



Interpretation of velocity and pressure measurements by various dynamic avalanche models

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January 2004 avalanche events in Vallée de la Sionne were measured with Continuous Wave Radar, Pulsed Doppler Radar, electro-optic methods and pressure gauges. The velocities obtained by the radar measurement techniques are compared to one, two and three dimensional dynamic avalanche models. In this paper the velocity development over the avalanche track will be compared to the simulation results of the various models. Additionally the observed and calculated peak pressures are compared. Based on sensitivity analyses the friction parameters (bed friction and turbulent friction) are optimized to reduce the difference between observed and calculated velocity distribution along the avalanche track. These optimized results are used to critically discuss the different model concepts.