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# *Interactive comment on* "Seasonality and spatial variability of dynamic precipitation controls on the Tibetan Plateau" *by* Julia Curio and Dieter Scherer

**Anonymous Referee #4**

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This paper by Julia Curio and Dieter Scherer try to demonstrate that the westerlies is an important factor influence the precipitation in the Tibetan Plateau even in the monsoon season, based on the High Asia Refined analysis. The correlation and principal components are used in this manuscript. There are five major problems in the manuscript described below. By considering these issues, I suggest major revisions.

Major issues: 1. The text is not fairly organized, especially the introduction. The discussion and interpretations are superficial given the figures results. Authors need to present their work with better clarity.

2. Authors used the HAR as the unique data for analyses, but they did not evaluate the dataset with observations on the Tibetan Plateau, and did not confirm their results with other data. The systematic analysis of stable isotopes in precipitation on the Tibetan



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Discussion paper

Plateau has demonstrated the seasonal moisture origins and moisture transports. I suggest the authors to refer it.

3. Why these six factors are considered in this study? Winds does not mean the precipitation if there is no moisture transport with them. Authors concluded that all of these factors combined influence on precipitation. In this case, what is the main contribution of this study? Authors also said moisture recycling was important that offers more than 60% moisture for precipitation. Which one is more important, the westerlies or the recycling? It is unclear.

4. Why is 300 hPa for the westerlies? Authors did not clarify the precipitation heights on the Tibetan Plateau. Due to the complex topography and climate, different type of precipitation shows diversified contribution to the annual precipitation amount and it occurs at different height. It should be considered.

5. This manuscript is not easy to follow because of many grammatical errors and disordered sentences.

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