



## **Heterogeneous interaction of $N_2O_5$ with mineral dust aerosol**

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The heterogeneous reaction of  $N_2O_5$  with mineral dust aerosols was investigated in an atmospheric pressure aerosol flow tube.  $N_2O_5$  was measured by cavity ring-down spectroscopy, enabling the use of initial  $N_2O_5$  concentration of less than 10 ppbv. Uptake coefficients of  $\sim 10^{-2}$  were found for Saharan dust, independent of relative humidity or  $[N_2O_5]$ . The presence of  $O_3$  (1-10 ppmv) was found to enhance the uptake of  $N_2O_5$  significantly, indicating a surface-catalyzed decomposition mechanism rather than heterogeneous hydrolysis. Results from the heterogeneous reaction of mineral dust aerosol with  $HNO_3$  (measured by chemical ionization mass spectroscopy) will also be presented and compared.