

	GRIP sensitivity tests				Dome C sensitivity tests				
No.	1	2	3	4	1	2	3	4	5
Section	4.3.	4.3.	4.3.	4.3.	4.3.	4.3.	4.3.	4.3.	4.3.
Figures	Fig. 9	Fig. 9	Fig. 9	Fig. 9	Fig. 10	Fig. 10	Fig. 10	Fig. 10	Fig. 10
Duration	6 months	6 months	6 months	6 months	3 years	3 years	3 years	3 years	3 years
Period	Jan–Jun 2000	Jan–Jun 2000	Jan–Jun 2000	Jan–Jun 2000	Jan 2000– Dec 2002	Jan 2000– Dec 2002	Jan 2000– Dec 2002	Jan 2001– Dec 2003	Jan 2001– Dec 2003
Atmospheric forcing applied									
Air $T$	–	–	–	–	–	–	–	ERA-Interim	ERA-Interim
Specific humidity	–	–	–	–	–	–	–	ERA-Interim	ERA-Interim
Air pressure	–	–	–	–	–	–	–	ERA-Interim	ERA-Interim
Wind velocity	–	–	–	–	–	–	–	ERA-Interim	ERA-Interim
Snowfall	NO	NO	NO	NO	NO	NO	NO	NO	NO
$\delta^{18}\text{O}_{\text{sf}}$	–	–	–	–	–	–	–	–	–
Model configuration									
Initial snow $T$	Flat profile (241 K)	Flat profile (241 K)	Flat profile (241 K)	Flat profile (241 K)	Flat profile (241 K)	Flat profile (220 K)	Flat profile (220 K)	1-year run initialization (Jan–Dec 2000)	1-year run initialization (Jan–Dec 2000)
Evolution of snow $T$	Constant	Constant	Constant	Constant	Constant	Constant	Constant	Computed	Computed
Initial snow $\delta^{18}\text{O}$	Sinusoidal profile <sup>1</sup>	Sinusoidal profile <sup>1</sup>	Sinusoidal profile <sup>1</sup>	Sinusoidal profile <sup>1</sup>	Sinusoidal profile <sup>2</sup>	Sinusoidal profile <sup>2</sup>	Sinusoidal profile <sup>2</sup>	Sinusoidal profile <sup>2</sup>	Sinusoidal profile <sup>2</sup>
Wind drift	NO	NO	NO	NO	NO	NO	NO	NO	NO
Homogeneous compaction	NO	NO	NO	NO	NO	NO	NO	NO	NO
Mass ratio $\tau$ within the grain	$1 \times 10^{-6}$	$5 \times 10^{-4}$	$3.3 \times 10^{-2}$	$5 \times 10^{-4}$	$5 \times 10^{-4}$	$5 \times 10^{-4}$	$5 \times 10^{-4}$	$5 \times 10^{-4}$	$3.3 \times 10^{-2}$
Period for recrystallization $\Delta t_{\text{surf/center}}$	15 days	15 days	15 days	2 days	15 days	2 days	15 days	15 days	15 days