

We thank you to the unanimous reviewer for his/her valuable insight to the present work. We have addressed the suggestions and made all the changes as per suggestions. We also thank to the editor for his patience and help for making this work more enhanced and easier for reader.

Comments and Reply:

Dear Authors,

I have received two reports from the reviewers. There are still some minor comments to be addressed as suggested by one of the reviewer. In addition, I would like to point out two issues that must be addressed in the revised version.

Comment:

1) Reporting BrC observations in mass concentrations are inappropriate unless the mass absorption coefficient (MAC) of BrC observed in the sampling locations are known. Otherwise, the BrC levels can only be reported as aerosol absorbance. Based on my understanding, the current manuscript does not include any determination/estimation/assumption of BrC MAC.

Response:

We agree with the comments and we have addressed this in the supplementary and as well as main manuscript “

$$BrC = \frac{b_{absBrC(370)}}{MAC_{BrC(370)}} \quad Eq. (S13)$$

The equation S13 calculates the Brown Carbon (BrC) mass concentration using the mass absorption coefficient (MACBrC) at a specific wavelength (370 nm) (Laskin et al., 2015). The MACBrC represents the ability of Brown Carbon to absorb light at that wavelength. MACBrC(370) is the mass absorption coefficient for Brown Carbon at 370 nm (Qin et al., 2018). The default value for MACBrC used is 4.5 m²/g.”.

See line no. 116, page no. 5 of supplementary, and line no. 202, page no.7 in manuscript.

Comment:

2) Although the positive statistical relationship between BC/BrC and thermal/solar radiation are observed, interpreting these relationships as direct evidence of positive radiative feedback caused by BC/BrC are inappropriate. I suggest to remove the related conclusion throughout the manuscript unless more comprehensive data analysis (e.g. modelling work) to support such conclusion.

Response:

We agree with the comments and we have made the changes as per suggestion:

The statements are removed from the MS; line no 32 page 1, line no 361 page 12, line no 399 and page 13.