

Interactive comment on “Biophysical effects on the interannual variation in carbon dioxide exchange of an alpine meadow on the Tibetan Plateau” by Lei Wang et al.

Anonymous Referee #2

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The authors studied the interannual variation in carbon dioxide exchanges and its controls over an alpine meadow site in the Tibetan Plateau. They found that the GPP were mainly related with T_a during the wet season, and seasonal variation of climatic factors largely affect the GPP variability. The manuscript may require substantial improvements before possible publications. Some specific comments are as follows.

1. The paper is mainly about investigating the environmental controls of the GPP. What does the "Biophysical effects" in the title mean here?
2. Although the author made large efforts in explaining the experiments and analyzing the data, they need to elaborate and highlight the key innovation of the study (e.g., new concepts, ideas, methods, or data)?

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3. The method used in this study is largely empirical, and most of the findings in the study are already well-known to the scientific community as the effects of temperature on GPP have been well simulated in land surface models. The author may need to consider what makes the study be different from existing studies given a special alpine meadow site.

4. The authors only used 4-year data from an individual site. Could the data be representative of the alpine meadow in the Tibetan Plateau? And if other scientists want to reproduce their results, are there any ways to obtain the data?

5. It needs more explanations on the processing of the NDVI data. It seems to me that there are no considerations for cloud-contaminated data or BRDF-affected data.

6. Although the general structure of the paper is clear, the manuscript requires large improvements on the texts. There are apparent grammar errors that need to be corrected.

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