

	GRIP simulation		Dome C simulations			
No.	1	2	3	4	5	6
Section	4.1.1.	4.1.2.	4.2.1.	4.2.2.	4.2.3.	4.2.4.
Figures	Fig. 2	Fig. 3	Fig. 5	Fig. 6	Fig. 7	Fig. 8
Duration	10 years	10 years	1 year	1 year	1 year	10 years
Period	Jan 2000– Dec 2010	Jan 2001– Dec 2011	Jan– Dec 2001	Jan– Dec 2001	Jan– Dec 2001	Jan 2000– Dec 2010
Atmospheric forcing applied						
Air $T$	–	ERA-Interim (GR)	ERA-Interim	ERA-Interim	ERA-Interim	ERA-Interim
Specific humidity	–	ERA-Interim (GR)	ERA-Interim	ERA-Interim	ERA-Interim	ERA-Interim
Air pressure	–	ERA-Interim (GR)	ERA-Interim	ERA-Interim	ERA-Interim	ERA-Interim
Wind velocity	–	ERA-Interim (GR)	ERA-Interim	ERA-Interim	ERA-Interim	ERA-Interim
Snowfall	NO	NO	NO	NO	YES	YES
$\delta^{18}\text{O}_{\text{sf}}$	–	–	–	–	Function ( $T$ ) <sup>1</sup>	Function ( $T$ ) <sup>1</sup>
Model configuration						
Initial snow $T$	Flat profile (241 K)	1-year run initialization (Jan–Dec 2000)	1-year run initialization (Jan–Dec 2000)	1-year run initialization (Jan–Dec 2000)	1-year run initialization (Jan–Dec 2000)	Exponential profile <sup>2</sup>
Evolution of snow $T$	Constant	Computed	Computed	Computed	Computed	Computed
Initial snow $\delta^{18}\text{O}$	Sinusoidal profile <sup>3</sup>	Sinusoidal profile <sup>3</sup>	–40 ‰	–40 ‰	–40 ‰	–40 ‰
Wind drift	NO	NO	NO	YES	YES	NO
Homogeneous compaction	NO	NO	NO	YES	YES	NO