

Supplementary material for

Surge-type glaciers in Kalaallit Nunaat (Greenland): distribution, temporal patterns and climatic controls

Harold Lovell^{1*}, Jonathan L. Carrivick², Owen King³, Jenna L. Sutherland⁴, Jacob C. Yde⁵, Clare M. Boston¹,
Jakub Małecki⁶

¹School of the Environment, Geography and Geosciences, University of Portsmouth, Portsmouth, UK

²School of Geography and water@leeds, University of Leeds, Leeds, UK

³School of Geography, Politics and Sociology, Newcastle University, Newcastle, UK

⁴School of Built Environment, Engineering and Computing, Leeds Beckett University, Leeds, UK

⁵Department of Environmental Sciences, Western Norway University of Applied Sciences, Sogndal, Norway

⁶Institute of Geoecology and Geoinformation, Adam Mickiewicz University, Poznań, Poland

**Corresponding author: harold.lovell@port.ac.uk*

Table S1 - Greenland surge-type glacier inventory

Lovelv and others: Surge-type glaciers in Kalaallit Nunaat (Greenland): distribution, temporal patterns and climatic controls

Inventory ID	GLIMS ID	RGI ID	Glacier name	LAT	LONG	Cluster	Glacier type	Terminus type	Area (km ²)	Surge index	RGI surge index	Sources
S001	G315572E60586N	RG160-05.04143	Sermersuaq/1AB06001	60.5860	-44.4280	South	Outlet (IS)	Marine	29.9	3	9	Leclercq et al. (2021)
S002	G315533E60785N	-	1AC07021	60.7850	-44.4672	South	Outlet (IS)	Marine	86.1	1	9	Weidick et al. (1992)
S003	G315510E60804N	-	Sermeq/1AC07020	60.8043	-44.4900	South	Outlet (IS)	Marine	94.9	1	9	Weidick (1988); Sevestre and Benn (2015)
S004	G313850E61277N	-	Eqalorutit Killit Sermiat/1AH06002	61.2765	-46.1501	South	Outlet (IS)	Marine	641.2	1	9	Weidick (1988)
S005	G314117E1389N	-	1AH08002	61.3885	-45.8627	South	Outlet (IS)	Land	219.3	2	9	This study
S006	G30924E63817N	RG160-05.07053	1CF09002	63.8165	-50.7545	South	Outlet (IC/F)	Land	21.9	1	2	Weidick et al. (1992)
S007	RG30765E68095N	RG160-05.00800	Taaerast Sermiat/1DF11005	66.0945	-66.0945	South	Outlet (IC/F)	Marine	246.8	9	9	Weidick et al. (1992)
W001	G306582E69504N	RG160-05.01027 (part of)	1HB16010	69.5040	-53.4180	West	Outlet (IC/F)	Land	1.5	1	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W002	RG307040E69541N	RG160-05.01335	C.A. Nielsen Brae/1HB16047	69.5406	-52.9599	West	Outlet (IC/F)	Land	32.4	1	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W003	G307148E69623N	RG160-05.01358	Steenstrup Gletsjer/1HB16020	69.6229	-52.8520	West	Outlet (IC/F)	Land	60.0	2	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W004	G305605E69613N	RG160-05.01109	1HB07004	69.6127	-54.3947	West	Mountain	Land	1.8	1	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W005	G305566E69628N	RG160-05.01108 (part of)	1HC05004	69.6284	-54.4337	West	Mountain	Land	3.6	1	2	Weidick et al. (1992); Yde and Knudsen (2007); Sevestre and Benn (2015)
W006	G306903E69629N	RG160-05.01313	1HB15039	69.6292	-53.0968	West	Outlet (IC/F)	Land	12.1	1	2	Weidick et al. (1992)
W007	G305553E69640N	RG160-05.01108 (part of)	1HC05006	69.6393	-54.4464	West	Mountain	Land	2.2	1	2	Weidick et al. (1992); Yde and Knudsen (2007); Sevestre and Benn (2015)
W008	G305508E69642N	RG160-05.01131	1HC05007	69.6417	-54.4917	West	Mountain	Land	3.4	1	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W009	G307522E69651N	RG160-05.01314	1HE01011/1HE01010	69.6511	-52.4779	West	Outlet (IC/F)	Land	5.1	1	2	Weidick et al. (1992)
W010	RG307024E69658N	RG160-05.01470	1HB16017	69.6580	-52.9757	West	Outlet (IC/F)	Land	25.2	1	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W011	G307471E69673N	RG160-05.01309	1HE01015	69.6729	-52.5286	West	Outlet (IC/F)	Land	9.8	1	2	Weidick et al. (1992)
W012	G306236E69652N	RG160-05.01118	1HB11011	69.6816	-53.7642	West	Mountain	Land	0.7	2	9	This study; Yde and Knudsen (2007); Sevestre and Benn (2015)
W013	G306842E69653N	RG160-05.01302	1HB15031	69.6928	-53.1502	West	Outlet (IC/F)	Land	1.4	1	2	Weidick et al. (1992); Yde and Knudsen (2007); Sevestre and Benn (2015)
W014	G306576E69639N	RG160-05.01127 (part of)	1HB15005	69.6929	-53.4239	West	Outlet (IC/F)	Land	5.0	1	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W015	G306243E69697N	RG160-05.01152 (part of)	1HB11013	69.6968	-53.7571	West	Outlet (IC/F)	Land	1.2	1	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W016	G306980E69700N	RG160-05.01371	Sermersuaq	69.6998	-53.0200	West	Outlet (IC/F)	Land	45.8	2	9	Weidick et al. (1992); Yde and Knudsen (2007); Sevestre and Benn (2015)
W017	G306235E69706N	RG160-05.01152	1HB11014	69.7064	-53.7651	West	Outlet (IC/F)	Land	1.8	1	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W018	G306553E69709N	RG160-05.01127 (part of)	1HB15008	69.7090	-53.4470	West	Outlet (IC/F)	Land	5.0	1	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W019	G305836E69713N	RG160-05.01211	1HC04019	69.7128	-53.7128	West	Mountain	Land	1.4	1	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W020	G306230E69719N	RG160-05.01152 (part of)	1HB11015	69.7190	-53.7707	West	Outlet (IC/F)	Land	1.4	1	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W021	G305902E69730N	RG160-05.01215	1HB10008	69.7301	-54.0981	West	Mountain	Land	3.6	1	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W022	G307166E69739N	RG160-05.01355	Moltke Gletsjer/1HE01024	69.7386	-52.8339	West	Outlet (IC/F)	Land	76.2	2	2	Weidick et al. (1992); Yde and Knudsen (2007); Sevestre and Benn (2015)
W023	G306118E69743N	RG160-05.01403	1HB10027	69.7433	-53.8819	West	Outlet (IC/F)	Land	17.8	3	2	This study; Yde and Knudsen (2007); Sevestre and Benn (2015)
W024	G306425E69747N	RG160-05.01441	1HB11029	69.7471	-53.5755	West	Outlet (IC/F)	Land	34.7	2	2	Weidick (1988); Weidick et al. (1992); Yde and Knudsen (2007); Sevestre and Benn (2015)
