

Response to Anonymous Referee #1

Comment: *Authors have added new figure, one table and the related description in the text. This concise version of the paper definitely clarifies my questions from the first round of revision. This version is written in a well-thought manner and is scientifically sound. I've only few comments and suggestions:*

1. I understand why the authors have used 108°E as a line of reference to divide WP and EP of the domain. I would like to ask authors to add any relevant reference/s in the paragraph starting at line 197 to justify/support the use of this longitude. The discussion of longitude is also mentioned in the paragraph (starting line 225) on page number 8. As a result, it seems a bit arbitrary to use this longitude unless you clarify this clearly.

Response: Thank you for your comment. In this revision, we have added references in the paragraph starting from Line 196 to support the selection of 108°E (Xu et al., 2004; Zhou and Yu, 2005; Wei et al., 2012; Li et al., 2019b). To further clarify this, we have also added references (Xu et al., 2004; Wei et al., 2012) to support our discussion in the paragraph starting from Line 225 per your suggestion. Please see the revised Lines 199-200 and 238-239.

References:

Li, Y., Wu, L., Chen, X., and Zhou, W.: Impacts of Three Gorges Dam on regional circulation: A numerical simulation, *J. Geophys. Res.-Atmos.*, 124(14), 7813–7824, <https://doi.org/10.1029/2018jd029970>, 2019b.

Wei, J., Dirmeyer, P. A., Bosilovich, M. G., and Wu, R.: Water vapor sources for Yangtze River Valley rainfall: Climatology, variability, and implications for rainfall forecasting, *J. Geophys. Res.*, 117(D5), D05126, <https://doi.org/10.1029/2011JD016902>, 2012.

Xu, X., Chen, L., Wang, X., Miao, Q., and Tao, S.: Moisture transport source/sink structure of the Meiyu rain belt along the Yangtze River valley, *Chin. Sci. Bull.*, 49(2), 181–188, <https://doi.org/10.1360/03wd0047>, 2004.

Zhou, T.-J., and Yu, R.-C.: Atmospheric water vapor transport associated with typical anomalous summer rainfall patterns in China, *J. Geophys. Res.*, 110(D8), D08104, <https://doi.org/10.1029/2004JD005413>, 2005.

Comment: *2. Line 258: page 9: the phrase “great change” doesn't sound scientific. Please rewrite this sentence.*

We have changed “experienced great changes” to “experienced substantial changes” in the revised Line 259.

Comment: *3. Line 295: This sentence has grammatical error. Please correct.*

Thank you for pointing this out. We have revised this part to “In this section, we compare the

contributions of moisture sources during wet and dry years. We select three wet years (1989, 1998, and 2007) and three dry years (1997, 2001, and 2006) as the representative years from the annual precipitation time series (based on CMA observations; Fig. 2b).”