Table 1: Description of topographic parameters used in the linear regression.

Topographic parameter	Definition	Calculation method	Notes	Source
Elevation (z)	Height above sea level	Values taken directly from DEM		
Distance from centreline (d_C)	Linear distance from user-defined glacier centreline	Minimum distance between the Easting and Northing of the northwest corner of each grid cell and a manually defined centreline		
Slope (m)	Angle between a plane tangential to the surface (gradient) and the horizontal	**r.slope.aspect** module in GRASS GIS software run through QGIS		???
Aspect (α)	Dip direction of the slope	**r.slope.aspect** module in GRASS GIS software run through QGIS	$\sin(\alpha)$, a linear quantity describing a slope as north/south facing, is used in the regression	???
Mean curvature (κ)	Average of profile (direction of the surface gradient) and tangential (direction of the contour tangent) curvature	**r.slope.aspect** module in GRASS GIS software run through QGIS	$(+)$ mean-concave terrain and $(-)$ mean-convex terrain	???
"Northness" (N)	A value of -1 represents a vertical, south facing slope, a value of $+1$ represents a vertical, north facing slope, and a flat surface yields 0	Product of the cosine of aspect and sine of slope		(?)
Wind exposure/shelter parameter (Sx)		Executable obtained from Adam Winstral that follows the procedure outlined in ?	Calculation based on selecting a cell within a certain angle and distance from the cell of interest that has the greatest upward slope relative to the cell of interest	(?)