

Exp.	State variables	Sites	Time period	Assimilated frequencies	Acronyms
A	$T_{\text{air}}$ , wind, precipitation $SW_{\text{down}}$ , $LW_{\text{down}}$	1, 9, 12, one winter	1 November 2014 to 1 May 2015	$\Delta T_{\text{B } 19-37}$ $\Delta T_{\text{B } 19-37}$ and $\Delta T_{\text{B } 11-19}$ $T_{\text{B } 11}$ , $T_{\text{B } 19}$ , $T_{\text{B } 37}$	DA1_DTB19-37 DA2_DTB19-37, DTB11-19 DA3_TB_11,19,37
B	$T_{\text{air}}$ , wind, precipitation, $SW_{\text{down}}$ , $LW_{\text{down}}$	12 sites, 43 winter simulations	From 1 November to 1 May, winters 2012 to 2016	$T_{\text{B } 11}$ , $T_{\text{B } 19}$ , $T_{\text{B } 37}$	DA_b_TB_11,19,37
C	$T_{\text{air}}$ , wind, precipitation, $SW_{\text{down}}$ , $LW_{\text{down}}$ , $\omega$ , $\tau_{\text{snow}}$	12 sites, 43 winter simulations	From 1 November to 1 May, winters 2012 to 2016	$T_{\text{B } 11}$ , $T_{\text{B } 19}$ , $T_{\text{B } 37}$	DA_c_TB_11,19,37