



## **Heterogeneous interaction of N<sub>2</sub>O<sub>5</sub> with mineral dust aerosol**

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The heterogeneous reaction of N<sub>2</sub>O<sub>5</sub> with mineral dust aerosols was investigated in an atmospheric pressure aerosol flow tube. N<sub>2</sub>O<sub>5</sub> was measured by cavity ring-down spectroscopy, enabling the use of initial N<sub>2</sub>O<sub>5</sub> concentration of less than 10 ppbv. Uptake coefficients of  $\sim 10^{-2}$  were found for Saharan dust, independent of relative humidity or [N<sub>2</sub>O<sub>5</sub>]. The presence of O<sub>3</sub> (1-10 ppmv) was found to enhance the uptake of N<sub>2</sub>O<sub>5</sub> significantly, indicating a surface-catalyzed decomposition mechanism rather than heterogeneous hydrolysis. Results from the heterogeneous reaction of mineral dust aerosol with HNO<sub>3</sub> (measured by chemical ionization mass spectroscopy) will also be presented and compared.