

CORRELATION BETWEEN SNOW COVER STABILITY MEASUREMENTS AND RESULTS OF MODELING THE SNOW STRUCTURE EVOLUTION WITH SNOWPACK

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The SNOWPACK model is applied to an Alpine site where detailed snow pit observations together with the snow cover stability tests were conducted for two winter seasons. Despite remaining discrepancies in quantitative snow structure parameters, a general agreement was found between the layering of snow predicted by the model and the observed snow layering. From the correlation analysis and additional data on snow cover stability, suggestions for a quantitative stability assessment using SNOWPACK are made. The strength of layers and interfaces is formulated as a function of the snow microstructure parameters. Results of the analysis are presented and discussed.