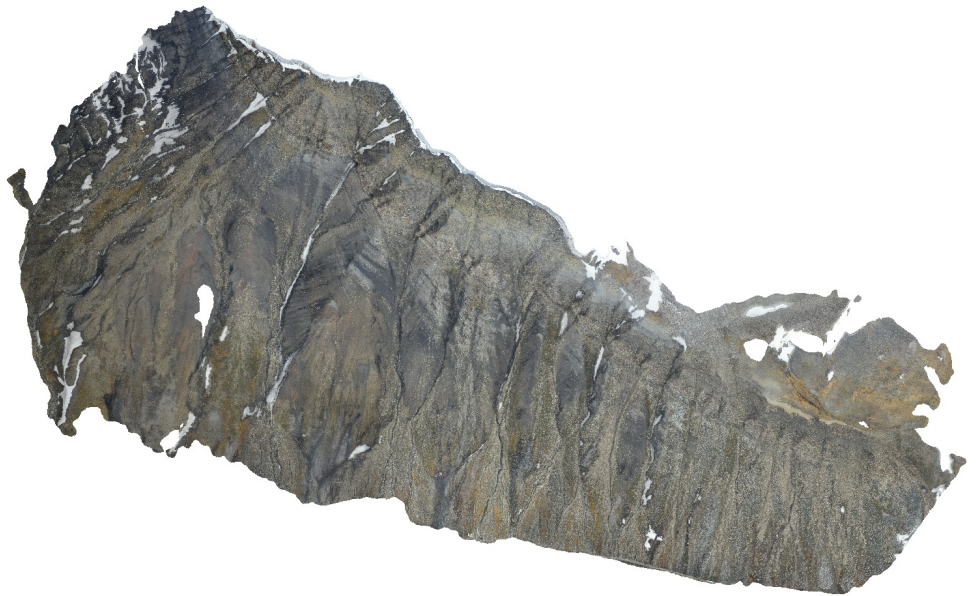


Ullaberget

Processing Report
03 February 2022



Survey Data

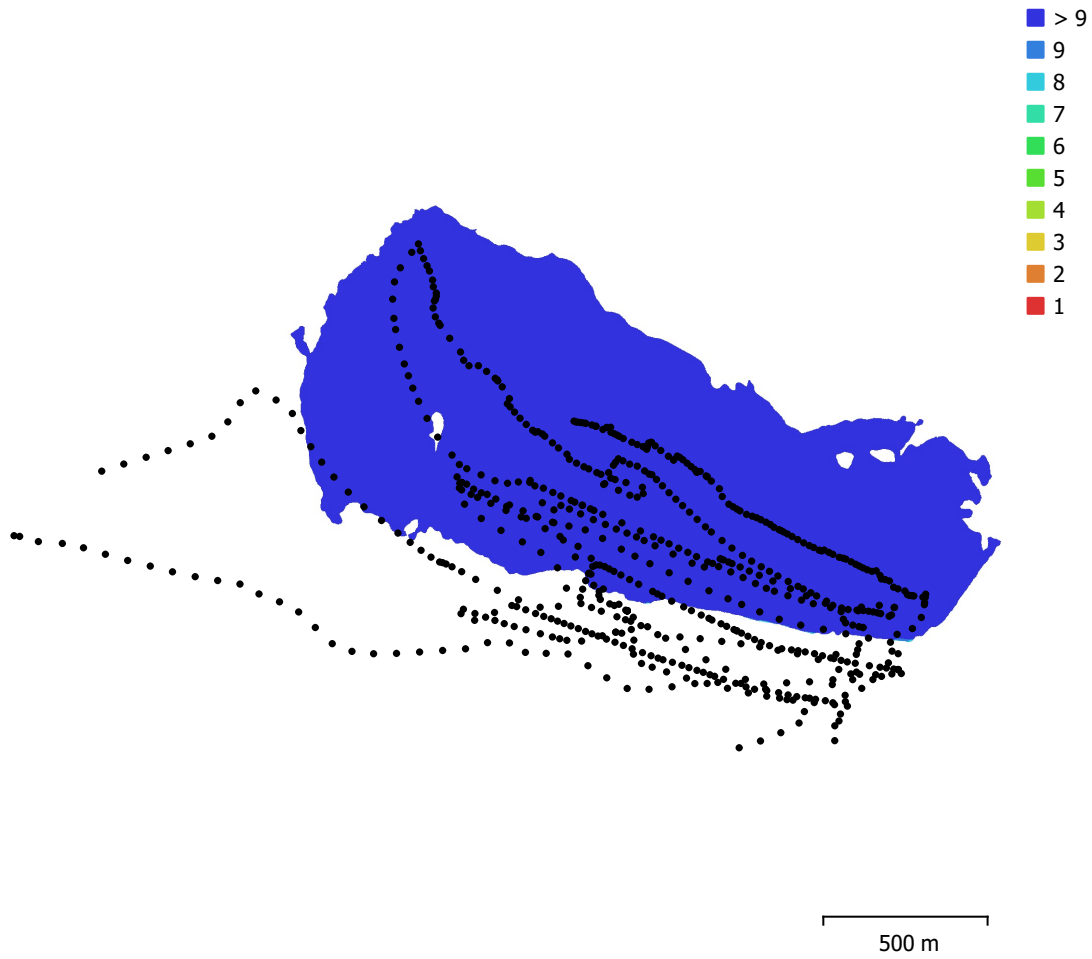


Fig. 1. Camera locations and image overlap.

Number of images:	621	Camera stations:	621
Flying altitude:	325 m	Tie points:	201,509
Ground resolution:	7.16 cm/pix	Projections:	596,363
Coverage area:	1.56 km ²	Reprojection error:	0.226 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
L1D-20c (10.26mm)	5472 x 3648	10.26 mm	2.41 x 2.41 μm	No

Table 1. Cameras.

Camera Calibration

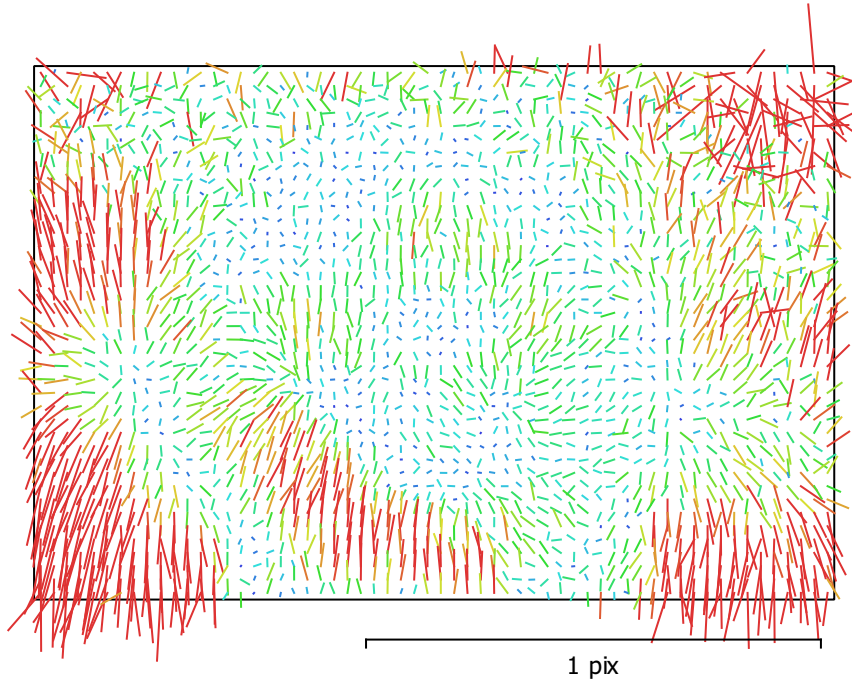


Fig. 2. Image residuals for L1D-20c (10.26mm).

L1D-20c (10.26mm)

621 images

Type	Resolution	Focal Length	Pixel Size
Frame	5472 x 3648	10.26 mm	2.41 x 2.41 μm

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	4334.92	0.034	1.00	-0.04	-0.54	0.01	0.07	-0.07	-0.09	-0.10
Cx	15.6525	0.043		1.00	-0.01	0.00	-0.01	0.01	0.89	0.10
Cy	-46.8338	0.043			1.00	-0.08	0.05	-0.04	0.06	0.49
K1	0.0017029	1.6e-05				1.00	-0.95	0.88	-0.00	-0.08
K2	0.0176962	6.4e-05					1.00	-0.98	-0.01	0.03
K3	-0.0250344	8e-05						1.00	0.00	-0.03
P1	0.00127027	2.8e-06							1.00	0.11
P2	-0.00274043	1.5e-06								1.00

Table 2. Calibration coefficients and correlation matrix.

