



Figure 5. Comparison of slopes at the Nunatarssuaq ice cap (A, B) and Mittivakkat glacier area (C, D; see inset for location in Greenland) derived from the Pléiades and ArcticDEM, respectively. The slope distributions (E, F) show the distribution of slope values within the buffer around the margin, shown in the map panels.

Table 3. Fractions of the terrestrial margin respectively classified as “near-vertical” (in brackets values for near-vertical sections on steep terrain, see Fig. 7D), “steep” or “shallow” ramps. NA refers to margin sections where the morphology was not investigated, either due to erroneous margin (see also Table 1) or steep bed topography.

Region	Land-terminating margin [km]	Near-vertical (steep terrain) [%]	Steep ramp [%]	Shallow ramp [%]	NA [%]
GrIS CW	1970	17.7 (4.5)	11.2	31.2	35.4
GrIS NW	6382	27.7 (4.2)	11.6	25.0	31.1
GrIS NO	4825	26.3 (2.3)	11.8	32.9	26.8
GrIS NE	18 030	26.6 (9.9)	12.9	28.2	22.4
GrIS CE	16 044	25.6 (30.2)	5.9	10.0	28.3
GrIS SE	16 591	22.0 (24.7)	5.6	7.3	40.5
GrIS SW	7072	22.8 (3.2)	14.1	37.0	22.9
Total GrIS	70 913	24.8 (16.1)	9.5	20.2	29.4
PGIC CW	13 977	35.9 (20.6)	15.4	17.2	11.0
PGIC NW	5296	23.3 (4.8)	19.2	27.6	25.1
PGIC NO	19 571	16.6 (3.4)	26.8	38.3	14.5
PGIC NE	49 095	24.9 (23.0)	20.1	19.5	12.6
PGIC CE	47 129	34.5 (34.1)	7.5	7.8	16.0
PGIC SE	24 370	36.4 (33.9)	8.5	5.0	16.2
PGIC SW	11 421	36.5 (16.9)	14.8	14.2	17.7
Total PGIC	170 904	29.9 (24.2)	15.0	16.1	14.9
Total	241 813	28.4 (21.8)	13.4	17.3	19.2

fractured and winding character of the margin in these regions. However, the land-terminating margin also dominates elsewhere and is above 85 % in all regions.

5.2 Interpretation of margin morphologies

5 We rely on mosaics of the ArcticDEM product here, produced from imagery over multiple years, to assure a continuous coverage and comparable quality of the tiles across

Greenland. Relying on these data ignores changes along the margin that happen within a few years. Due to the resolution of 2 m and the steep nature of large sections of the margin, the product is also not able to definitely distinguish vertical sections from near-vertical sections of the margin. However, a comparison to higher resolution Pléiades data suggests that the ArcticDEM is able to capture the margin morphology, with differences in slope less than half a degree (Table 2). Chudley et al. (2021), relying on the same Arctic-