Atmos. Chem. Phys. Discuss.,
https://doi.org/10.5194/acp-2020-891-RC2, 2020

Atmospheric Chemistry and Physics Discussions

Interactive comment on "Upward transport into and within the Asian monsoon anticyclone as inferred from StratoClim trace gas observations" *by* Marc von Hobe et al.

Anonymous Referee #2

Received and published: 17 November 2020

Review comments on ACP-2020-891

Upward transport into and within the Asian monsoon anticyclone as inferred from StratoClim trace gas observations

by Hobe et al

The manuscript endeavors to comprehend the field measurements of CO, N2O & O3 from the ASMA region during the StratoClim field campaigns and elucidate its different transport pathways. Quite a lot of quantification and new insights are offered in this manuscript. Hence the manuscript can be accepted for publication after addressing the following points.

Printer-friendly version

Discussion paper

Recommendation: Minor revision

Comments/suggetions

1. 3D Map of averaged CO from figure 2, looks nice but hard to get information easily. The Theta_e labels are not visible and difficult to understanding CO mixing ratios difference as they mentioned in the manuscript.

2. Many unconventional acronyms used in the manuscript, which make it difficult to read the manuscript, and some of them are not expanded where it first appeared. It will be better to minimize the same in running text.

3. Hope that AM Eq latitude in the figure 3 label is a typo instead of M Eq Lat. Or Asian Monsoon Equalent latitude is also a better terminology.

4. In case if not much required the supplementary materials can be limited in the manuscript. For eg Figure S4, which is not providing any new insights and besides which creating confusion with the discussion later in the text and main figures.

5. The statements in lines 245's are very difficult to digest from the figure and considering the possibilities of multiple other influencing factors.

6. Why there is a high value of CO even below 340K at designated latitudes (from figure 3 & 4). It will be nice if the authors can provide some details/explanations in this regard.

7. In the discussion section how suddenly authors restricted the transport till 370K. Till this point, the authors were mentioning that the LRT is at 380K. Better to clarify this.

Interactive comment on Atmos. Chem. Phys. Discuss., https://doi.org/10.5194/acp-2020-891, 2020.