Reply to the review reports

Dear Editor,

Thank you very much for your time and discussion on this manuscript. We also thank the referees very much for their constructive comments. We have revised the manuscript accordingly. The replies are follows:

Referees' comments:

Referee #3:
1. How the outhor deal with the missing values in the data sets?

Reply: Thanks for the referee's comments. Missing data is a common problem in mountainous. The data sets used in manuscript are from 1951, but some stations is missed data, so we choosed the data sets from 1961.

2. there is a need on discussion about how the author deal with the 'uncertainties' occurring due to the change in the bin size for the entroy calculation..

Reply: The data sets is monthly precipitation, the uncertainties of entroy is due to the uncertainties of precipitation, so we did not discuss the uncertainties.

3. The author should use a kernel-density based for other nonparametric methods for estimating the PDF and therefore the entropies.

Reply: Thanks for the referee's comments. In this manuscript, We want to detect the mutation of trend.

4. Several major discussions resembles to Mishra et al. (2009) published in J Hydrology, however the author did not gave proper credit to their article..
Reply: Sure, the idea that we used method is derive from the article that Mishra et al. (2009) and including the reference in 319 line.

5. Page 2980:Calcultaion of entropy values: It is not clear.

Reply: According to the referee's suggestion, we revised and given explanation.

6. More discussion are need on the discussion section and it is weak..

Reply:
Thank you in advance for your time and consideration.

7.The title of the paper says 'long-term', however the length of data is less than 50 years, the title is needs to be changed..

Reply: Thanks for the referee's comments, the series is nearly 50 years, only few station records started 1951. So we think the series is long-term for the study areas.

Thank you in advance for your time and consideration.

Yours sincerely,

Chuan-cheng Zhao