

Comment on Proofreading Adjustments to Manuscript egusphere-2023-1857

Dear Brigitte Schaper,

I hope this message finds you well.

I am writing to bring to your attention a minor error that we discovered in our manuscript during the processing phase. Specifically, we identified an incorrect value in Equation (26), where the specific volume of carbon dioxide was erroneously stated as $0.509 \text{ m}^3 \text{ kg}^{-1}$ at standard conditions (0°C , 1 atm) instead of the correct value of $0.546 \text{ m}^3 \text{ kg}^{-1}$ at normal conditions (20°C , 1 atm). Regrettably, this oversight affected our emission inversion calculations. However, upon recognizing the error, we recalculated the emissions using the accurate conversion factor.

Upon review, we noted the following consequences of the correction:

1. All emission estimates have been adjusted within their respective error margins.
2. The qualitative statements and correlations within the paper remain unaffected.
3. The correlation between the retrieved and expected emissions has shifted from $89 \pm 25\%$ to $84 \pm 24\%$.

As a result of these adjustments, Figures 7, 8, and 10 require updating to reflect the revised data. Figure 10 is well-suited to illustrate these changes, with a comparison provided on Page 2. Additionally, a side-by-side comparison of Figures 7 and 8 is available on Page 3. Furthermore, the optimal inversion parameters in Table 2 need to be updated, and the revised parameters are provided in the attached Table_2.tex file.

I want to express my sincere regret for the need to make these alterations during the proofreading process. Although it is unfortunate, we believe the impact of this mistake is minimal, remaining well within the error margins and without significant consequence to the overall contribution of the paper.

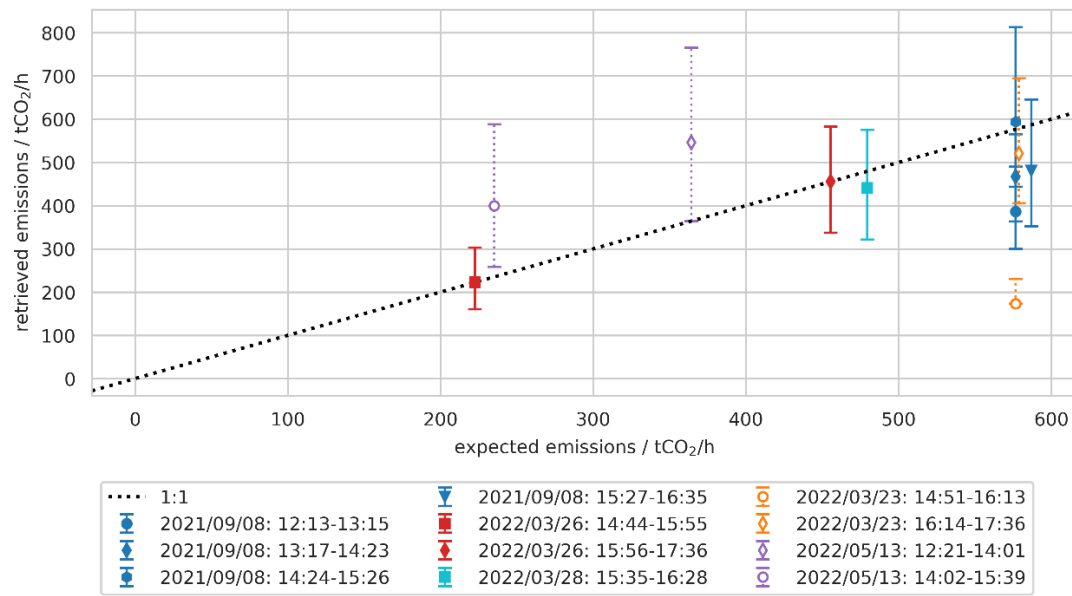
For your convenience, all changes related to this oversight have been highlighted in blue within the attached *.pdf. Any additional comments regarding proofreading and typesetting are marked in yellow.

Thank you for your understanding and cooperation in addressing this matter. Please do not hesitate to reach out if further clarification or assistance is required.

