

## Editor comments to the author

Thank very much for the editor for the appreciating comments and important inputs to improve the quality of the manuscript. We follow all the editor's comments very carefully and answer accordingly. We have incorporated all the modifications in the revised manuscript (RMS). Please refer to the revised manuscript where we highlighted the changes by **green color**. Please follow the line numbers to reviewing the changes in RMS.

*1. The response to comment 1 by reviewer 1 (the part speculating about consistently low temperatures giving the same emissions) I think is an important enough observation that this should be mentioned in the article text.*

Reply: Thank very much for this important comment. As per the editor's comment we have incorporated the following phrase in revised manuscript.

“Further it was observed that during winter the ambient temperature was consistently low (less than -10 °C, Fig. 3a) in Ulaanbaatar therefore residential biomass burning occurred continuously for space heating. Thus, there would be no dependence of emission rates of levoglucosan and mannosan with ambient temperature during the sampling period. The concentration of levoglucosan and mannosan may be influenced by local wind speed as shown in Fig. 3a rather than ambient temperature.”

Please see line number 228-234

*2. Please consider making the data available through a public archive as per ACP's data policy: [https://www.atmospheric-chemistry-and-physics.net/about/data\\_policy.html](https://www.atmospheric-chemistry-and-physics.net/about/data_policy.html)*

Reply: Thank you very much for the editor comment. We were clearly mentioned the data availability statement at end of the manuscript.

“The data used in this study are available from the corresponding author upon request ([jsjung@kriss.re.kr](mailto:jsjung@kriss.re.kr)).”

Please see line number 484-486