Camera Locations

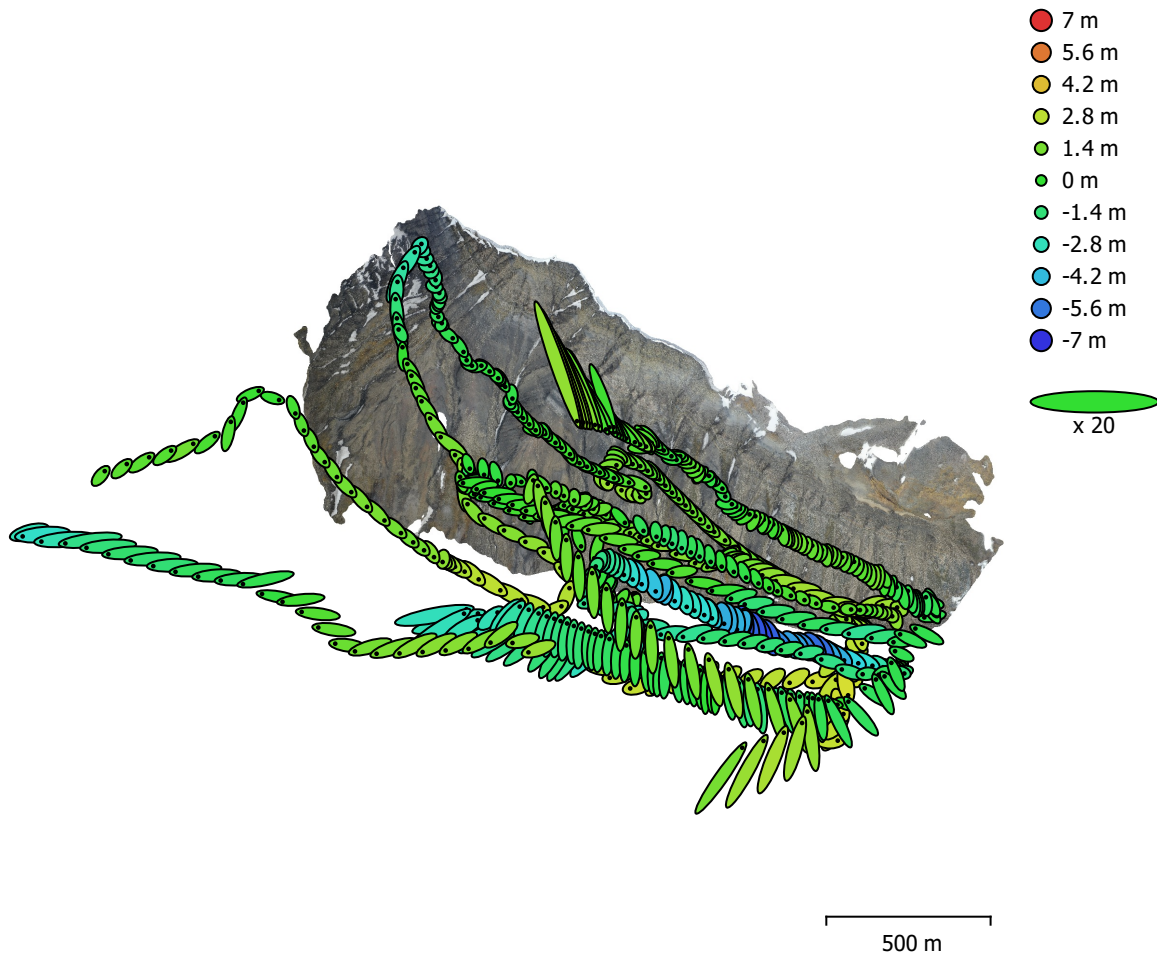


Fig. 3. Camera locations and error estimates.

Z error is represented by ellipse color. X,Y errors are represented by ellipse shape.

Estimated camera locations are marked with a black dot.

X error (m)	Y error (m)	Z error (m)	XY error (m)	Total error (m)
2.42927	3.02635	1.7599	3.88074	4.26115

Table 3. Average camera location error.

X - Longitude, Y - Latitude, Z - Altitude.

