This paper investigated the tropospheric NO2 vertical column density (VCD) over an urban site in Guangzhou, China using the MAX-DOAS measurements during a campaign for less than a year. The part investing the effect of the main coincidence criteria is interesting and will be useful for the similar analysis in the further. However, I still feel it is a little bit dangerous to make conclusions based on such limited numbers of ground measurements. I suggest the authors to convince readers by either including longer-period data or quantifying uncertainties of the validations.

General comments:

1. Introduction. The authors took too many efforts in describing the importance of NO2, instead of the historical validation using MAX-DOAS. The last paragraph needs to be extended by including more detail introduction of the previous validation works in both China and other regions.

2. Page 7, line 10. The explanation for the better agreement between GOME-2b and ground measurements is not very convincing. "Possibly, the NO2 spatial distribution over the Guangzhou area during the GOME-2B overpass days is quite smooth and without significant horizontal gradients." I suggest providing further evidence (e.g., meteorological parameters) to support this argument, as it is quite an important statement to point out the better agreement of GOME-2b in this paper.

3. Page 7, line 20. As pointed out by the authors themselves, "the number of coincident data pairs is rather small", the reliability of the conclusion is questionable. In addition, the validation result that GOME-2b shows lower bias with ground measurements than the other two sensors is not the same as previous findings, e.g., Wang et al. (2017). Further discussion on uncertainties of this conclusion is necessary.

4. Section 3.2. A summary of the recommended MAX-DOAS settings based on the investigation is helpful for readers.

Specific comments:

1. Page 2, line 27, the bracket is missing in Shao et al., 2009

2. Page 11, line 18. The sentence is too long to read. Please consider rephrasing it.

3. all the x in NO_x should be subscript.