W025	G306544E69748N	RG160-05.01468 (part of)	1HB15009	69.7475	-53.4562	West	Outlet (IC/F)	Land	2.9	1	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W026	G306520E69752N	RG160-05.01468 (part of)	1HB11033	69.7520	-53.4800	West	Outlet (IC/F)	Land	1.7	1	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W027	G306567E69760N	RG160-05.01396	Sorte Hvak Gletsjer/1HB15029	69.7587	-53.0133	West	Outlet (IC/F)	Land	71.3	2	2	Weidick et al. (1992); Yde and Knudsen (2007); Sevestre and Benn (2015)
W028	G305672E69760N	RG160-05.01223	1HC03013	69.7601	-54.3276	West	Valley	Land	3.4	2	3	Yde and Knudsen (2007); Sevestre and Benn (2015)
W029	G305768E69761N	RG160-05.01219	1HC03010	69.7609	-54.2318	West	Valley	Land	4.7	1	2	This study; Yde and Knudsen (2007); Sevestre and Benn (2015)
W030	G305726E69761N	RG160-05.01220	1HC03011	69.7609	-54.2743	West	Valley	Land	3.3	2	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W031	G306804E69767N	RG160-05.01462	1HB15018 (part of Kuannersuit Gletsjer/1HB15017)	69.7667	-53.1965	West	Outlet (IC/F)	Land	17.2	1	2	Weidick et al. (1992)
W032	G306543E69768N	RG160-05.01460	1HB15012	69.7682	-53.4572	West	Valley	Land	8.8	3	2	Weidick (1988); Weidick et al. (1992); Yde and Knudsen (2007); Sevestre and Benn (2015)
W033	G306040E69770N	RG160-05.01413	1HB10013	69.7698	-53.9600	West	Valley	Land	4.6	3	3	Weidick et al. (1992); Yde and Knudsen (2007); Sevestre and Benn (2015)
W034	G306224E69774N	RG160-05.01410	1HB10035	69.7735	-53.7758	West	Outlet (IC/F)	Land	4.4	1	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W035	G305860E69779N	RG160-05.01216	Sermia/1HD07040	69.7793	-54.1402	West	Valley	Land	5.3	2	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W036	G306014E69787N	RG160-05.01408	1HB10012	69.7872	-53.9864	West	Valley	Land	3.2	3	9	This study
W037	G306599E69788N	RG160-05.01452 (part of)	1HB15013 (W) (part of same glacier system as W040)	69.7880	-53.4010	West	Outlet (IC/F)	Land	14.0	2	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W038	G306345E69789N	RG160-05.01393	1HB10036	69.7888	-53.6549	West	Outlet (IC/F)	Land	34.5	3	2	Weidick (1988); Weidick et al. (1992); Yde and Knudsen (2007); Sevestre and Benn (2015)
W039	G307189E69805N	RG160-05.01298	1HE01036	69.8051	-52.8106	West	Outlet (IC/F)	Land	13.9	3	2	This study; Yde and Knudsen (2007); Sevestre and Benn (2015)
W040	G306719E69807N	RG160-05.01453 (part of)	1HB15013 (E) (part of same glacier system as W037)	69.8070	-53.4540	West	Outlet (IC/F)	Land	15.4	2	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W041	G306260E69820N	RG160-05.01396	1HD07028	69.8202	-53.0296	West	Outlet (IC/F)	Land	29.6	2	3	Yde and Knudsen (2007); Sevestre and Benn (2015)
W042	G306836E69824N	RG160-05.01456	Kuannersuit Gletsjer/1HB15017	69.8244	-53.1643	West	Outlet (IC/F)	Land	135.3	3	3	This study; Gilbert et al. (2002); Yde et al. (2005, 2019); Yde and Knudsen (2005, 2007); Sevestre and Benn (2015)
W043	G307121E69830N	RG160-05.01297	1HD10038	69.8302	-52.8790	West	Outlet (IC/F)	Land	25.1	3	3	Yde and Knudsen (2007); Sevestre and Benn (2015)
W044	G306506E69836N	RG160-05.01449	1HD06041	69.8359	-53.4940	West	Outlet (IC/F)	Land	29.9	2	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W045	G306385E69844N	RG160-05.01394	1HD06042	69.8440	-53.6152	West	Outlet (IC/F)	Land	6.8	2	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W046	G306316E69852N	RG160-05.01385	1HD06046	69.8522	-53.6844	West	Outlet (IC/F)	Land	8.6	1	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W047	G306063E69864N	RG160-05.01265	1HD07013	69.8643	-53.9373	West	Mountain	Land	1.9	1	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W048	G306257E69865N	RG160-05.01388	1HD06048	69.8645	-53.7433	West	Outlet (IC/F)	Land	6.6	3	2	This study; Yde and Knudsen (2007); Sevestre and Benn (2015)
W049	G306156E69871N	RG160-05.01383	1HD07018	69.8714	-53.8445	West	Outlet (IC/F)	Land	10.3	3	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W050	G306604E69872N	RG160-05.01447	1HD06035	69.8718	-53.3960	West	Outlet (IC/F)	Land	24.3	2	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W051	G306212E69885N	RG160-05.01378	1HD06051	69.8845	-53.7885	West	Outlet (IC/F)	Land	4.9	2	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W052	G306768E69892N	RG160-05.01457	1HE09044	69.8915	-53.2320	West	Outlet (IC/F)	Land	16.8	2	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W053	G306165E69900N	RG160-05.01376	1HD06053	69.9000	-53.8346	West	Valley	Land	2.7	2	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W054	G306771E69901N	RG160-05.01375	1HD07022	69.9011	-53.9235	West	Valley	Land	7.5	3	2	This study
W055	G306816E69920N	RG160-05.01432	1HE09042	69.9201	-53.1841	West	Valley	Land	2.3	1	9	Yde and Knudsen (2007)
W056	G306128E69921N	RG160-05.01473	1HD06055	69.9206	-53.8717	West	Valley	Land	1.4	2	9	Yde and Knudsen (2007); Sevestre and Benn (2015)
W057	G306589E69921N	RG160-05.01373 (part of)	1HE09050	69.9212	-53.4108	West	Outlet (IC/F)	Land	6.8	3	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W058	G306423E69933N	RG160-05.01556	1HD06030	69.9334	-53.5774	West	Valley	Land	10.7	3	9	Weidick (1988); Weidick et al. (1992); Yde and Knudsen (2007); Sevestre and Benn (2015)
W059	G306359E69941N	RG160-05.01549	1HD06026	69.9408	-53.6413	West	Valley	Land	6.8	1	2	Weidick et al. (1992)
W060	G306544E69944N	RG160-05.01553	1HE09051	69.9436	-53.4559	West	Valley	Land	12.8	3	2	This study; Weidick (1988); Weidick et al. (1992); Yde and Knudsen (2007); Sevestre and Benn (2015)
W061	G306406E69975N	RG160-05.01540	1HE09062	69.9746	-53.5944	West	Valley	Land	12.2	2	2	Yde and Knudsen (2007); Sevestre and Benn (2015)
W062	G306308E69998N	RG160-05.01588	1HE09078	69.9977	-53.6924	West	Valley	Land	16.3	3	9	This study; Yde and Knudsen (2007)
W063	G306186E70006N	RG160-05.01585	1HE09083	70.0059	-53.8138	West	Valley	Land	5.4	3	2	This study; Yde and Knudsen (2007); Sevestre and Benn (2015)
W064	G306254E70013N	RG160-05.01586	1HE09081	70.0125	-53.7459	West	Valley	Land	2.1	2	9	This study
W065	G305706E70026N	RG160-05.01638	1HD04007	70.0280	-54.2943							

