Response to Reviews of manuscript entitled "Wintertime direct radiative effects due to black carbon (BC) over Indo-Gangetic Plain as modelled with new BC emission inventories in CHIMERE (ACP-2020-511)"

We thank the Editor for their valuable comments, suggestions, and corrections. Specific changes made in response to the comments are described below.

Response to Editor's comments

There are still a few remaining issues, as detailed below. Please further address, clarify and revise.

Although claimed "This is done", it seems that

(1) no additional quantitative results/information have been provided in the abstracted - related to reviewers' comment "In the Abstract more quantitative information should be included".

Response: Additional quantitative results/information have been provided in the abstract now. The following lines have been additionally included:

"The mean BC emission flux from the five BC emission inventory database was found to be considerably high (450–1000 kg km^{-2} yr^{-1}) over most of the IGP, with this being the highest (>2500 kg km^{-2} yr^{-1}) over the megacities (Kolkata and Delhi)."

"The wintertime direct radiative perturbation due to BC aerosols from the *Constrained* comprised of the radiative warming at the atmosphere (+30 to +50 W m^{-2}) estimated to be about 50%–70% larger than the cooling due to BC at the surface."

(2) the conclusion has not been shortened or revised to be more concise, but rather lengthened - related to reviewers' comment "The conclusion section should be short and crispy for better readability".

Response: We have revised the Conclusion and tried to keep it as concise as possible. The Conclusion is shortened by about 170-words compared to the previous version. The texts in the Conclusion are required for presenting the outcomes of the manuscript adequately. Please see the uploaded "manuscript with track changes".