



Evaluation of FlowCapt™ acoustic sensors for snowdrift measurements

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The acoustic sensors FlowCapt designed for measuring drifting snow fluxes are compared to the optical sensor Snow Particle Counter S7 hereby considered as the reference. The intercomparison took place in the French Alps at the Lac Blanc Pass where a bench test for the aeolian transport of snow was set-up. Two generations of FlowCapt™ (built before and after 2006) exist and both generations were compared in terms of drifting snow event detection and snow flux quantification. It has been shown that both generations were able to detect drifting snow event accurately. The first one was not able to estimate the snow fluxes even if a new calibration proposed in the literature (Cierco et al., 2007) was applied. The second one gave better results: orders of magnitude were more or less similar but the acoustic sensor lead to an underestimation of drifting snow fluxes. Additional experiments carried out in Antarctica also supported these conclusions.