

Dear Editor,

Thank you very much for providing detailed comments regarding to the manuscript in this round. The manuscript and data publication have been revised based on the comments.

Please find below our detailed response to each comment.

We think that the revised manuscript has appropriately addressed all the concerns and we hope that you can consider it for publication in Earth System Science Data.

Sincerely,

Pei Zhang

On behalf of all co-authors

In the text below we provide our response to each comment point by point.

Editor's comments are in **bold**.

Author's responses are in regular.

Author's additions/modifications in the text are in blue.

**Please remove the "SM" in line 244, as by now the sentence refers to both SM and precip time series.**

Thanks for the suggestion. The "SM" has been removed in revised manuscript on Page 8 Line 245:

“the trend of the time series is regarded as upward (downward) at the significance level of  $\alpha$ .”

**It would be good to also include the mean annual precipitation for the Maqu network in section 2.1.1 as you do it for the other two networks and also provide the monthly data for Maqu now. Could you please add this value?**

Thanks for the comment and suggestion. The mean annual precipitation for the Maqu network has been added on Page 4 Line 111-112:

“The annual precipitation is about 600 mm that falls mainly in the warm season (May-October).”

In addition, the monthly precipitation data for the Naqu network is also added in the data publication along with other two networks:

\ Supplementary data \	\Precipitation.xlsx	- Maqu: This sheet contains monthly precipitation of Maqu weather station (Fig. 1) between 5/2009 and 4/2019 - Shiquanhe: This sheet contains monthly precipitation of Shiquanhe weather station (Fig. 1) between 8/2010 and 7/2019 - Naqu: This sheet contains monthly precipitation of Naqu weather station (Fig. 1) between 1/2009 and 12/2019
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