

Comment on hess-2022-66

Anonymous Referee #2

Referee comment on "Statistical characteristics of raindrop size distribution during rainy seasons in complicated mountain terrain" by Wenqian Mao et al., Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2022-66-RC2>, 2022

The authors investigate the characteristics of the raindrop size distribution (DSD) over the complex mountainous terrain Qilian Mountains which are sensitive to climate change in recent decades. Such a study is very helpful to increase the knowledge of the precipitation regimes over the arid and semi-arid region. Overall, the study is written well in terms of science and techniques, and can be accepted and published after minor revision. More comments are as follows:

- 1) On line 18, the "which" had better to be replaced with "while".
- 2) The period on line 32 should be updated with English style.
- 3) The period before (SR) should be removed on line 50.
- 4) "in southeast" should be updated as "in the southeast".
- 5) "results from" had better be replaced with "measurement in" on line 56.
- 6) Insert a blank space between the number and unit on line 57.
- 7) "vary from location" had better be replaced with "vary with", or

â□□vary from location to locationâ□□.

8) The equation $\frac{1}{4} \square \frac{1}{4} \square$ on line 139 shows up suddenly and suffers from discontinuity in the context. Similar case can be seen for Eq. (7) on line 169.

9) â□□withâ□□ or â□□byâ□□ should be added after the word â□□calculatedâ□□ on line 149.

10) Refine the sentence on 167-168.

11) Replace â□□to be well fittedâ□□ with â□□to well fitâ□□ on line 167.

12) Refine the sentence on line 174-175.

13) Add legends for different color points, and add descriptions for the rectangles in grey line in the subfigures in Fig.7.

13) â□□with the rain rate class risingâ□□ can be refined as â□□as the rainfall rate increasesâ□□.

14) Refine sentence on line 478-479.

15) â□□Fig 1â□□ needs to be considered for better presenting sites information.

16) The differences from different sites can be described more clearly in the Conclusion section.

17) Some key raindrop parameters can be reported in the Analysis section, such as 3.4 Section reflecting the differences in different rain types.

18) Line 320: â□□based on the classification ideas of Chen and Saurabhâ□□, Saurabh is not shown in the part of classification method. Please check this sentence.

19) Check the accuracy of the subscripts in the manuscript.