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Creating an icing climatology

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Atmospheric icing can have a huge impact on human activities in the lower parts of the atmosphere. For many purposes, such as for wind turbines in cold climate, a long term climatology of icing would be desired and highly useful. Atmospheric icing has not been measured on a longer time scale or at many sites and thus creating a climatology comes with difficulties. In the last few years there have been progress with the modelling of icing and there's belief that a high resolution climatology can be created.

Atmospheric icing is a complicated phenomenon that is dependent on several atmospheric factors, such as temperature, wind speed and liquid water content: creating a climatology isn't straightforward. Based on ERA-Interim reanalysis data and measurements of icing in Sweden a method to create an icing climatology have been investigated, which combines Lamb weather-type classification and a new technique of modelling icing.

It has been shown that there are some wind directions more prone to icing than others, and in light of that there are reasons to assume that using Lamb weather-type classification could be a viable option in creating a climatology. By using this combination of reanalysis data and measurements there is a hope that an icing climatology could be created using these techniques.