

# ATMOSPHERIC MEASUREMENTS OF GAS-PHASE HNO<sub>3</sub> AND SO<sub>2</sub> BY CHEMICAL IONIZATION MASS SPECTROMETRY DURING MINATROC 2000

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The EU-project MINATROC (MINeral dust And TROpospheric Chemistry) aims at enabling an estimation of the influence of mineral dust on tropospheric oxidant cycles. Of particular interest is a possible interaction of certain trace gases with mineral dust. Such trace gases include also HNO<sub>3</sub> and SO<sub>2</sub>. Within the scope of this project continuous atmospheric measurements of gas-phase HNO<sub>3</sub> and SO<sub>2</sub> were conducted between May and July 2000 at the CNR WMO station, situated on Monte Cimone (MTC), the highest peak of the Northern Apennines (2165 m a.s.l.) in Italy. The site was chosen because African air transporting dust is occasionally advected over the Mediterranean Sea to the site. Thus mineral aerosol emitted from Africa will encounter polluted air masses and provide ideal conditions to study their interactions. HNO<sub>3</sub> and SO<sub>2</sub> were measured with an improved CIMS (chemical ionization mass spectrometry) system that was developed and built at MPI-K Heidelberg. Complete data sets could be obtained before, during and after major dust intrusions. For the first time these measurements might provide a strong observational indication of efficient gas-phase HNO<sub>3</sub> uptake by atmospheric mineral dust aerosol particles.