

Interactive
Comment

Interactive comment on “Influence of aerosols and surface reflectance on satellite NO₂ retrieval: seasonal and spatial characteristics and implications for NO_x emission constraints” by J.-T. Lin et al.

Anonymous Referee #1

Received and published: 8 June 2015

I found this to be a very important and mostly clear paper that is a wonderfully complete case study on tropospheric NO₂ retrieval. It should be accepted with only a few minor changes in grammar and bookkeeping, none of particular substance. They are:

Read carefully to define abbreviations and acronyms on first use (AMFv6, OMLER, Case S_A, CRF, ...)

12656.1 – Excluding days with high pollution is not clarified until Section 3.5. Please add a sentence to clarify here.

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12657.5-6 Please discuss in terms of moving from implicit to explicit, since this is the direction of improvement.

12659.25 I found Figure 2 to be unnecessary. It did not clarify the retrieval procedure.12666.4-8 The wrong conclusion seems to be drawn here. If the heights are correlated would that more likely reduce errors than if they were not?

12667.20 and later discussion – The order of rows in Figure 5 and the order of subsequent discussion in the text should be made consistent.

12671.23 – “to space”

12672.7 What is the correlation for Castellanos et al?

12672.26 “Several representative regions of China are considered, including. . .”

12675.15 “. . .REF from DOM. These include. . .”

12676.12 “. . .TOA radiance is from the combination. . .”

12676.26 “situations”12681.10 “. . .DOMINO v2. Our cloud. . .”

12684 – The conclusions here should certainly mention the upcoming GEMS mission and its hourly high spatial resolution measurements of China.

Interactive comment on Atmos. Chem. Phys. Discuss., 15, 12653, 2015.

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