

The authors discuss the effects of dust aerosols and CAPE on the vertical structure of precipitation clouds using multi-source observations. This study has a certain reference significance for the study of aerosol influence uncertainty on local clouds and precipitation. The overall writing and discussion are relatively smooth. But there are still some comments that authors need to address.

- 1、The authors analyzed the influence of dust aerosols on clouds and precipitation in 14 summers from 2000 to 2013. However, the probability of dust occurrence in southeast China is very low. What is the proportion of dust days in the total samples? If the proportion is too low, does the study have statistical or scientific significance?
- 2、In Figure 2, the authors analyzed the backward trajectory on 12 June 2006. Please explain whether this is representative for the whole study period.
- 3、How do the authors define warm rain ?
- 4、In Figure 4e, why is the difference between cleaning and dust conditions minimum when the ppt is -20 to -15 (green lines)?
- 5、In Figure 5, why do the negative values of the difference all appear at 5km? Does it mean that the vertical LH of the convective clouds and stratus clouds have similar feedback to dust aerosol? In addition, the color bar values displayed on the right of the figure are incomplete, please adjust them.
- 6、In Figure 9, what is the criterion or basis for the selection of CAPE thresholds?