



## **Horizontal moisture gradients and spatial dimensions of ice supersaturated regions**

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Ice supersaturated regions (ISSRs) exist in the upper troposphere and even in the lowermost stratosphere from the tropics up to arctic regions. These regions represent potential formation areas for non-convective cirrus clouds, contrail persistence and for contrail-to-cirrus transformation. The radiative effects of these ice clouds is still not certain, therefore the formation and properties of ISSR plays a key role in recent research.

Using data of the MOZAIC (Measurement of Ozone and Water Vapour by Airbus In-Service Aircraft) project from April 1997 to March 1999, we estimate the properties of ISSRs in different regions and seasons. This enables us to investigate the spatial dimensions of ISSRs. Further, we correlate the dimensions of ISSRs to meteorological properties like temperature, pressure and humidity. For example, we show that ISSR with relatively cold temperatures will lead to larger ISSRs.