Digital Elevation Model

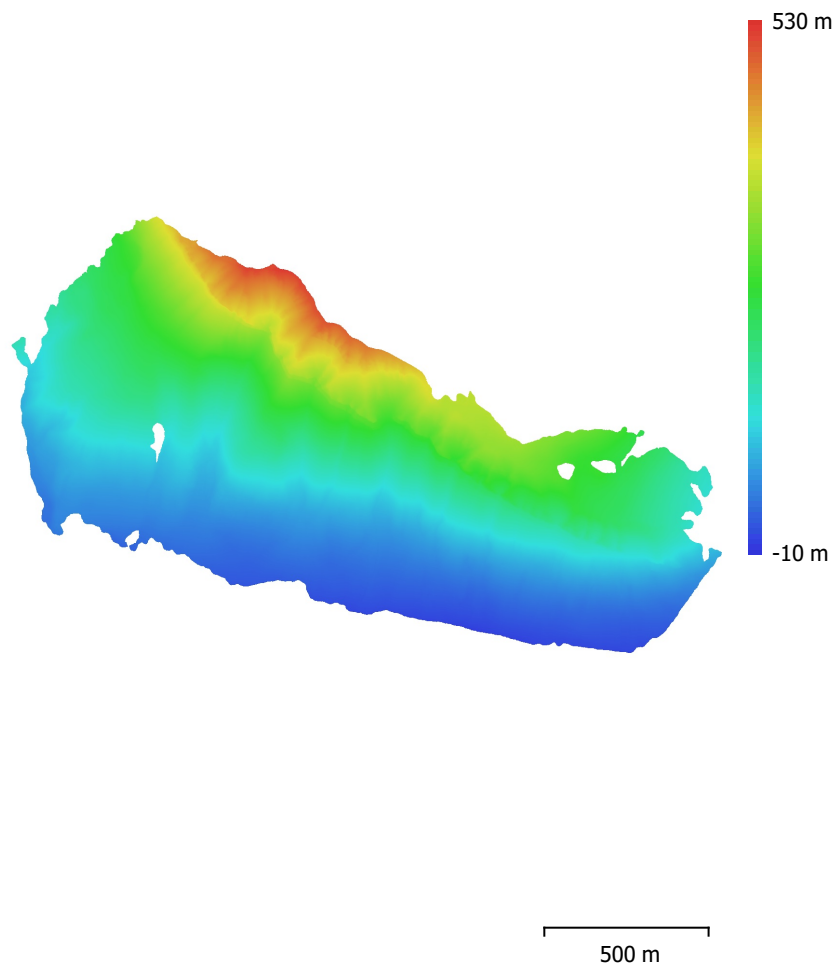


Fig. 4. Reconstructed digital elevation model.

Resolution: 28.7 cm/pix
Point density: 12.2 points/m²

Processing Parameters

General

Cameras	621
Aligned cameras	621
Coordinate system	WGS 84 (EPSG::4326)
Rotation angles	Yaw, Pitch, Roll

Point Cloud

Points	201,509 of 3,380,286
RMS reprojection error	0.15369 (0.225624 pix)
Max reprojection error	0.3 (1.82822 pix)
Mean key point size	1.42333 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	3.87652

Alignment parameters

Accuracy	Highest
Generic preselection	Yes
Reference preselection	No
Key point limit	60,000
Tie point limit	0
Exclude stationary tie points	Yes
Guided image matching	No
Adaptive camera model fitting	No
Matching time	1 hours 27 minutes
Matching memory usage	1.17 GB
Alignment time	1 hours 5 minutes
Alignment memory usage	1.80 GB

Optimization parameters

Parameters	f, cx, cy, k1-k3, p1, p2
Adaptive camera model fitting	No
Optimization time	1 minutes 7 seconds
Software version	1.7.2.12040
File size	275.48 MB

Depth Maps

Count	562
Depth maps generation parameters	
Quality	Medium
Filtering mode	Mild
Processing time	40 minutes 21 seconds
Memory usage	933.66 MB
Software version	1.7.2.12040
File size	1.02 GB

Dense Point Cloud

Points	21,557,503
Point colors	3 bands, uint8
Depth maps generation parameters	
Quality	Medium
Filtering mode	Mild
Processing time	40 minutes 21 seconds
Memory usage	933.66 MB
Dense cloud generation parameters	

Processing time	1 hours 23 minutes
Memory usage	8.07 GB
Software version	1.7.2.12040
File size	566.17 MB
Model	
Faces	1,429,657
Vertices	718,690
Vertex colors	3 bands, uint8
Texture	4,096 x 4,096 x 10, 4 bands, uint8
Depth maps generation parameters	
Quality	Medium
Filtering mode	Mild
Processing time	40 minutes 21 seconds
Memory usage	933.66 MB
Reconstruction parameters	
Surface type	Arbitrary
Source data	Dense cloud
Interpolation	Enabled
Strict volumetric masks	No
Processing time	8 minutes 26 seconds
Memory usage	11.08 GB
Texturing parameters	
Mapping mode	Generic
Blending mode	Mosaic
Texture size	4,096
Enable hole filling	Yes
Enable ghosting filter	Yes
UV mapping time	3 minutes 49 seconds
UV mapping memory usage	3.38 GB
Blending time	42 minutes 3 seconds
Blending memory usage	4.97 GB
Software version	1.7.2.12040
File size	320.80 MB
Tiled Model	
Texture	3 bands, uint8
Depth maps generation parameters	
Quality	Medium
Filtering mode	Mild
Processing time	40 minutes 21 seconds
Memory usage	933.66 MB
Reconstruction parameters	
Source data	Dense cloud
Tile size	256
Face count	Medium
Enable ghosting filter	No
Processing time	4 hours 33 minutes
Memory usage	2.81 GB
Software version	1.7.2.12040
File size	556.38 MB
System	
Software name	Agisoft Metashape Professional
Software version	1.7.2 build 12040
OS	Windows 64 bit
RAM	127.78 GB
CPU	Intel(R) Core(TM) i9-9900K CPU @ 3.60GHz
GPU(s)	GeForce RTX 2080