

Abstract Submitted  
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**Using laser-cantilever anemometry under various flow conditions** MICHAEL HÖLLING, STEPHAN BARTH, JOACHIM PEINKE, Institute of Physics - University of Oldenburg, JEAN-DANIEL RÜEDI, WSL Swiss Federal Institute for Snow and Avalanche Research (SLF) — We present measurements executed with the new laser-cantilever anemometer (LCA) under various flow conditions. Previously, the basic principles and characteristics of the LCA were investigated. Measurements led to results comparable to common measurement techniques for turbulent flows, such as hot-wire anemometry for air and hot-film anemometry for water. Here we present further experiments under various flow conditions. The LCA was used in a snow wind tunnel to investigate the behavior of the cantilever under particle impact. In comparison to data collected with a hot-film anemometer under same conditions the times series of the LCA showed less pronounced impact characteristics than that of the hot-film, namely a shorter and easier to identify recovery time. In addition the behavior of the LCA at low velocities in air was investigated to determine the threshold velocity for measurements.

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