

Interactive comment on “Intercomparison of UV-visible measurements of ozone and NO₂ during the Canadian Arctic ACE validation campaigns: 2004–2006” by A. Fraser et al.

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This comprehensive and thorough work is excellent and clearly deserving of publication. I have a few rather trivial points that the authors might consider dealing with:

1. The team have still not resolved the merit of "agreement within error bars" when failing to meet NDACC standards (p16296 lines 13 & 25, and elsewhere). Some discussion would be fruitful.
2. In order to substantiate the claim that the daily reference is better because of smaller wvaelngth shifts (p16299), the wavelength shifts should be instanced. If they routinely exceed 0.5 pixels, the claim is not true, as interpolation errors mirror at half-integral

pixel differences. Also, WinDOAS software has an excellent interpolation scheme, and only a half-daily reference taken in the midst of the twilight, as often done for BrO measurements, so reduces the wavelength shift that the interpolation error is removed.

3. The text of section 6 is full of detailed results that would be much better in tables.

4. Tables 4, 5, and 6 have minus signs mixed with hyphens and they are almost indistinguishable. At least leave spaces, better would be to spell out "minus".

5. Figure 1 caption would be better as "ECMWF potential vorticity at 475 K potential temperature (about 19 km in the lower stratosphere) on 4 March ..."

6. Figure 5(b) is what one might expect from different wavelength ranges being used (AMFs being different at different wavelengths, and the slant columns used in the figure being the equal vertical columns times the different AMFs). But the wavelength ranges of UT-GBS and SAOZ for ozone analysis are the same in Table 1. This worthy of comment, and even of investigation - has misinformation crept in here?

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