

Northernmost no more? The fragmentation of Nordmannsjøkelen in Norway

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Table S1: Results of an uncertainty buffer analysis applied to glacier outlines derived from various remote sensing sources. Buffer distances of ± 5 m and ± 10 m were applied to outlines extracted from Sentinel-2 imagery. For outlines derived from orthorectified aerial photographs (Ap), a buffer of ± 1 m was used, except for the 1970 aerial photograph, where a ± 5 m buffer was applied due to seasonal snow around the glacier margins. For Landsat-derived outlines, a buffer of ± 15 m was applied. Delta denotes the difference in area and percentage relative to the initial glacier area. Ap refers to orthorectified aerial photographs.

				Ap								Sentinel-2								Landsat 5			
				Buffer size				1m	-1m	5m	-5m	5m	-5m	10 m	-10m	5m	-5m	10 m	-10m	15 m	-15m	15 m	-15m
Source date	Used outline as constraint	Data source	km ²	Δ %	Δ %	Δ %	Δ %	Δ km ²	Δ km ²	Δ km ²	Δ km ²	Δ %	Δ %	Δ %	Δ %	Δ km ²	Δ km ²	Δ km ²	Δ km ²	Δ %	Δ %	Δ km ²	Δ km ²
1970-08-14	-	Ap	4.41	1.6	-1.5	-6.8	8.0	4.5	4.3	4.7	4.1	-	-	-	-	-	-	-	-	-	-	-	-
1990-09-08	1970	L5TM, GI1990	3.56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.6	-16.4	4.2	3.0
2006-08-28	1970	L5TM, GI2000	1.86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19.3	-18.5	2.2	1.5
2016-08-16	1970	Ap	1.46	5.7	-5.7	-	-	1.5	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2018-09-08	1970	S2A, GI2018	1.18	-	-	-	-	-	-	-	-	14.9	-15.9	28.9	-30.2	1.4	1.0	1.5	0.8	-	-	-	-
2023-08-27	2018	S2A	1.08	-	-	-	-	-	-	-	-	18.4	-10.8	33.2	-24.7	1.3	1.0	1.4	0.8	-	-	-	-
2024-08-04	2018	Ap	0.71	7.0	-7.0	-	-	0.8	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2024-08-08	2018	S2A	0.62	-	-	-	-	-	-	-	-	24.4	-23.5	47.8	-42.4	0.8	0.5	0.9	0.4	-	-	-	-
2024-09-02	2018	S2B	0.35	-	-	-	-	-	-	-	-	22.8	-24.3	46.0	-42.5	0.4	0.3	0.5	0.2	-	-	-	-