



## **Stereological measurement of the specific surface area of snow**

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Porosity and specific surface area (SSA) influence the physical, mechanical and chemical properties of snow. Using a model-based stereological method, porosity and SSA can be estimated unbiased and without consideration of snow shape from vertical surface sections. We compared this method to the SSA measured using a micro-computer tomograph. The result shows that a one-to-one relation exists, and  $r^2 = 0.99$ . A comparison based on snow type with the SSA measured by Legagneux et al. using gas-adsorption shows that both techniques result in almost identical SSA within a snow type. This makes the stereological estimation of specific surface area of snow a very attractive and relatively simple method. The result also shows that the surface of snow is smooth below about 20 micrometers.