 30 pages while retaining the analyses and information needed to support the main findings.

Please find the Editor's comments and our responses below. Responses and corresponding changes in the manuscript are shown in [blue](#).

1. When assessing which figures could move to supplemental I considered whether a figure was a diagnostic or sensitivity check only, and whether the figure was required to support the paper's central claims about the importance of thermal calibration, divergence between GAI & PAI under senescence, dynamic fg, and daily ET upscaling.

Figure 13 is the clearest candidate (the ET difference maps). The correction lowers ET across the whole field so the maps look predominantly uniform red. The spatial structure described in the caption is difficult to see in the figure, and the stress-related spatial contrast that matters to the paper's argument is better shown in Figures 14 & 15. Whether or not you move it, I suggest revising the caption to match what the figure shows, since the variation with evaporative source and stress condition is hard to make out here.

- [We agree. This figure has now been relocated to Appendix D \(Fig. D5\). Section 3.4 has also been substantially condensed so that the main text focuses on the principal findings.](#)
2. Figure 12 is also a good candidate for supplemental since it is a sensitivity diagnostic (input vs. output CV). Fg influences spatial ET variability more than LAI type is a secondary point and the sentence at 663 that references it in the discussion could simply redirect to the same figure in the supplement. I would suggest moving this one.

- [We agree, and this figure has also been moved to Appendix D \(Fig. D4\). References to the figure in the Results and Discussion have been updated accordingly, and the associated Results section has been shortened.](#)

3. Figures 8 & 10 are the four-component flux scatterplots for the LST & LAI/fg experiments, and Figures 9 & 11 distill each to the ET performance the argument actually uses. The four-component detail is useful but not needed to follow the paper's main claims so it is a candidate for moving to supplement (and keeping 9 & 11 in main text). These were explicitly requested by Referee 2, so I leave this to your preference. Keeping them in the supplemental or in the main text are both defensible.
- We have retained Figures 8 and 10 in the main manuscript because they provide the component-level energy flux information specifically requested during the previous review. However, the corresponding descriptions in Sections 3.2 and 3.3 have been shortened substantially to reduce redundancy and maintain focus on the principal results.
4. In the abstract, please report the R² range, not just the highest value across crops. So "R² values up to 0.80 across crops" should be "R² values from 0.27 to 0.80 across crops" to represent the crop-dependent performance more accurately.
- This has been corrected as suggested
5. Data availability currently says "Data will be available upon request". This does not meet the journal's data policy: https://www.biogeosciences.net/policies/data_policy.html. The underlying data should be deposited in a FAIR-aligned repository with a persistent identifier (preferably a DOI), or a specific explanation of any legal or ethical reason the data cannot be shared. Please add a compliant Data availability section. The ICOS eddy covariance datasets already carry handles that can be cited directly; code and pretrained weights can be archived via Zenodo to obtain a DOI; and any restricted dataset should be accompanied by a stated reason consistent with the policy.
- Thank you for highlighting this requirement. We have revised the Code and Data Availability statements accordingly. For code availability, we now provide references to the public pyTSEB repository and the repository containing the flux-footprint tools used in the study.

For data availability, the ICOS datasets used for EC, meteorological, and associated ground measurements will be referenced through their corresponding ICOS data records and persistent identifiers. We also intend to archive the UAV datasets in an appropriate repository, currently considering Zenodo or the PhenoRoam infrastructure associated with PhenoRob at the University of Bonn, and provide a persistent identifier.

Because of the short timeframe for completing the minor revision and the size and complexity of the multi-season UAV datasets, it is not possible to complete the repository selection, preparation, upload, and DOI assignment before the current revision deadline. We will provide the permanent repository information before final publication, should the manuscript be accepted.

6. During our final review of the manuscript, we identified several additional areas where clarification or streamlining would improve the presentation. These changes do not alter the underlying methods, model runs, or reported results.

-References: Zheng et al. (2024) was added to support the discussion of SIF and PRI in relation to canopy physiological information and transpiration, replacing citations that were less directly relevant to the statement being made such as Wang et al. (2022).

-Clarification of fractional cover in pyTSEB: Following further examination of the pyTSEB documentation and direct discussion with Héctor Nieto, the developer of pyTSEB, we identified that the previous manuscript wording could incorrectly describe f_c . Corresponding changes were made to the Methods, Table 1, Figure 4, and Appendix A4. An additional equation (Eq. A13) was also included to clarify the distinction between the supplied fractional cover f_c and the directional vegetation fraction $f_c(\theta)$. These revisions clarify the description of the existing model implementation and do not alter the model inputs, simulations, or results presented in the manuscript.