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Availability of sensor data from the Weissfluhjoch research field of the WSL Institute for Snow and Avalanche Research, SLF

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The SLF Weissfluhjoch research field is located in Dorftälli above Davos, in the eastern Swiss Alps, 150 m below Weissfluhjoch in the direction of Davos (SE). It is a flat-field site at 2540 m, which has been shown to have a reasonably spatially homogeneous snowpack. The site was first established in 1936, leading to one of the longest high altitude daily time series of height of snow as well as depth of snowfall and its water equivalent.

Since the early 1970s, the site has also hosted automated measurements; many different instruments for snow parameter measurements have been used, tested, and calibrated here, ranging from early mechanical snow height sensors, to standard meteorological observations including high quality radiation measurements and experimental measurements of snow water equivalent (SNOWPOWER, SNOWPILLOW, under-snow radars and GPS reflectometry), laser snow height measurements, terrestrial laser scans, passive and active microwave radars, IR thermometers, as well as continuous measurements of snow settling and temperature over time. Several instrument comparisons have been made (air temperature and humidity, snow height, etc.) or are still ongoing (Solid Precipitation Intercomparison Experiment SPICE). Long-term automated measurements have also been maintained and the site is therefore often used as a reference for other measurements made in the region.

Recent efforts have resulted in baseline measurement series, corrected to a high standard, which can be used as validation datasets, for example, as additional reference datasets for the SNOWPACK model development.

These validation datasets, together with the raw data from all available automated experimental measurements have now been recorded in the Swiss Experiment infrastructure, and will be made available for 3rd party use within research (upon requesting permission from the data owner through the data system). This poster will provide details of the datasets available within the system, how they can be accessed and recommendations for their use.