Response to Report #1

The manuscript by Oak et al. presents a logical and robust approach to bias correcting geostationary satellite NO2 retrievals against TROPOMI and improving performance against PANDORA. The results and method are clearly presented, and the article will be of likely interest to the audience of AMT. The authors' responses to prior reviewer comments are appropriate; I have only a couple very minor suggestions to add.

At L104: "appropriate geophysical quantity" is a bit vague in its meaning. Instead of "appropriate," perhaps "most relevant for comparisons and interpretation" or something else a bit more precise?

Thank you for the suggestion. We revised the phrase to:

"...converted to VCDs, the geophysical quantity more relevant for column interpretation, using air mass factors…"

Figure 6: I have a difficult time seeing the Pandora observations overplotted on the map. I did not realize the Pandora obs were there initially; upon reading the text, I referred back to the figure and still have a hard time making the visual comparison to the satellite products at a zoom less than 200%. Perhaps shift panels d, e, i, and j down below the other six, and enlarge the maps that include the Pandora obs? Or otherwise enlarge the overplotted data points?

We enlarged the Pandora data points on each panel so that they're more visible.