

Dear Editor, Dear Referees,

First of all, also on behalf of the other co-authors, we would like to thank you for your positive feedbacks and for the opportunity of reviewing this manuscript towards a publication on the Journal of Biogeosciences. Following the last comments received from the Referee, the suggested minor reviews have been accepted and implemented in the manuscript. In particular:

- Page 3, lines 27-32 has been modified as follow: “The observations in these studies show higher autumn and winter COS molar fractions in the Netherlands than those *at Mace Head, Ireland* and at Gif-sur-Yvette and Trainou, France. This calls for a more thorough investigation of possible local sources in the Netherlands at a local and regional scale. *A proper assessment of local sources is also necessary to evaluate the performance of existing databases, such as the one realized by Zumkehr et al. (2018). A recent effort has been reported by Belviso et al. (2023) at a sub-regional level in France.*”
- A new figure (see Figure A below) has been added to the supplementary materials, to exemplify footprints related to the Antwerp-Rotterdam region influence. It is mentioned in the main text on Page 12, lines 25-28: “This period is related to a mixed southern and eastern footprint, which ascribes this share of enhancements to the Antwerp-Rotterdam area and to paper production locations in northern Germany (*an example is shown in Figure S6 in the supplementary material.*)”

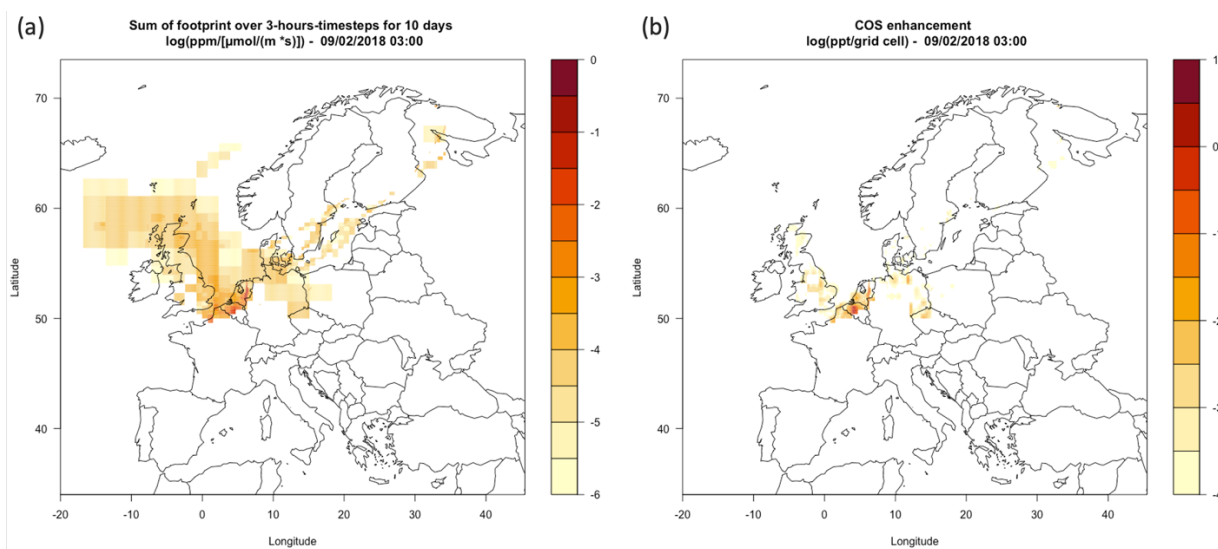


Figure A: example of (a) footprint and (b) related COS enhancements for February 9th, 2018 (Period 3), retrieved as described in Sect. 2.4 in the main text (see also Figure 2). In this period, part of the measured COS enhancements could be attributed to the Antwerp-Rotterdam region. This is Figure S6 in the supplementary material.

- Figure 6 has been modified as suggested, including a shading for the relevant periods similarly to Figure 4 (see Figure B below). The discrepancy between the two figures was due to an obsolete scenario being plotted in Figure 6. We would like to thank the Referee once more for noticing this, since it had been overlooked till now. The new Figure 6 is now correctly matching Figure 4.
- The efforts to quantify European anthropogenic COS sources reported in Belviso et al. (2023) have been mentioned in the main text and added to the references (see above).