Table S1 - Greenland surge-type glacier inventory

Lovel and others: Surge-type glaciers in Kalaallit Nunaat (Greenland): distribution, temporal patterns and climatic controls

Inventory ID	GLIMS ID	RGI ID	Glacier name	LAT	LONG	Cluster	Glacier type	Terminus type	Area (km ²)	Surge index	RGI surge index	Sources
W092	G308030E70394N	RG160-05.02150	1IA02105	70.3941	-51.9699	West	Outlet (IC/F)	Land	21.7	3	9	This study
W093	G307948E70447N	RG160-05.02123	Umiarfiorup Sermia/11B25002	70.4471	-52.0517	West	Outlet (IC/F)	Land	46.3	2	9	This study
W094	G307754E70447N	RG160-05.02132	1IA02090	70.4472	-52.2460	West	Outlet (IC/F)	Land	46.6	2	9	This study
W095	G307855E70484N	RG160-05.02117	Assakaat Sermia/11B26003	70.4839	-52.1450	West	Outlet (IC/F)	Land	13.8	3	2	This study; Weidick (1988); Weidick et al. (1992); Sevestre and Benn (2015)
W096	G307704E70489N	RG160-05.02108	Kome Gletsjer/11B29004	70.4890	-52.2958	West	Outlet (IC/F)	Land	42.0	3	2	This study; Weidick (1988); Weidick et al. (1992); Sevestre and Benn (2015)
W097	G306957E0519N	RG160-05.02087	1IA02031	70.5192	-53.3425	West	Valley	Land	1.3	3	9	This study
W098	G307817E05222N	RG160-05.02112	11B27003	70.5220	-52.1887	West	Valley	Land	25.1	3	9	This study
W099	G306546E70532N	RG160-05.02213	1IA02034	70.5323	-53.4542	West	Valley	Land	8.0	3	2	This study; Weidick (1988); Weidick et al. (1992); Sevestre and Benn (2015)
W100	G307505E70548N	RG160-05.02107	11B30003 E	70.5479	-52.4955	West	Valley	Land	26.7	3	9	This study
W101	G306703E70583N	RG160-05.02216	1IA02044	70.5829	-53.2973	West	Valley	Land	2.7	3	9	This study
W102	G306546E70588N	RG160-05.02306	1IA02036	70.5879	-53.4543	West	Valley	Land	11.2	3	9	This study
W103	G306384E70594N	RG160-05.02303	1IA02008	70.5941	-53.6161	West	Valley	Land	9.9	3	9	This study
W104	G306680E70596N	RG160-05.02297	1IA02045	70.5959	-53.3199	West	Valley	Land	9.1	3	9	This study
W105	G307068E70601N	RG160-05.02299	1IA02062	70.6006	-52.9317	West	Outlet (IC/F)	Land	18.4	3	9	This study
W106	G307297E70603N	RG160-05.02279	11B30003 W	70.6030	-52.7027	West	Outlet (IC/F)	Land	41.4	2	9	This study
W107	G306445E70621N	RG160-05.02288	11B40015	70.6211	-53.5549	West	Valley	Land	8.7	3	9	This study
W108	G306682E70664N	RG160-05.02280	11B40002	70.6643	-53.3180	West	Valley	Land	12.9	3	9	This study
W109	G307143E70665N	RG160-05.02315	11B33005	70.6648	-52.8568	West	Valley	Land	11.0	3	9	This study
W110	G306998E70701N	RG160-05.02328	11B34004	70.7014	-53.0019	West	Outlet (IC/F)	Land	5.0	3	9	This study
W111	G307173E71231N	RG160-05.02494	Unknown	71.2392	-52.2375	West	Valley	Land	24.94	3	9	This study
W112	G307917E71273N	RG160-05.02452	Aappaluttukassaap Kangiani Semikassak	71.2728	-52.0835	West	Valley	Land	14.6	3	9	This study
W113	G307936E71318N	RG160-05.02533	Unknown	71.3180	-52.0840	West	Valley	Land	14.2	2	9	This study
W114	G308059E71327N	RG160-05.02536	Unknown	71.3271	-51.9412	West	Valley	Land	2.9	3	9	This study
W115	G307473E71758N	RG160-05.02755	Unknown	71.7584	-52.5271	West	Valley	Land	3.2	3	9	This study
W116	G307157E71782N	RG160-05.02852	Unknown	71.7820	-52.8428	West	Valley	Land	18.6	3	9	This study
W117	G306428E71865N	RG160-05.03004	Unknown	71.8649	-53.5724	West	Outlet (IC/F)	Land	18.6	3	9	This study
W118	G305848E71865N	RG160-05.02934	Unknown	71.8651	-54.1521	West	Valley	Land	10.6	3	9	This study
W119	G307595E71977N	RG160-05.02972	Unknown	71.9769	-52.4054	West	Outlet (IS)	Land	62.5	3	9	This study
W120	G305799E71978N	RG160-05.03127	Unknown	71.9782	-54.2007	West	Outlet (IC/F)	Land	33.9	3	9	This study
W121	G305895E72026N	RG160-05.03116	Unknown	72.0259	-54.1055	West	Outlet (IC/F)	Land	24.3	2	9	This study
W122	G306051E72105N	RG160-05.03167	Unknown	72.1054	-53.9490	West	Valley	Land	4.3	2	9	This study
W123	G306659E72137N	RG160-05.03240	Unknown	72.1367	-53.3406	West	Valley	Land	13.3	3	9	This study
E001	G329529E68295N	RG160-05.13071	Unknown	68.2946	-30.4714	East	Valley	Marine	191.0	2	9	This study; Jiskoot et al. (2003)
E002	G330460E68913N	RG160-05.13130	Unknown	68.3730	-29.5397	East	Valley	Marine	58.6	2	9	Jiskoot et al. (2003)
