

Review of “First-time comparison between NO<sub>2</sub> vertical columns from GEMS and Pandora measurements” Kim et al 2023

Overall, this version of the manuscript is much easier to read than the previous iteration.

### Comments

- Paragraph at line 246: Provide more details on the TROPOMI comparison. What is the motivation for doing this? Were the TROPOMI columns matched to the Pandora locations using the same method as is used for GEMS?
- The conclusion is still lacking some details. In particular, you mention that this is the first time that GEMS, TROPOMI, and Pandora NO<sub>2</sub> were compared, but do not provide any details on the comparison or what the results mean. It would also be useful to discuss how the agreement between GEMS and Pandora NO<sub>2</sub> compares to the agreement between other, similar types of measurements. Can you conclude that the GEMS data is of a quality appropriate for use in scientific studies?

### Minor Edits

Line 118: November 28<sup>th</sup> of what year?

Line 119: change “day 28th” to “November 29th”

Figure 2: Not all panels have y-axis labelled.

Line 217: Change “fir” to “for”

Line 251: change to “less underestimation”

Figures 10 and 11: Mention dot colour meanings in the caption. Which colour is the regression line fit to?

Figure 11: I suggest using a different colour for either the green or red dots as it is difficult for colourblind people to distinguish between these.

Line 337 (equation): Are the indices on VCD<sub>1</sub> and VCD<sub>2</sub> mixed up?

Line 354: Change “GENS” to “GEMS”