

***Interactive comment on “Global distributions of nitric acid from IASI/MetOP measurements” by C. Wespes et al.***

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Received and published: 4 May 2009

Congratulations on developing the first nadir HNO<sub>3</sub> product! I have one error to correct and some other comments.

On page 8038, it is stated "The Tropospheric Emission Spectrometer (TES)/Aura (Beer et al., 2006) does indeed not routinely probe the nitric acid absorption spectral range around 900 cm<sup>-1</sup>" This is not accurate. TES routinely takes nadir measurements between 660 and 910 cm<sup>-1</sup> which includes all the selected IASI windows. Perhaps the confusion is regarding the limb HNO<sub>3</sub> measurements which we no longer take? Our project has done some preliminary analysis on nadir HNO<sub>3</sub> but we have not developed it into a product.

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I also wondered why only scenes with cloud cover below 25% are analyzed since the IASI HNO<sub>3</sub> sensitivity is in the stratosphere?

A comment on section 2.4: TES has had issues with retrievals over dessert and found the best emissivity match is ASTER's alluvial sand. You might try alluvial sand emissivity from ASTER (go to <http://speclib.jpl.nasa.gov/search-1/soil> and search for "alluvial".)

Figure 4 is hard to see. Can it be enlarged?

Figure 6: does the grey represent error or real variability? How does this compare to the predicted error? Where is the NDACC data on these plots?

Congratulations again on your new product.

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Interactive comment on Atmos. Chem. Phys. Discuss., 9, 8035, 2009.