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Response#2 to the Editor's Comments on Totterdill *et al.*, Atmospheric Lifetimes, Infrared Absorption Spectra, Radiative Forcings and Global Warming Potentials of NF_3 and CFC-115

Editor

Comment 1: The comparison of the integrated absorption cross sections of NF_3 given in Table 2 show a large discrepancy with previous literature values over the 1330-1440 cm^{-1} region (a very weak band). This band is approximately equal in strength to the band in the region 1085-1200 cm^{-1}. However, the log plot shown in Figure 1 does not show the absorption in the 1330-1440 cm^{-1} region. I assume that this is a simple baseline or offset problem with the experimental data. I recommend revising the data shown in Figure 1 (either correcting the baseline or expanding the range of the y-axis) to show this weak band (this is the point of including a log plot). Also, digitized spectra for NF_3 and CFC-115 should be included as supplementary material for future reference. I trust that this can be done without further review.

Response: thank you for making this important point.

Older versions of the spectra of NF_3 and CFC-115 had been plotted by mistake. The latest versions are now plotted, and the corresponding data is uploaded as supplementary material. The axis of Figure 1, panel a, has been expanded as requested to show the region highlighted by the Editor. The labels of the y axes in Fig. 1 and 2 were wrong and have been changed accordingly.

The NF_3 band in the 1330-1440 cm^{-1} range is not as strong as the one in the 1085-1200 cm^{-1} range. The problem does not seem to be related to the baseline correction. Pressure and resolution effects can also be discarded since our spectrum has been measured at the same pressure and with a better resolution than in Robson *et al.*, 2006.