

Review comments

Shi et al. present a study on a flux tower site attribute dataset intended for land surface modeling. This dataset is very valuable for land surface modeling and beyond. Overall, the manuscript is well-written, I have some additional comments for consideration.

Specific Comments

1. **Line 102:** "Picking years with a low gap-filled percentage for fluxes (latent and sensible heat) and vapor pressure deficit (VPD)." Why were these variables chosen for picking? Why not include precipitation, temperature, etc.? Please provide an explanation.
2. One of our studies (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4732309) conducted land surface model evaluations at the site level using the PLUMBER2 datasets, which are very valuable. We took time to find seek additional model inputs, such as soil texture information, from the literature. This study is convenient for land surface modelers. Therefore, it would be even more valuable if it included more sites and longer period of data beyond the PLUMBER2 sites.
3. Another study of ours developed global 1km land surface parameters for earth system modeling (<https://essd.copernicus.org/articles/16/2007/2024/essd-16-2007-2024.html>), sharing some data sources with this study, such as PFTs classification. Combining this 1km data with the site-level study could enhance land surface modeling. For example, global 1km data could provide topography attributes for sites lacking this information. This could be discussed in the manuscript.
4. **Line 92:** "Three global datasets were used to complement attribute data of sites lacking site-observed FVC, LAI, and soil texture." It's great to analyze the uncertainty by using global datasets to fill site data. How accurate are these global datasets? The authors could analyze the consistency between sites with complete attributes and the corresponding global datasets. This information would be valuable for readers to understand the uncertainties introduced by using global datasets.
5. **Line 195:** It seems not all sites have elevation, slope, and aspect information from literature. How were these attributes obtained for sites lacking them? Seems not mentioned in the manuscript.
6. **Table 2:** Should "LAI_default" be "LAI_max_default"? Similarly, for "LAI_site."
7. **Line 220:** "Resulting in six available sites. These sites were simulated to show the respective impact of different attributes in model results." This sentence is unclear. How many experiments were run for each site? This section could be written more clearly to make Section 3.3 easier to understand.

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