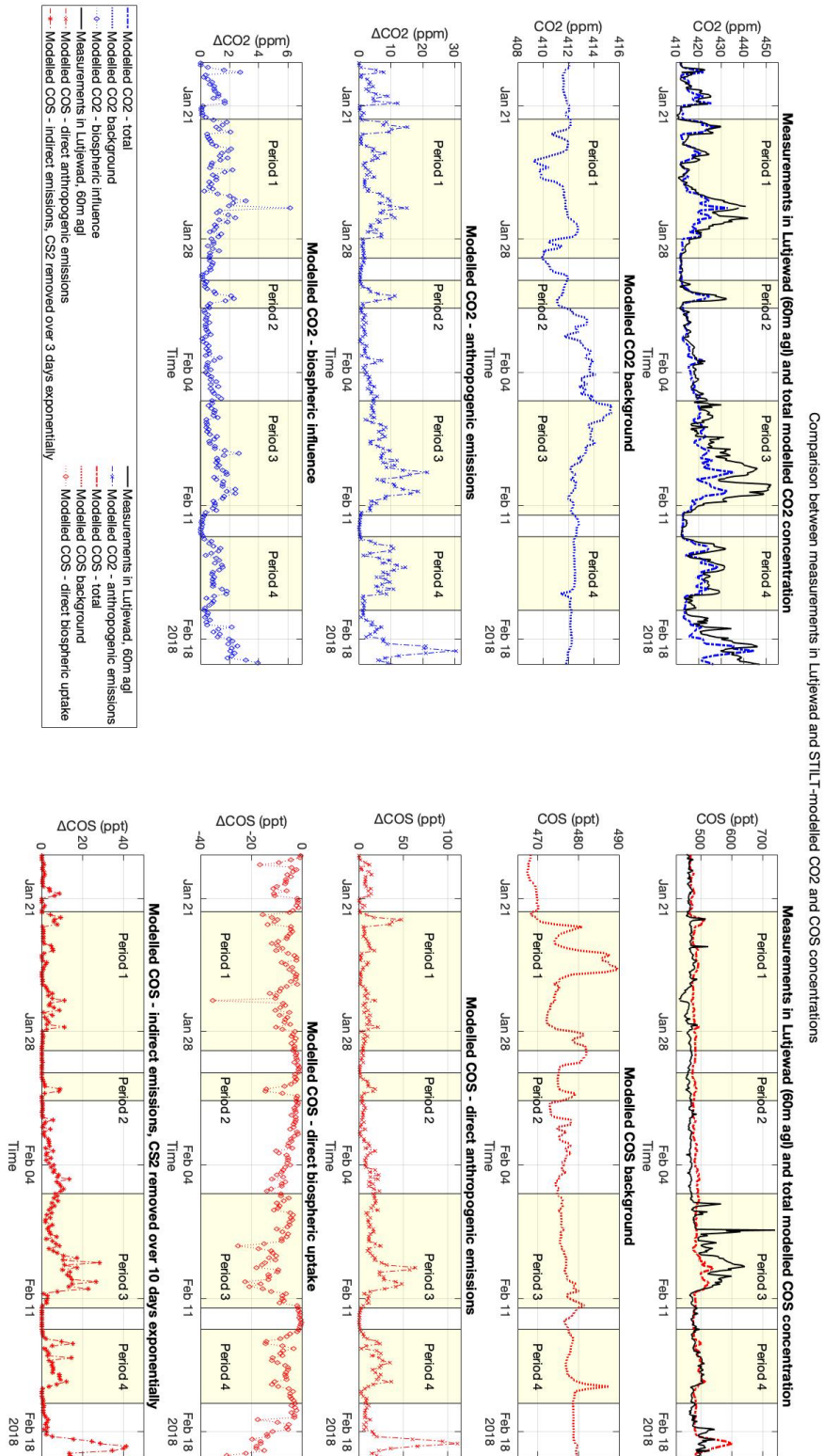


Figure B (updated version of Figure 6 in the main text).

With these, we believe to have addressed all the remarks received so far thoroughly and we hope this manuscript will now be eligible for publication in the Journal of Biogeosciences.

With kind regards, also on behalf of the coauthors,
Alessandro Zanchetta and Huilin Chen