E003	G330334E68392N	RG160-05.13127	Unknown	68.3915	-29.6658	East	Valley	Land	19.7	2	9	This study; Jiskoot et al. (2003)
E004	G330668E68424N	RG160-05.13667 (part of)	Unknown (part of same glacier system as E006 and E008)	68.4240	-29.3320	East	Valley	Marine	21.8	2	9	Jiskoot et al. (2003)
E005	G328779E68438N	-	Unknown (part of larger system)	68.4380	-31.2210	East	Outlet (IC/F)	Marine	209.0	2	9	Jiskoot et al. (2003)
E006	G330640E68461N	RG160-05.13667 (part of)	Unknown (part of same glacier system as E004 and E008)	68.4610	-29.3600	East	Valley	Marine	43.2	2	9	This study; Jiskoot et al. (2003)
E007	G330429E68466N	RG160-05.13423	Unknown	68.4662	-29.5707	East	Valley	Land	38.9	2	9	Jiskoot et al. (2003)
E008	G330795E68471N	RG160-05.13667 (part of)	Unknown (part of same glacier system as E004 and E006)	68.4710	-29.1661	East	Outlet (IC/F)	Marine	106.3	3	9	This study; Jiskoot et al. (2003, 2012)
E009	G329481E68502N	RG160-05.13134	Unknown	68.5023	-30.5188	East	Valley	Land	6.5	3	9	This study
E010	G330335E68560N	RG160-05.13437	Unknown	68.5602	-29.6646	East	Valley	Land	76.4	3	9	This study; Jiskoot et al. (2003)
E011	G331844E68576N	RG160-05.13536 (part of)	Borggraven (SW tributary) (part of Borggraven system)	68.5760	-28.1560	East	Valley	Land	12.9	3	1	This study; Jiskoot et al. (2003, 2012)
E012	G331604E68601N	RG160-05.13416	Unknown	68.6008	-28.3964	East	Valley	Land	45.3	2	9	This study; Jiskoot et al. (2003)
E013	G332267E68608N	RG160-05.13457 (part of)	Unknown	68.6080	-27.7332	East	Valley	Land	26.0	2	9	Jiskoot et al. (2003)
E014	G329089E68624N	-	Sorgenfri Gletsjer (N tributary) (part of Sorgenfri Gletsjer system)	68.6237	-30.9115	East	Outlet (IS)	Land	58.7	2	9	This study; Jiskoot et al. (2003, 2012)
E015	G330191E68651N	RG160-05.13667 (part of)	Risenborg Gletsjer (part of Rosenborg Gletsjer system)	68.6510	-29.3870	East	Outlet (IS)	Marine	954.7	2	9	This study; Jiskoot et al. (2003, 2012); Käbb et al. (2023)
E016	G331710E68667N	RG160-05.13442	Unknown (part of Borggraven system)	68.6685	-29.5397	East	Valley	Land	75.1	3	9	This study; Jiskoot et al. (2003)
E017	G330219E68674N	RG160-05.13435	Unknown	68.6737	-29.7812	East	Outlet (IC/F)	Land	16.7	3	9	This study; Jiskoot et al. (2003)
E018	G332182E68674N	RG160-05.13457 (part of)	Unknown	68.6743	-27.8179	East	Valley	Land	18.8	2	9	This study; Jiskoot et al. (2003)
E019	G330076E68679N	RG160-05.13433	Unknown	68.6785	-29.9241	East	Outlet (IC/F)	Land	28.9	3	9	This study; Jiskoot et al. (2003)
E020	G332007E68691N	RG160-05.13536 (part of)	Borggraven (E tributary) (part of Borggraven)	68.6913	-27.9924	East	Valley	Land	19.6	3	1	This study; Jiskoot et al. (2003)
E021	G332536E68700N	RG160-05.14147	Unknown	68.6997	-27.4643	East	Valley	Marine	82.5	1	9	This study; Jiskoot et al. (2003)
E022	G332299E68732N	RG160-05.13426	Unknown	68.7318	-27.7008	East	Valley	Marine	177.7	2	9	This study; Jiskoot et al. (2003)
E023	G333279E68754N	RG160-05.13663	Unknown	68.7541	-26.7206	East	Valley	Land	42.3	2	9	This study; Jiskoot et al. (2003)
E024	G333073E68783N	RG160-05.13429 (part of)	Sortebræ (SE tributary 1) (part of Sortebræ system)	68.7829	-26.9262	East	Valley	Land	7.5	2	1	Jiskoot et al. (2003)
E025	G332581E68782N	RG160-05.13429 (part of)	Unknown (part of Sortebræ system)	68.7832	-27.4184	East	Valley	Marine	325.3	3	1	This study; Jiskoot et al. (2001, 2003); Murray et al. (2002); Sevestre and Benn (2015); Käbb et al. (2023)
E026	G330976E68786N	RG160-05.13667 (part of)	Kronborg Gletsjer (W tributary) (part of Kronborg Gletsjer system)	68.7880	-29.0240	East	Valley	Land	666.8	3	9	Jiskoot et al. (2003); Leclercq et al. (2021)
E027	G333494E68792N	RG160-05.13666 (part of)	Johan Petersen (W tributary) (part of Johan Petersen system)	68.7920	-26.5060	East	Valley	Marine	38.2	2	9	Jiskoot et al. (2003)
E028	G333097E68816N	RG160-05.13429 (part of)	Sortebræ (SE tributary 2) (part of Sortebræ system)	68.8160	-26.9030	East	Valley	Marine	9.0	2	1	Jiskoot et al. (2003)
