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The role of atmospheric ions in aerosol nucleation – a review

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Abstract. Atmospheric aerosols affect climate and yet the reason for many observed events of new aerosol formation is not understood. One of the theories put forward to explain these events is that the presence of ions can enhance the formation of aerosols. The theory is called Ion Induced Nucleation and in this paper the state of observations, theory and experiments within the field will be reviewed. While evidence for Ion Induced Nucleation is accumulating the exact mechanism is still not known and more research is required to understand and quantify the effect.

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