

RESPONSE TO REVIEWERS

Ms. Ref. No.: Atmos. Chem. Phys. Discuss., doi:10.5194/acp-2020-342.

Title: Long-term trends in air quality in major cities in the UK and India: A view from space

Journal: Atmos. Chem. Phys. Discuss.

Reviewer comments are in blue. Responses are in black and include line numbers consistent with the updated manuscript with changes tracked.

Response to RC#1:

The authors have now addressed the majority of my comments. There are a final few minor issues to address though:

1) Lines 108-110: “multiple air pollutants to complement and address spatial, temporal and air pollutant gaps in surface monitoring networks”. This needs to be worded more carefully. When you say “temporally” do you mean diurnal or longer time periods? If the former, the temporal resolution is going to be better from the surface site. If the latter, some surface networks go back further in time than satellite records. I would be more inclined to put something like “multiple air pollutants complementing surface monitoring networks, which can have limited spatial coverage and temporal records”.

We now reword the statement as suggested (lines 102-105).

2) Lines 215-216: “We identified that NO₂ data from DPCC and CPCB (Delhi) and from UPPCB (Kanpur) is networks are inconsistently reported in either ppbv or $\mu\text{g m}^{-3}$, but the corresponding units are reported as $\mu\text{g m}^{-3}$.” This sentence is unclear. I suggest “We identified that NO₂ data from the DPCC and CPCB (Delhi) and UPPCB (Kanpur) networks are inconsistently reported in either ppbv or $\mu\text{g m}^{-3}$.” I don’t follow what you mean by adding “the corresponding units are reported as $\mu\text{g m}^{-3}$ ”. Do you mean that you report all NO₂ surface values in this study in units of $\mu\text{g m}^{-3}$?

We now update the text as suggested (lines 206-208).

3) The quality of the figures needs to be improved. I could be wrong, but it looks like the individual panels have been generated and then merged together afterwards using some software. In places this looks untidy and the text looks to be in different fonts, sizes or just pixelated. In many of the panels there are also random lines, which look messy and unnecessary.

We now ensure that the font types are consistent across all figures, the text does not appear pixelated and there are no stray lines.