E029	G333764E68858N	RG160-05.13459 (part of)	Storbræ S (SW tributary) (part of Storbræ system)	68.8557	-26.2332	East	Valley	Land	95.1	2	9	Jiskoot et al. (2003)
E030	G333644E68868N	RG160-05.13666 (part of)	Johan Petersen (E tributary) (part of Johan Petersen system)	68.8684	-26.3554	East	Valley	Land	9.3	2	9	Jiskoot et al. (2003)
E031	G333367E68882N	RG160-05.13666 (part of)	Johan Petersen (part of Johan Petersen system)	68.8824	-26.6328	East	Valley	Marine	235.2	2	9	This study; Jiskoot et al. (2003); Walsh et al. (2012); Sevestre and Benn (2015)
E032	G333618E68902N	RG160-05.13666 (part of)	Johan Petersen (N tributary) (part of Johan Petersen system)	68.9025	-26.3825	East	Outlet (IC/F)	Land	28.7	2	9	This study; Jiskoot et al. (2003)
E033	G332952E68942N	RG160-05.13429 (part of)	Sortebræ (E tributary) (part of Sortebræ system)	68.9425	-27.0481	East	Valley	Land	59.1	2	9	This study; Jiskoot et al. (2001, 2003); Sevestre and Benn (2015)
E034	G327468E68958N	-	Nordfjord Gletsjer	68.9580	-32.5320	East	Outlet (IS)	Marine	541.2	2	9	Jiskoot et al. (2003, 2012)
E035	G332759E68980N	RG160-05.13429 (part of)	Sortebræ (part of Sortebræ system)	68.9795	-27.2411	East	Outlet (IS)	Marine	943.4	3	1	This study; Jiskoot et al. (2001, 2003); Murray et al. (2002); Pritchard et al. (2003); Sevestre and Benn (2015); Käbb et al. (2023)
E036	G332806E68980N	RG160-05.13429 (part of)	Sortebræ (W tributary) (part of Sortebræ system)	68.8080	-27.1940	East	Valley	Land	28.8	2	1	This study; Jiskoot et al. (2003)
E037	G333654E69030N	RG160-05.13499 (part of)	Apuseeq Anitangasikakjuk/Storbræ S (part of Storbræ system)	69.0304	-26.3461	East	Outlet (IS)	Marine	725.3	3	9	This study; Jiskoot et al. (2003)
E038	G334105E69192N	RG160-05.13655	Unknown (part of Dendritgletsjer system)	69.1924	-25.8949	East	Outlet (IS)	Marine	335.2	2	9	Jiskoot et al. (2003)
E039	G334270E69283N	RG160-05.13482	Unknown	69.2825	-25.7303	East	Valley	Land	31.4	3	9	This study
E040	G334131E69320N	RG160-05.13575 (part of)	Dendritgletsjer (SW) (part of Dendritgletsjer system)	69.3207	-25.8692	East	Outlet (IS)	Marine	1016.2	2	2	This study; Jiskoot et al. (2003)
E041	G333401E69321N	RG160-05.13575 (part of)	Dendritgletsjer (part of Dendritgletsjer system)	69.3210	-26.5990	East	Outlet (IS)	Marine	2608.2	2	2	This study; Weidick (1995); Jiskoot et al. (2003); Sevestre and Benn (2015)
E042	G334274E69460N	RG160-05.13575 (part of)	Dendritgletsjer (W tributary) (part of Dendritgletsjer system)	69.4597	-25.7259	East	Outlet (IS)	Marine	250.4	2	2	This study; Jiskoot et al. (2003)
E043	G334042E69509N	RG160-05.13577 (part of)	Dendritgletsjer (N tributary) (part of Dendritgletsjer system)	69.6905	-25.1161	East	Outlet (IC/F)	Marine	40.0	2	2	This study; Jiskoot et al. (2003, 2012)
E044	G335220E69791N	RG160-05.13717 (part of)	Bartholin Bræ (W) (part of Bartholin Bræ system)	69.7910	-24.7800	East	Outlet (IC/F)	Land	475.0	2	9	This study; Jiskoot et al. (2003, 2012)
E045	G335247E69850N	RG160-05.13717 (part of)	Bartholin Bræ (E) (part of Bartholin Bræ system)	69.8500	-24.7530	East	Outlet (IC/F)	Marine	592.8	3	9	This study; Jiskoot et al. (2003, 2012)
E046	G336006E69900N	RG160-05.13505	Steno Bræ	69.9001	-23.9944	East	Outlet (IC/F)	Marine	359.8	3	9	This study; Jiskoot et al. (2003)
E047	G330936E69934N	RG160-05.14872	Gåsegletsjer	69.9341	-29.0638	East	Outlet (IS)	Land	523.5	3	9	This study; Jiskoot et al. (2003)
E048	G331558E69996N	RG160-05.13665	Unknown	69.9963	-28.4423	East	Outlet (IC/F)	Land	12.5	3	9	This study
E049	G336622E69997N	RG160-05.13568	Torvgletsjer	69.9968	-23.3778	East	Outlet (IC/F)	Marine	362.6	2	9	Rucklidge (1966); Jiskoot et al. (2003, 2012)
E050	G331839E70008N	RG160-05.13635	Unknown	70.0076	-28.1608	East	Outlet (IC/F)	Land	9.3	3	9	This study
E051	G337380E70010N	RG160-05.13471	Unknown	70.0099	-22.6198	East	Valley	Marine	26.8	3	9	This study; Jiskoot et al. (2003)
E052	G332885E70013N	RG160-05.13718	Unknown	70.0131	-27.1146	East	Outlet (IC/F)	Land	3.9	3	9	This study; Jiskoot et al. (2003)

