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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Concentration, temporal variation and sources of black carbon in the Mount Everest region retrieved by real-time observation and simulation" *by* Xintong Chen et al.

Anonymous Referee #4

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1. This manuscript present analysis of the high-resolution measurement of black carbon (BC) at Qomolangma (Everest) station of Chinese Academy of Sciences during 15 May 2015 to 31 May 2017, together with model simulations to investigate the possible transport mechanisms of BC. Generally, the manuscript is well organized, but many sentences and even paragraphs still need to be clarified or improved. Though I have marked many places in the text, I believe that there are still more problematic phases or sentences to be identified and corrected. I suggest that the whole text should be carefully checked and improved with the help of an English editor.

2. Some of the explanations are not convincing. For example, in line 182 of page

6, it reads "The valley wind from north in the morning, could bring the short-distance emissions from local cooking or heating to QOMS. BC concentrations appeared two peaks in the morning and after the noon in the monsoon season, which might be owing to the surrounding local emission." Why it occurred in the morning and afternoon in the monsoon season, not other times and in other seasons? It should be clarified to what extent the daily and seasonal values and patterns obtained in this study are influenced by local emissions.

3. Section 3.2 is not well written. What do you want to say through these comparisons?

4. The authors should indicate what is new in this study. It seems to me that most of the results are similar to those obtained in previous studies, although different instruments and models might be used in different studies.

5. More corrections and comments are marked in the text.

Please also note the supplement to this comment:
https://www.atmos-chem-phys-discuss.net/acp-2018-183/acp-2018-183-RC4-supplement.pdf

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