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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Hydroxyl radicals in the tropical troposphere over the Suriname rainforest: airborne measurements" *by* M. Martinez et al.

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The flux is determined in both nitrogen and helium bath gases and Figure 5 shows a difference in behaviour for both gases. The flux measured in nitrogen shows a dependence on gas flow and $\%N_2O$ added, while the flux measured in He does not. Has the NOx analyser response to the nitrogen and helium carrier gases been quantified?

With a chemiluminescence TECO NOx analyser (as used here) the NO signal will be quenched by N2O in the gas flow. For 20% N2O in nitrogen, the NO signal is reduced by almost 20%, an effect comparable to that seen in Figure 6. This effect becomes non-linear with higher concentrations of N_2O. Has this reduction been corrected for in the flux calculation?

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Other comments:
1) In Table 1 the sum in quadrature of these parameters is over 17% - not the 12% quoted in the text. Why are the dimensions of the photolysis chamber known to within only 10%? Is there a mistake in the errors quoted or in the calculation of the total error?

2) Contamination of optics by pump oil is suggested as a reason for C0 variation. If so, is there any reason the C0 for OH and HO_2 would not follow the same trends?

Interactive comment on Atmos. Chem. Phys. Discuss., 8, 15491, 2008.