Table S1 - Greenland surge-type glacier inventory

Inventory ID	GLIMS ID	RGI ID	Glacier name	LAT	LONG	Cluster	Glacier type	Terminus type	Area (km ²)	Surge index	RGI surge index	Sources
E067	G334439E70307N	RG160-05.13451	Unknown	70.3068	-25.5606	East	Outlet (IC/F)	Marine	42.3	3	9	This study; Jiskoot et al. (2003)
E068	G332664E70338N	RG160-05.15242	Calcidalen Gletscher	70.3383	-27.3362	East	Outlet (IC/F)	Land	100.2	3	9	This study; Jiskoot et al. (2003)
E069	G331395E70370N	RG160-05.15184	Unknown	70.3701	-28.6045	East	Outlet (IC/F)	Land	68.5	2	9	This study; Jiskoot et al. (2003)
E070	G332848E70387N	RG160-05.15236	Unknown	70.3866	-27.1524	East	Valley	Land	5.9	3	9	This study; Jiskoot et al. (2003)
E071	G333114E70753N	RG160-05.15488	Unknown	70.7526	-26.8857	East	Outlet (IC/F)	Land	38.5	3	9	This study; Jiskoot et al. (2003)
E072	G333613E70810N	RG160-05.15467	Korridøren (W)	70.8057	-26.3872	East	Outlet (IC/F)	Marine	158.2	1	9	This study; Jiskoot et al. (2003)
E073	G334001E70848N	RG160-05.15461	Korridøren (E)	70.8475	-26.9987	East	Outlet (IC/F)	Land	134.2	2	9	This study; Jiskoot et al. (2003)
E074	G334189E70910N	RG160-05.15456	Unknown	70.9102	-25.8110	East	Outlet (IC/F)	Land	29.3	2	9	This study; Jiskoot et al. (2003)
E075	G333207E70982N	RG160-05.16139	Unknown	70.9823	-26.7935	East	Outlet (IC/F)	Land	37.3	3	9	This study; Jiskoot et al. (2003)
E076	G333002E70988N	RG160-05.16133	Unknown	70.9881	-26.9981	East	Outlet (IC/F)	Land	33.3	3	9	This study; Jiskoot et al. (2003)
E077	G331508E71028N	-	Unknown	71.0275	-28.4925	East	Outlet (IS)	Marine	5170.0	2	9	This study; Weidick (1995); Jiskoot et al. (2003)
E078	G333582E71033N	RG160-05.16137	Unknown	71.0325	-26.4180	East	Outlet (IC/F)	Land	15.4	3	9	This study
E079	G333591E71149N	RG160-05.16072 (part of)	Edward Bailey Gletsjer (W) (part of Edward Bailey Gletsjer)	71.1488	-26.4082	East	Outlet (IC/F)	Lake	290.1	2	9	Jiskoot et al. (2003)
E080	G331831E71165N	-	Eielson Gletsjer	71.1653	-28.1686	East	Outlet (IS)	Marine	3700.2	2	9	This study; Jiskoot et al. (2003)
E081	G333791E71191N	RG160-05.16072 (part of)	Edward Bailey Gletsjer (E) (part of Edward Bailey Gletsjer)	71.1911	-26.2087	East	Outlet (IC/F)	Land	362.0	3	9	This study; Jiskoot et al. (2003)
E082	G333795E71323N	RG160-05.16061	Apusinigajik	71.3234	-26.2049	East	Outlet (IC/F)	Land	189.8	2	9	This study; Jiskoot et al. (2003)
E083	G330763E71340N	-	Unknown	71.3407	-29.2374	East	Outlet (IS)	Lake	230.0	3	9	This study; Jiskoot et al. (2003)
E084	G333895E71406N	RG160-05.16050	Unknown	71.4062	-26.1046	East	Outlet (IC/F)	Land	35.7	2	9	This study; Jiskoot et al. (2003)
E085	G331351E71426N	RG160-05.15937	Unknown	71.4255	-26.6495	East	Outlet (IC/F)	Land	90.5	3	9	This study
E086	G330432E71432N	-	Freuchen Gletsjer	71.4323	-26.5081	East	Outlet (IS)	Lake	120.0	2	9	This study
E087	G334613E71560N	RG160-05.17155	Unknown (part of Oxford Gletsjer)	71.5600	-26.3873	East	Valley	Land	16.6	2	9	This study; Jiskoot et al. (2003)
E088	G334937E71599N	RG160-05.17139	Unknown	71.5822	-25.0628	East	Valley	Land	26.7	2	9	This study; Jiskoot et al. (2003)
E089	G334740E71596N	RG160-05.17200	Oxford Gletsjer	71.5859	-25.2602	East	Valley	Land	52.0	2	9	This study; Jiskoot et al. (2003)
E090	G334521E71594N	RG160-05.17150 (part of)	Løberen (E tributary) (part of Løberen)	71.5943	-25.4795	East	Valley	Land	8.0	3	3	This study
E091	G334470E71600N	RG160-05.17150 (part of)	Løberen	71.6003	-25.5303	East	Valley	Land	62.0	3	3	This study; Henrikson and Watt (1968); Olesen and Reeh (1969); Rutishauser (1971); Weidick (1995); Jiskoot et al. (2003); Sevestre and Benn (2015)
