

This revised manuscript was mostly corrected the reviewers' comments, and the manuscript is well constructed. However, I would like to suggest that some additional corrections for the improvement of manuscript.

- 1) Section 2: The specifications of instruments are too omitted and not standardized. For Gk2B instruments, the manuscript wrote the wavelength, spatial coverage, and resolution. However, the AMI is not. Please add and unify the instrument explanations.
- 2) Section 2.2.2: Please add the advantage and disadvantage of type classification for GEMS AOD retrieval.

Minor Comments

- 1) L165: hyperspectral 'radiance' observations
- 2) L174: The GEMS → the GEMS
- 3) L191: AERONET AODs is known to be 0.010-0.021 → for version 3?
- 4) L198: Please add the reference

Park, S. S., Kim, S. -W., Song, C. -K., Park, J. -U., and Bae, K.: Spatio-Temporal Variability of Aerosol Optical Depth, Total Ozone and NO₂ Over East Asia: Strategy for the Validation to the GEMS Scientific Products, *Remote Sens*, 2020, 12(14), 2256.