

Mass Balance Components (mm w.e.)	Completely Dry Scenario (mm w.e.)	Partially Saturated Scenario (mm w.e.)	Fully Saturated Scenario (mm w.e.)	Measurements (mm w.e.)
5/12/2012 to 02/12/2013				
Cumulated solid precipitation	289	289	289	
Melt	1241	1237	771	
Sublimation	40	40	220	
Evaporation	0	81	549	
Ablation	1281	1359	1540	
Point mass balance	-992	-1069	-1251	-1080 (at SR50) -753 (at stake)
02/12/2013 to 28/11/2014				
Cumulated solid precipitation	368	368	368	
Melt	975	983	605	
Sublimation	15	15	441	
Evaporation	0	66	553	
Ablation	990	1064	1599	
Point mass balance	-622	-696	-1231	N/A
09/04/2014 to 19/07/2014				
Cumulated solid precipitation	142	142	142	
Melt	500	495	267	
Sublimation	8	8	338	
Evaporation	0	47	362	
Ablation	508	550	967	
Point mass balance	-366	-408	-825	-760 (at SR50)

Table 3. Mass balance components of three model runs (dry debris, partially saturated debris, and fully saturated debris) compared with the available measured point mass balance. In order to achieve fully dry debris, all rain and melted snow was assumed to run off immediately (frozen snow could persist and sublimate; hence, there is zero evaporation but sublimation commensurate with that of the partially saturated scenario. The fully saturated scenario has debris water that sublimates when a snow cover is absent in sub-freezing temperatures). The measurements come from a bamboo stake, which carries an uncertainty of ± 200 mm w.e. (Vincent et al., 2016), and SR50-detected surface height changes using a snow density of 200 kg m^{-3} . In 2014 the stake broke and SR50 was operational from only 09/04/2014 to 19/07/2014. Dates are in dd/mm/yyyy format. *Runoff has not been taken into account for this comparison.