E092	G335124E71666N	RG160-05.17177	Bjørnbo Gletsjer	71.6664	-24.8763	East	Valley	Land	288.4	3	2	This study; Rutishauser (1971); Jiskoot et al. (2003); Sevestre and Benn (2015)
E093	G333831E71684N	RG160-05.17132	Unknown	71.6838	-26.1688	East	Outlet (IC/F)	Land	60.3	2	9	This study; Jiskoot et al. (2003)
E094	G335250E71695N	RG160-05.17159	Unknown	71.6945	-24.7497	East	Outlet	Land	18.6	2	9	This study; Jiskoot et al. (2003)
E095	G334216E71698N	RG160-05.17145 (part of)	Borgbjerg Gletsjer (E) (part of Borgbjerg Gletsjer)	71.6982	-25.7842	East	Outlet (IC/F)	Land	253.5	2	9	This study; Jiskoot et al. (2003)
E096	G334051E71716N	RG160-05.17145 (part of)	Borgbjerg Gletsjer (W) (part of Borgbjerg Gletsjer)	71.7163	-25.9486	East	Outlet (IC/F)	Land	171.7	3	9	This study; Jiskoot et al. (2003)
E097	G335200E71800N	RG160-05.17178 (part of)	Roslin Gletsjer	71.7999	-24.7999	East	Valley	Land	171.5	3	3	This study; Colvill (1984); Woodward et al. (2002); Jiskoot et al. (2003); Sevestre and Benn (2015)
E098	G335201E71871N	RG160-05.17176	Gamnochys Gletsjer	71.8706	-24.7989	East	Valley	Land	35.0	2	9	This study; Smart (1968); Jiskoot et al. (2003)
E099	G335932E71895N	RG160-05.17071	Aldebaran Gletsjer	71.8948	-24.0677	East	Valley	Land	22.6	2	9	This study; Jiskoot et al. (2003)
E100	G335000E71900N	RG160-05.17178 (part of)	Dalmors Gletsjer (part of Roslin Gletsjer)	71.9000	-25.0000	East	Valley	Land	34.5	2	3	This study; Colvill (1984); Woodward et al. (2002); Jiskoot et al. (2003); Sevestre and Benn (2015)
E101	G334487E71915N	RG160-05.17192	Spærregletsjer	71.9145	-25.5134	East	Valley	Marine	156.4	2	9	This study
E102	G335939E71927N	RG160-05.17163	Sirius Gletsjer	71.9274	-24.0613	East	Valley	Land	46.4	3	3	This study; Woodward et al. (2002); Jiskoot et al. (2003); Sevestre and Benn (2015)
E103	G335418E71963N	RG160-05.17229	Unknown	71.9629	-24.5824	East	Valley	Land	34.3	3	9	This study; Jiskoot et al. (2003)
E104	G335162E71964N	RG160-05.17160	Storgletsjer	71.9640	-24.8384	East	Valley	Land	144.3	3	9	This study; Jiskoot et al. (2003)
E105	G336036E71975N	RG160-05.17049	Østre Gletsjer	71.9753	-23.9644	East	Valley	Land	43.2	3	2	This study; Woodward et al. (2002); Sevestre and Benn (2015)
E106	G334634E71988N	RG160-05.17070	Krabbegletsjer	71.9875	-25.3661	East	Valley	Marine	19.2	3	9	This study
E107	G335513E72006N	RG160-05.17199	Schuchert Gletsjer	72.0063	-24.4872	East	Valley	Land	148.6	2	9	This study; Jiskoot et al. (2003)
E108	G335563E72066N	RG160-05.17057	Skelbræ	72.0659	-24.4369	East	Valley	Land	66.9	2	9	This study
E109	G334314E72110N	RG160-05.17010	Unknown	72.1099	-26.6858	East	Outlet (IC/F)	Land	25.3	3	9	This study
E110	G334184E72124N	RG160-05.17047	Sydvestgletsjer	72.1236	-25.8165	East	Outlet (IC/F)	Land	51.5	2	9	This study
E111	G335293E72137N	RG160-05.17171	Bersærkerbræ	72.1369	-24.7069	East	Valley	Land	114.3	2	9	This study; Friese-Greene and Pert (1965)
E112	G332216E72175N	RG160-05.16807	Unknown	72.1747	-27.7845	East	Outlet (IS)	Land	258.3	3	9	This study
E113	G334024E72192N	RG160-05.17042	Sandgletsjer	72.1920	-25.9764	East	Outlet (IC/F)	Land	32.2	3	9	This study
E114	G335329E72221N	RG160-05.17053	Skjoldungebræ	72.2206	-24.6708	East	Valley	Land	124.9	3	9	This study
E115	G333735E72257N	RG160-05.17052	Snedrivgletsjer	72.2569	-26.2651	East	Outlet (IC/F)	Land	162.8	2	9	This study
E116	G335410E72273N	RG160-05.17116	Sortes Gletsjer	72.2730	-24.5902	East	Valley	Land	25.6	3	9	This study
E117	G335076E72238N	RG160-05.17198	Linné Gletsjer	72.3052	-24.9309	East	Valley	Land	48.5	3	9	This study
