

This study combines and discusses air pollution records reconstructed from four different ice-core sites in the European Alps. My comment suggests some technical clarifications concerning the ice-core records from Colle Gnifetti which I invite the authors to address in the revision.

Thanks Michael for the suggested technical clarifications. We will add them to the manuscript accordingly.

L 142: Please add as citation for the dating Sigl et al., (2018) providing necessary details about the individual ice cores (Table 1) and the final dating (Supplementary) used to derive the NO₃, NH₄, rBC and SO₄ records used for this study together with access to the underlying high-resolution datasets (<https://doi.org/10.1594/PANGAEA.894787>).

The reference Sigl et al. (2018) is already included in Tables 1 and 2, but we will also add it to line 142.

L 172: Are these new IC analyses for the CG15 ice core extending back to 1750; or are these the upper 12m of CG15 merged with the records from the two CG03 ice cores (CG03A and CG03B)? Please clarify; see Table 1 in Sigl et al., (2018) for details. If these are new analyses, how was the dating of CG15 done, and how do the records compare relative to the CG03 records during the period of overlap? If the latter, which records did you use for your analyses? CG03A, CG03B or a stacked record of both?

These are the records from the upper 12m of CG15 merged with those from the CG03A core. Details will be added to Tables 1 and 2.

L 187: Same question here: Are these new rBC analyses from the CG15 ice core? The reference to Sigl et al., (2018) suggests these are from CG03B.

These are the records from the upper 12m of CG15 merged with those from the CG03B core. Details will be added to Tables 1 and 2.

L 196: This now answers the two questions noted above. To avoid misunderstanding, I suggest to correct or clarify the meaning of the core labels in the sections above and in Table 1 and 2, since the CG15 ice core is actually encompassing the time period 1750-2015 overlapping with CG03 ice cores.

Details will be added to Tables 1 and 2.

L 487: Add "Data from CG ice cores are available at PANGAEA, doi.org/10.1594/PANGAEA.894787" to acknowledge the work generating these measurements.

We will add this sentence to the final version.

Table 2: Suggest to replace "CG15" with "CC03_CG15" or similar, to show this is the CG03 ice core updated by the CG15 ice core.

For the clarity of the figures, we prefer not to have overlong ice core denotations. Therefore we keep the "CG15", but clarify details in Tables 1 and 2.