

This is my second round of reviewing this manuscript. It seems to me that substantial modifications have been made in this resubmission and most of my suggestions have been incorporated. However, after reading through the manuscript, I find there are still some small issues that need to be addressed and some revisions require to be made. I list my concerns below and suggest a minor revision is needed to meet the publication requirement.

1. Line 18, please be specific about what 'pattern of higher rates' means.
2. Lines 21-22, PAR is an environmental factor rather than a climatic factor.
3. Line 22, should be more accurate to state that NEE is the net ecosystem CO₂ exchange.
4. Abbreviations should be used consistently and avoid repetition. For examples, in Line 78, the abbreviation of eddy covariance should be illustrated in Line 75; while in Line 76, the full name of NDVI should be given here rather than in Line 91; in Line 88, PAR has already been abbreviated in Line 84; the terms VPD and PAR appeared in Line 263 and Line 266 have already been abbreviated earlier. There should be other similar mistakes like the above mentioned, but I won't list all of them.
5. Lines 23-25, this result here is a bit incoherent, some introduction is needed to elucidate the sudden change from a site study to a spatial distribution.
6. Line 24, I understand that you observed higher NEE where there are higher air temperatures. However, according to the equation ($y=-16.29x-86.67$) in Figure 7, this correlation should be negative rather than positive. More importantly, the correlation is not that good given the correlation coefficient is only 0.17. I suggest rephrasing or reorganizing this sentence here to better show the rigorous results and innovative conclusions.
7. Line 26, the standard deviation or the range of NEE is needed to report here rather than a single mean value.
8. Lines 26-29, rephrase and refining are needed to make this sentence more concise. In addition, '368 g C m⁻²'.
9. Line 29, 'This study provides ...'. Besides, should avoid using the word 'essential' as this needs to be evaluated by the readers rather than the authors.
10. Line 30, should be 'alpine ecosystems' or 'sub-alpine ecosystems' rather than 'plateau ecosystems'.
11. In Lines 30-32, the proposition here is too broad and doesn't have that many direct connections with the research results of this study. I didn't see the necessity of stressing this here. Besides, the comma should be placed after the double quotation mark.

12. Line 36, 'The eddy covariance technique' or 'The eddy covariance method' is a better keyword here.
13. Line 62, the full name of the unit is not necessarily needed here.
14. Lines 99-101, it's better to merge the two sentences into one.
15. Lines 106-107, which are 'these ecosystems'?
16. Lines 118-120, it's better to rephrase this sentence to show that it's these kinds of research that is needed to be done rather than saying researchers should do this or that.
17. Line 124, what's the connection between this study and Yunnan-Kweichow Plateau. Maybe delete this part.
18. Lines 130-132, simply state your research aim directly, the reasons should be illustrated earlier in the introduction part.
19. Line 147, '... is around (should not be below) 30 meters....'?
20. Lines 149-152, better to merge the two sentences into one. Besides, should explain what 'southwest and southeast monsoons' means if you want to keep it.
21. Lines 152-156, refine and rephrase the two sentences.
22. Line 163, it should be that the EC system is deployed at the height of 35 m rather than the data were collected from this height.
23. Lines 169-170, what are the 'other environmental variables'?
24. Line 170, data was stored at 30-minute intervals.
25. Line 184, ... F_C raw data...
26. Lines 227-228, reformulate this sentence. It sounds like that only 27.33% of missing data were gap-filled. Should be that 27.33% of the data were filtered out and then the gaps were filled using Tovi based on Reichstein et al., 2005.
27. Lines 231-233, rephrase.
28. Lines 254, a supplementary file is needed to show the results that the authors compiled from the 82 sites and their locations and other environmental characteristics.
29. Line 293, should be specific that they are CO₂ fluxes.
30. Line 356, delete 'these factors'.

31. Line 384, ... 9.03, 2.22, 2.71,
32. Line 403, ... has indicated that
33. Figure 8, would be better to show the raw data points in this figure. It's hard to judge their relations based only on the four curves.
34. Lines 453-454, rephrase, the current description is confusing.
35. Lines 456-459, merge the two sentences and refine.