

Referee Report

The author provided detailed responses to my comments in the initial review round. This enhanced the clarity and accuracy of the article, leading me to recommend its acceptance.

In the initial review, I raised three critical points concerning spatial resolution, sample size, and response variables. The author not only responded adequately to these issues but also supplemented experimental data to address my questions. Firstly, the author accurately defined the research subject to 25-day precipitation events, thus avoiding potential reader misinterpretations. Secondly, through the sensitivity analysis of data spatial resolution, it was demonstrated that the experimental results remained stable within the range of 0.1 to 1 degree, corresponding to the spatial scale of intra-seasonal precipitation events. The author also provided information on the sample size for computing regional composites, indicating that the minimum sample size exceeded 500 precipitation events, ensuring a high level of confidence. It is noteworthy that the author adjusted the research region to 60°S-60°N, after identifying significant differences in sample sizes of various datasets in high-latitude regions, effectively mitigating the uncertainty associated with meteorological data in these regions. Concerning the third issue, regarding the GPP variation range or its sensitivity to extreme precipitation, the author chose to focus on sensitivity, which is acceptable.

I greatly appreciate the author's clear and comprehensible responses to comments about methods. For instance, regarding the comment on [line 154 (original script)], the author detailed the process of utilizing the Lanczos filtering method to identify precipitation events, making it easier for readers to comprehend. Regarding the comment on [line 213 (original script)], the author explained in detail the reason behind choosing soil moisture for recalibration, significantly enhancing the logical coherence of the article.

A slight drawback was the response to comment about [line 206 (original script)], where the author explained that the 40-60 day window was set to avoid the influence of repeated precipitation events. While this slightly differs from my original intention, which emphasized that vegetation responses continue after this period and may not be entirely assessed, it does not affect the core content of the article and can be further explored in future work.

In conclusion, following the revisions made by the author to the initial draft, the overall quality of the article has significantly improved. I recommend accepting this article.