

AAS001-P01

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## Effect of amines on the particle formation in the atmosphere

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The ternary nucleation of H<sub>2</sub>O-H<sub>2</sub>SO<sub>4</sub>-NH<sub>3</sub> has been considered to be one of the key mechanisms of new particle formation in the lower atmosphere. However, the effect of ammonia molecules is too small to explain the observed particle formation rates in the atmosphere. Recent studies indicate that amines may be more effective than ammonia in enhancing particle formation. In order to investigate the effects of amines on the formation and the growth of nano-particles in the atmosphere, we conducted experiments on particle formation by corona discharge in Amines/SO<sub>2</sub>/H<sub>2</sub>O/Air mixtures. The size distributions of the nano-particles as well as the compositions of the ions were measured using the cluster-differential mobility analyzer combined with Faraday cup electrometer (C-DMA/FCE) and the drift tube ion mobility spectrometer/mass spectrometer (DT-IMS/MS).