

Interactive comment on "Intercomparison of daytime stratospheric NO₂ satellite retrievals and model simulations" by M. Belmonte Rivas et al.

N. A. Krotkov

nickolay.a.krotkov@nasa.gov

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1) The paper should acknowledge those who first presented the OMI strat NO2 discrepancies with both NASA GMI model and concurrent satellite measurements. This was a part of the Aura Science Team meeting presentation in 2012. The following citation is consistent with AMT's reference style guide:

Krotkov, N. A., Bucsela, E. J., Celarier, E. A., Lamsal, L. N., and Swartz, W. H.: Improved OMI NO2 Standard Product: Algorithm, evaluation, and results, EOS Aura Science Team Meeting, Pasadena, California, 1-3 October, 2012.

Link to presentation-> http://avdc.gsfc.nasa.gov/index.php?site=1072744097

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2) The OMI stratospheric NO2 positive bias has been traced to the current OMI operational NO2 fitting algorithm, which is shared between DOMINO (V2) and standard (SP v2.1) NO2 products. New NASA NO2 fitting algorithm essentially removes the bias in OMI strat NO2:

Krotkov, N. A., Joiner J., Bhartia P.K., Lamsal L. N., Marchenko S., Celarier, E.A, and Swartz, W. H., Li, C., Key improvements in OMI NO2 and SO2 products, 18th OMI Science Team Meeting, Debilt,Netherlands, 11-13 March, 2014. Link to presentation– > http://www.knmi.nl/omi/research/project/meetings/ostm18/pres_ostm18_2014.php

3) Using new NASA fitting OMI NO2 SCDs are reduced by 20%-40%. This is turn cases reduced tropospheric NO2 VCDs over polluted regions. Therefore, the following statement in the abstract is not consistent with our preliminary results: "It is highlighted that biases in nadir stratospheric columns are not expected to affect tropospheric retrievals significantly ".

N. Krotkov

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