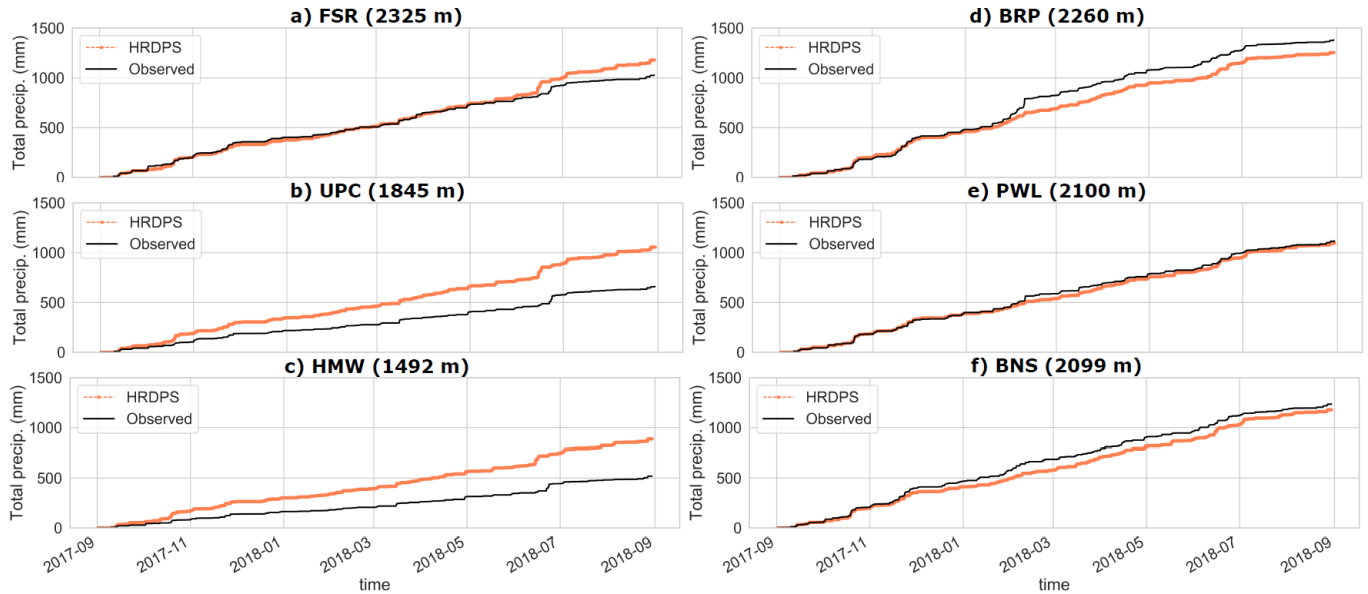


Supplementary materials for the manuscript *Multi-scale snowdrift-permitting modelling of mountain snowpack* by Vionnet et al.

1. Evaluation of precipitation



5 Figure S1: Comparison of observed (black lines) and HRDPS (orange lines) cumulated precipitation (solid + liquid) from 1st September 2017 to 31st August 2018 for six stations located in the Kananaskis domain. The location of the stations is shown on Fig. 1 in the main manuscript.

2. Elevation-dependency of snow persistence

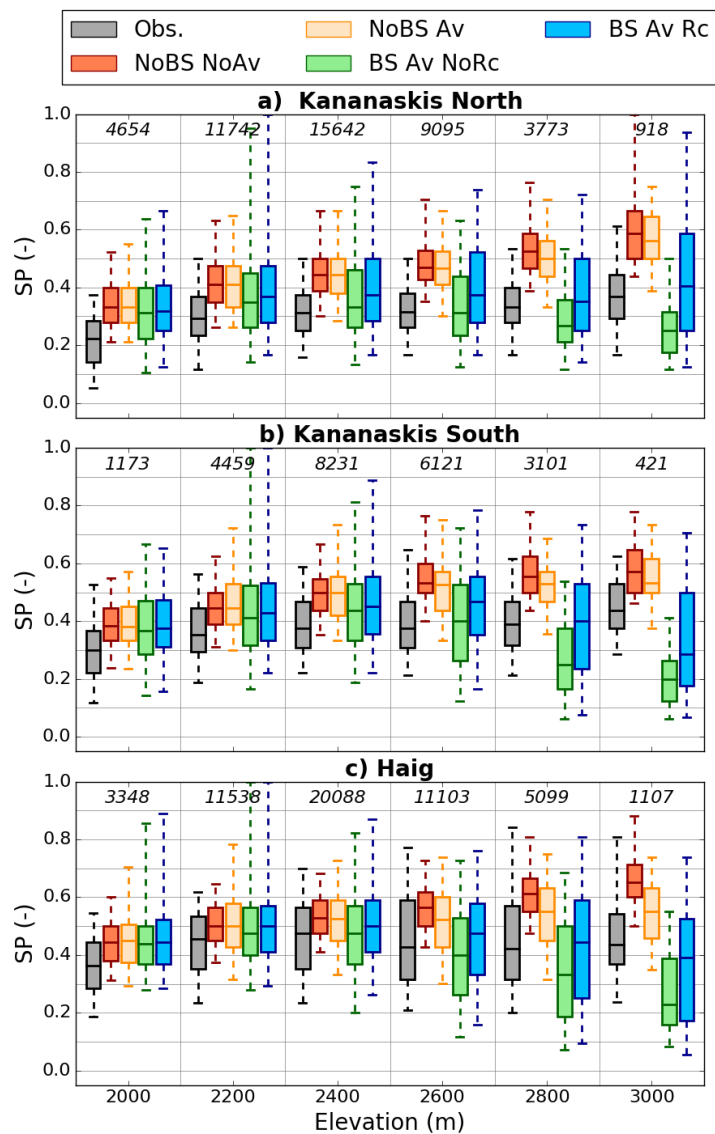


Figure S2: Boxplots showing the distributions of observed and simulated snow persistence (SP) index per 200-m elevation bands for three sub-regions. The location of these sub-regions is shown on Fig. 1b. Results of four CHM experiments are shown. The numbers in italic indicate the number of grid points within each elevation band. The whiskers show the 5th and 95th percentiles and outliers are not plotted.