**Review of article: "Present-day radiative effect from radiation-absorbing aerosols in snow"** *by Paolo Tuccella, Giovanni Pitari, Valentina Colaiuda, Gabriele Curci*

This work presents an estimation of present-day radiative forcing (RF) of radiation absorbing aerosols (Black carbon-BC, brown carbon-BrC and soil dust) by using the GEOS-Chem global chemistry and transport model. First, the authors performed an evaluation of their simulations. Then, they estimated a global mean all sky RF of 0.068, 0.033, 0.0066, and 0.012 W/m2 for total RAA, BC, BrC and dust snow. Non-BC is the compound with the highest contribution to snow RF and anthropogenic compounds account for 56% of the RF. Moreover, seasonal and spatial differences regarding the specie are described. Authors also estimated the uncertainties in snow RF due to mixing ratio in snow, snow grain dimension and snow cover fraction.

In my opinion the paper presents an interesting work and the quality for the publication in this review. However, I have found some issues that deserve a minor revision or technical correction and could, in my opinion, improve the overall quality of this work.

My detailed comments are given below.

Methods

- Lines 102-107. Please include the references for the EDGAR v4.2 database, the RETRO inventory and the different regional inventories used.
- Line 197: "We have used Two different […]" correct by "We have used two different […]".
- Line 236: "[…], for this reasontwo extreme […]" correct by "[…], for this reason two extreme […]"

Results

In my opinion, this section would benefit from a change in the name by "Results and discussion" because both the presentation and the discussion of the results is performed here.

- In my opinion, Figure 1 and 2 are enough to show the evaluation results, table 3 may move to supplementary material.
- Please correct "Angstrom" by "Ångström".
- Lines 333-334: "In this case, the analysis of the light fraction absorption due to non-BC compounds (fnon-BC) revealed other aspects of the model skill in reproducing the RAA in snow." What are these aspects? Please clarify.
- Line 335: "In Figure 3 a comparison between calculated and observed fnon-BC. fnon-BC is shown proposed," I think there is some mistake in this statement.
- Lines 358-359: "In Table 4 a summary of the RF estimated from all numerical experiments discussed in Section 2.4 is given." This should be indicated in section 3.4 as is done and not here. Please, remove.

- Line 368 and 411: “BF BC shew an impact […]” and “BrC and dust RFs shew a peak” would you mean “show” instead of shew?
- Caption figure 5: “[…]. Lower panel: […]” correct by “[…]. Bottom panel: […]”

Conclusions

A paragraph discussion the novelty of this work and how this work will help to the actual knowledge would improve the quality of the work.