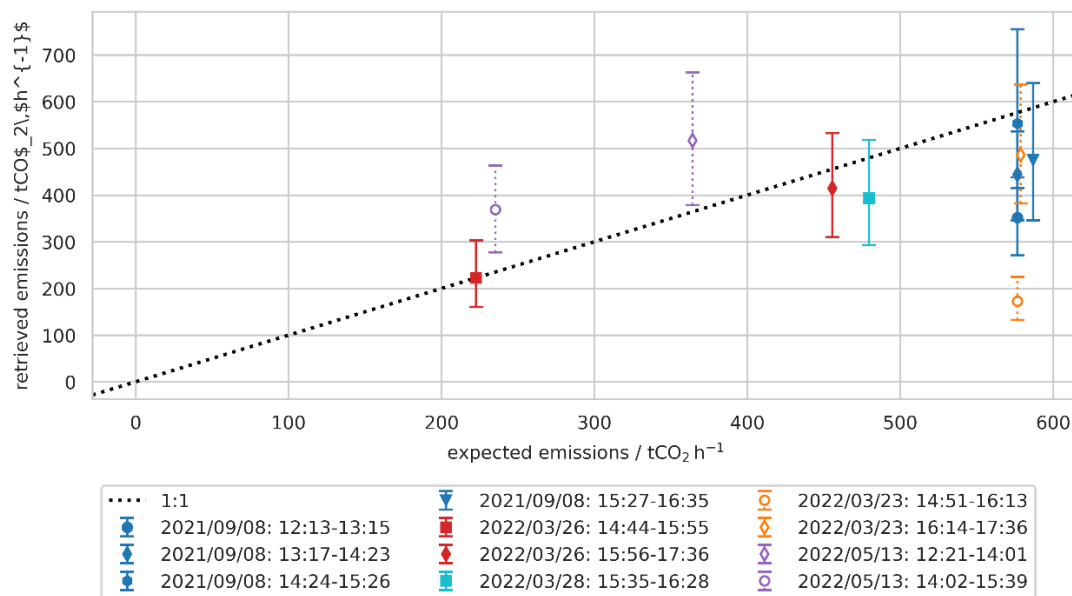
Sincerely,

Marvin Knapp

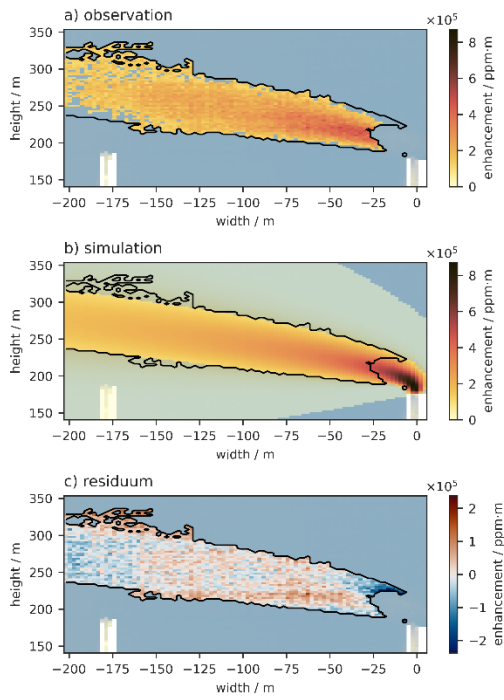
Old version of Figure 10:



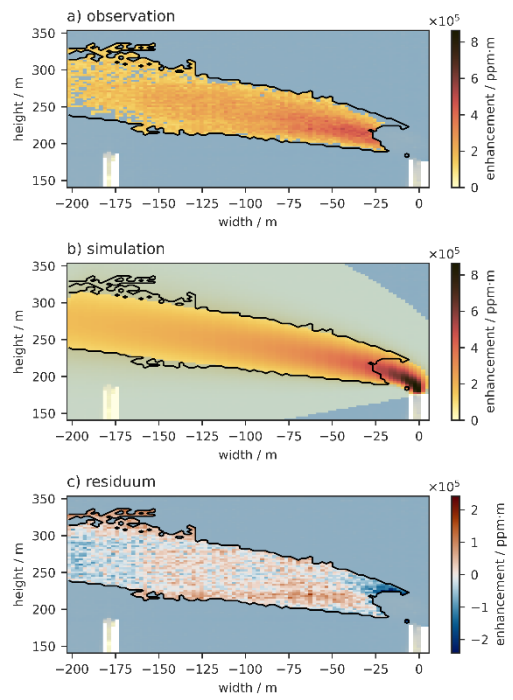
Updated version of Figure 10:



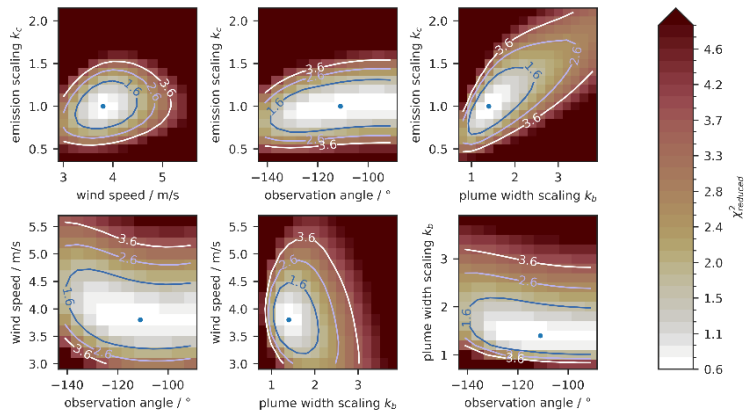
Old version of Figure 7:



Updated version of Figure 7:



Old version of Figure 8:



Updated version of Figure 8:

