

Point-by-point replies to the Referee's comments on the Revised Manuscript titled "**Solar radiometer sensing of multi-year aerosol features over a tropical urban station: Direct Sun and inversion products**" – amt-2019-437

The authors are, once again, highly grateful to the Referee for valuable comments/suggestions on the revised manuscript, which improved the quality of the original manuscript. The corrections in the re-revised manuscript have been indicated in GREEN colour.

C1: BOA, ATM, TOA are first mentioned in Line 173, but are defined latter in Line 354.

R1: Revised as suggested. The terms BOA, ATM and TOA have been defined at their first appearance i.e. at line no. 173. The line 354 (now 654) has been corrected accordingly.

C2: Section 5.4 and 5.10 needs to be together at the end and before the section for comparison with satellite observations.

R2: As suggested, the sections 5.4 and 5.10 have been combined and placed in the manuscript as remarked.

C3: Line 375: 'increase observed in AODs'. Please refer to the figure.

R3: Revised the sentence in the light of the comment.

C4: Please include all long-term trends of aerosol parameters in one section. For example, sections 5.3, 5.5 and 5.6 should be merged in section 5.9.

R4: Revised as suggested. The sections 5.3, 5.5 and 5.6 have been merged with sections 5.9.

C5: Lines 393 – 401 are more relevant in the seasonal variations section.

R5: Revised as suggested. The suggested material has been moved to the section, seasonal variations.

C6: Lines 472 – 475: Repeated sentence – "Similar analysis performed anthropogenic pollution etc".

R6: Corrected as suggested.

C7: Please move the section 5.8 to the beginning – immediately after the composite average description of the aerosol parameters.

R7: Revised as suggested.

C8: For the section 5.9 – figure 13 and the table 3 are sufficient. Figures 14, 15, 16 are NOT

really adding anything to the main content and can be or placed as additional/supplementary material.

R8: Revised as suggested. The Figures 14-16 have been removed from the main text and indicated under the additional/supplementary material.

C9: Ideally I would suggest the organization of section 5 to be:

- a. Composite average of aerosol properties
- b. Seasonal average of aerosol properties
- c. Seasonal variation in aerosol types
- d. Long-term trends in aerosol properties
- e. Aerosol Radiative forcing (including trends in ARF)
- f. Comparison with satellite observations

Among these, the first two (a & b) are very well documented by the previous studies in the literature. Please use brevity and condense the content appropriately to the results.

R9: Thanks for the valuable remarks by the Referee. As suggested, the 5th section has been restructured, and the material has been rearranged under six sub-sections as suggested. Now, the Results and Discussion section looks much better and far improved.

C10: In section 5.11, what spatial extent of satellite pixels are used in the comparison for a given AERONET observation?

R10: The spatial extent of the satellite pixels used in the present study is 1.0 for MODIS and 0.25 degree for OMI.

C11: Please include the explanation for all points raised in the previous review in the main text.

R11: Point-by-point explanation has been given to all the modifications made in the revised manuscript.

C12: Finally, please check for the overall consistency in the structure and flow of the manuscript.

R12: The re-revised manuscript is checked for overall consistency. It reads better and clear scientifically, and in line with the objectives and guidelines of the renowned journal, Atmospheric Measurement Techniques.