E118	G335526E72314N	RG160-05.17877	Krypt Gletsjer	72.3143	-24.4737	East	Valley	Land	3.0	3	9	This study
E119	G334237E72660N	RG160-05.18746	Unknown	72.6595	-25.7629	East	Valley	Land	52.9	2	9	This study
E120	G331723E72887N	RG160-05.18973	Unknown	72.8865	-28.2770	East	Outlet (IC/F)	Land	173.8	2	9	This study
E121	G333869E72887N	RG160-05.18917	Østre Spærregletsjer	72.8873	-26.1314	East	Outlet (IC/F)	Land	31.9	3	9	This study
E122	G333661E72888N	RG160-05.18903	Vestre Spærregletsjer	72.8876	-26.3386	East	Outlet (IC/F)	Land	56.5	2	9	This study
E123	G333883E73036N	RG160-05.19189	Unknown	73.0359	-26.1174	East	Outlet (IC/F)	Land	55.0	3	9	This study
E124	G332133E73047N	RG160-05.18977	Mercanton Gletsjer	73.0469	-27.8673	East	Outlet (IC/F)	Land	53.2	3	9	This study
E125	G333446E73048N	RG160-05.19143	Ispassagen	73.0482	-26.5538	East	Outlet (IC/F)	Land	12.0	3	9	This study
E126	G333831E73107N	RG160-05.19132	Sonklargletsjer	73.1072	-26.1692	East	Outlet (IC/F)	Land	52.6	2	9	This study
E127	G331043E73439N	-	Unknown	73.4392	-28.9566	East	Outlet (IS)	Land	115.0	2	9	This study
E128	G331899E73541N	RG160-05.19065	Unknown	73.5410	-28.1013	East	Outlet (IC/F)	Land	51.6	3	9	This study
E129	G333635E73848N	RG160-05.19751	Unknown	73.8459	-23.6475	East	Valley	Land	14.9	3	9	This study
E130	G333236E73858N	RG160-05.20114	Unknown	73.8581	-26.7643	East	Outlet (IC/F)	Land	170.7	3	9	This study
E131	G333446E73907N	RG160-05.20112	Unknown	73.9066	-26.5541	East	Outlet (IC/F)	Land	15.7	3	9	This study
E132	G333194E73954N	RG160-05.20140	Unknown	73.9540	-26.8062	East	Valley	Land	25.4	3	9	This study
N001	G336797E76314N	-	L. Bistrup Bræ	76.3142	-23.2027	North	Outlet (IS)	Marine	21868.0	3	9	Koch and Wegener (1930); Hill et al. (2017); Mouginit et al. (2018)
N002	G292374E76580N	-	Ullip Sermia/Harald Moltke Bræ	76.5797	-67.6260	North	Outlet (IS)	Marine	1401.3	3	9	Mock (1966); Weidick et al. (1995); Rignot and Kanagaratnam (2006); Murray et al. (2015); Sevestre and Benn (2015); Hill et al. (2017)
N003	G292408E76864N	RG140-05.08054	Equitissaatut Sermiat/Knud Rasmussen Gletsjer	76.8640	-67.5920	North	Outlet (IC/F)	Marine	515.7	3	9	Leclercq et al. (2021)
N004	G337500E77083N	-	Storsstrømmen	77.0833	-22.4999	North	Outlet (IS)	Marine	28859.0	3	9	Reeh et al. (1994, 2003); Rignot and Kanagaratnam (2006); Sevestre and Benn (2015); Mouginit et al. (2018)
N005	G338096E77464N	-	Kofoed-Hansen Bræ	77.4614	-21.9042	North	Outlet (IS)	Marine	74686.0	1	9	Hill et al. (2017)
N006	G331437E81350N	-	Hagen Bræ	81.3498	-28.5630	North	Outlet (IS)	Marine	30741.0	3	9	Hill et al. (2017); Solgaard et al. (2020)
N007	G327422E81504N	-	Academy Gletsjer	81.5042	-32.5779	North	Outlet (IS)	Marine	6184.0	1	9	Rignot and Kanagaratnam (2006); Hill et al. (2017)
N008	G309750E81550N	-	Ryder Gletsjer	81.5500	-50.2500	North	Outlet (IS)	Marine	17265.0	3	9	Joughin et al. (1996); Rignot et al. (2001); Sevestre and Benn (2015); Hill et al. (2017)
N009	G314885E81775N	-	Brikkerne Gletsjer	81.7751	-45.1149	North	Outlet (IS)	Marine	2058.0	3	9	Higgins (1991); Rignot et al. (2001); Hill et al. (2017)
N010	G331218E81833N	RG160-05.10033	Unknown	81.8330	-28.7620	North	Outlet (IC/F)	Land	103.2	3	9	Leclercq et al. (2021)
N011	G344614E81507N	RG160-05.10315 (part of)	Flade Isblink Basin 2 (part of Flade Isblink)	81.5085	-15.3860	North	Outlet (IC/F)	Marine	636.0	3	9	Rinne et al. (2011); Möller et al. (2022)
N012	G344631E81507N	RG160-05.10315 (part of)	Flade Isblink Basin 3 (part of Flade Isblink)	81.5066	-15.3683	North	Outlet (IC/F)	Marine	751.0	3	9	Rinne et al. (2011); Möller et al. (2022)