

Table S1. Overview of available data from PROMICE AWS (Ahlstrøm and others, 2008; van As and others, 2014)

#	Station name	Elevation, (m)	Start year	End year	Mean monthly data available
1	'EGP'	2663	2016	2016	5
2	'KAN_B'	350	2011	2016	66
3	'KAN_L'	672	2008	2016	97
4	'KAN_M'	1275	2008	2016	97
5	'KAN_U'	1839	2009	2016	90
6	'KPC_L'	374	2008	2016	99
7	'KPC_U'	865	2008	2016	99
8	'MIT'	454	2009	2016	89
9	'NUK_K'	710	2014	2016	27
10	'NUK_L'	567	2007	2016	110
11	'NUK_N'	919	2010	2014	49
12	'NUK_U'	1127	2009	2016	110
13	'QAS_A'	1010	2013	2014	37
14	'QAS_L'	297	2007	2016	110
15	'QAS_U'	906	2008	2016	98
16	'SCO_L'	481	2008	2016	99
17	'SCO_U'	988	2008	2016	99
18	'TAS_A'	900	2013	2016	38
19	'TAS_L'	262	2007	2016	110
20	'TAS_U'	566	2008	2015	90
21	'THU_L'	571	2011	2016	74
22	'THU_U'	770	2011	2016	74
23	'UPE_L'	218	2009	2016	86
24	'UPE_U'	952	2009	2016	86

Table S2. Overview of available data from GC-Net AWS (Steffen and others, 1996)

#	Station name	Elevation,(m)	Start year	End year	Hourly data available
1	'Swiss_Camp'	1176	1996	2016	177756
2	'Crawford_Point1'	2022	1995	2015	176039
3	'NASA'	2334	1995	2016	184045
4	'GITS'	1869	1995	2016	183792
5	'Humboldt'	1995	1995	2015	179561
6	'Summit'	3199	1996	2016	175547
7	'Tunu_N'	2052	1996	2015	166655
8	'DYE_2'	2099	1996	2016	173761
9	'JAR_1'	932	1997	2016	164854
10	'Saddle'	2467	1997	2016	167263
11	'South_Dome'	2901	1997	2016	167183
12	'NASA_E'	2614	1997	2016	167038
13	'Crawford_P2'	1990	1997	2001	35450
14	'NGRIP*'	2941	2002	2010	69363
15	'NASA_SE'	2373	1998	2016	158033
16	'KAR*'	2579	1999	2001	18045
17	'JAR'	507	1999	2013	123078
18	'KULU*'	878	1999	2000	10867
19	'JAR3*'	283	2000	2004	34991
20	'Aurora*'	1798	2000	2001	7571
21	'Peterman_ELA*'	965	2003	2016	114056
22	'NEEM'	2454	2006	2016	89032