



## **Development of a new fast ice nuclei counter: The Frankfurt Continuous Flow Mixing Chamber**

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A new ice nuclei counter will be developed. This instrument will determine the ambient concentration of aerosol particles which are able to form ice particles by deposition freezing and contact freezing. Three gas flows (a moist warm, a dry cold and the sample air) will be mixed within a small volume in order to obtain a certain predefined temperature and super-saturation. Ice nuclei will be activated at freezing temperatures. After activation particles will grow within a development chamber. By measuring the scattering phase function an optical sensor at the end of the chamber will determine the concentration of both ice particles and super-cooled droplets.