

Supplementary Table 1. List of satellite scenes and their key uses. FM = Full glaciological mapping assessment, SA = spatial assessment, FT = used for surface feature tracking and InS = InSAR

Sensor (pixel size)	Scene ID	Date (dd/mm/yyyy)	Path	Row	Scene centre (Lat/ Long (°))		FM	SA	FT
MSS (79 m)	LM1231110007300910	09/01/1973	231	110	-70.759	-67.369	✓	✓	
MSS (79 m)	LM1231111007300910	09/01/1973	231	111	-72.017	-69.683	✓	✓	
MSS (79 m)	LM1231112007300910	09/01/1973	231	112	-73.245	-72.311	✓	✓	
MSS (79 m)	LM12331091974006AAA04	06/01/1974	233	109	-69.381	-68.182	✓	✓	
MSS (82 m)	LM32331101979034AAA04	03/02/1979	233	110	-70.647	-70.199	✓	✓	
MSS (82 m)	LM52171121986076AAA03	17/03/1986	217	112	-73.516	-72.198		✓	✓
TM (30 m)	L5217110_11019860128	28/01/1986	217	110	-67.696	-70.914			✓
TM (30 m)	L4219109_10919880225	25/02/1988	219	109	-69.140	-69.567			✓
TM (30 m)	LT42191121989010XXX02	10/01/1989	219	112	-73.475	-75.568			✓
TM (30 m)	L4218110_11019890220	20/02/1989	218	110	-69.393	-70.896			✓
TM (30 m)	LT42171121989060XXX02	01/03/1989	217	112	-73.488	-72.537			✓
TM (30 m)	LT42181091989083XXX02	24/03/1989	218	109	-69.650	-67.469	✓	✓	✓
TM (30 m)	L4219109_10919891126	26/11/1989	219	109	-69.019	-69.646			✓
TM (30 m)	L4217110_11019900115	15/01/1990	217	110	-67.693	-70.926			✓
TM (30 m)	LT42191091990029XXX01	29/01/1990	219	109	-69.657	-69.024			✓
TM (30 m)	LT52191091991024XXX02	24/01/1991	219	109	-69.588	-69.167			✓
TM (30 m)	LT52161121991035XXX03	04/02/1991	216	112	-73.473	-70.867	✓	✓	✓
TM (30 m)	L5218110_11019910218	18/02/1991	218	110	-69.457	-70.872			✓
TM (30 m)	LT42171121989060XXX02	01/03/1989	217	112	-73.488	-72.537			✓
ETM+ (15 m)	L71217112_11220000228	28/02/2000	217	112	-72.317	-73.505			✓
ETM+ (15 m)	L71218109_10920010104	04/01/2001	218	109	-67.424	-69.626	✓	✓	✓
ETM+ (15 m)	L71217110_11020010214	14/02/2001	217	110	-67.800	-70.965			✓
ETM+ (15 m)	L71217110_11020011129	29/11/2001	217	110	-67.895	-70.949			✓
ETM+ (15 m)	L71218110_11020011206	06/12/2001	218	110	-69.453	-70.925			✓
ETM+ (15 m)	L71218110_11020020107	07/01/2002	218	110	-74.034	-73.472			✓
ETM+ (15 m)	L71218112_11220020107	07/01/2002	218	112	-73.974	-73.499			✓
ETM+ (15 m)	L71217110_11020021202	02/12/2002	217	110	-67.834	-70.958			✓
ETM+ (15 m)	L71218110_11020021225	25/12/2002	218	110	-69.357	-70.933			✓
ETM+ (15 m)	L71217112_11220030103	03/01/2003	217	112	-72.544	-73.463			✓
ETM+ (15 m)	L71218110_11020030110	10/01/2003	218	110	-72.554	-73.354			✓
ETM+ (15 m)	LE72161122003012EDC00	12/01/2003	216	112	-73.473	-70.867	✓	✓	
ETM+ (15 m)	LE72161112003012EDC00	12/01/2003	216	111	-72.191	-68.582	✓		
ETM+ (15 m)	LE72161102003044EDC01	13/02/2003	216	110	-70.947	-66.287	✓	✓	
ETM+ (15 m)	L72218110_11020040317	17/03/2004	218	110	-70.958	-69.385			✓
ETM+ (15 m)	L72218110_11020050115	15/01/2005	218	110	-70.828	-69.400			✓
ETM+ (15 m)	L72218110_11020060118	18/01/2006	218	110	-70.859	-69.391			✓
ETM+ (15 m)	L72218110_11020080108	08/01/2008	218	110	-70.888	-69.355			✓
ETM+ (15 m)	L72219112_11220081114	14/11/2008	219	112	-73.405	-75.721			✓
ETM+ (15 m)	L72218110_11020090211	11/02/2009	218	110	-70.946	-69.379			✓
ETM+ (15 m)	L72218109_10920091110	10/11/2009	218	109	-69.639	-67.507			✓
ETM+ (15 m)	L72217110_11220100106	06/01/2010	217	110	-67.938	-70.871		✓	✓

ETM+ (15 m)	L72217112_11220100106	06/01/2010	217	112	-73.462	-72.415			✓
ETM+ (15 m)	L71218111_11120100113	13/01/2010	218	111	-71.557	-72.174			✓
ETM+ (15 m)	L71216111_11120100115	15/01/2010	216	111	-72.191	-68.582	✓	✓	
ETM+ (15 m)	L72216112_11220100115	15/01/2010	216	112	-73.494	-71.060	✓	✓	✓
ETM+ (15 m)	L72218109_10920100129	29/01/2010	218	109	-69.641	-67.488			✓
ETM+ (15 m)	L72218110_11020100129	29/01/2010	218	110	-70.822	-69.485	✓	✓	✓
ETM+ (15 m)	L72218112_11220100129	29/01/2010	218	112	-73.488	-74.155	✓		✓
ETM+ (15 m)	L72216112_11220101201	01/02/2010	216	112	-73.522	-71.101	✓	✓	✓

Sensor	Orbit/Frame (Ascending/Descending)	Date (dd/mm/yyyy)	Scene centre		SA	InS	Image Pair
			(Lat	/ Long(°))			
ERS-2 SAR	03924 5651 (A)	20/01/1996	-73.125	289.613	✓		-
ERS-1 SAR	23983 5729 (A)	15/02/1996	-70.067	291.906		✓	1
ERS-2 SAR	04310 5729 (A)	16/02/1996	-70.071	291.909	✓	✓	1
ERS-1 SAR	22413 5096 (D)	28/10/1995	-70.145	291.656		✓	2
ERS-2 SAR	02740 5096 (D)	29/10/1996	-70.189	291.564		✓	2
ERS-2 SAR	78033 5140 (D)	24/03/2010	-72.903	288.321	✓		-