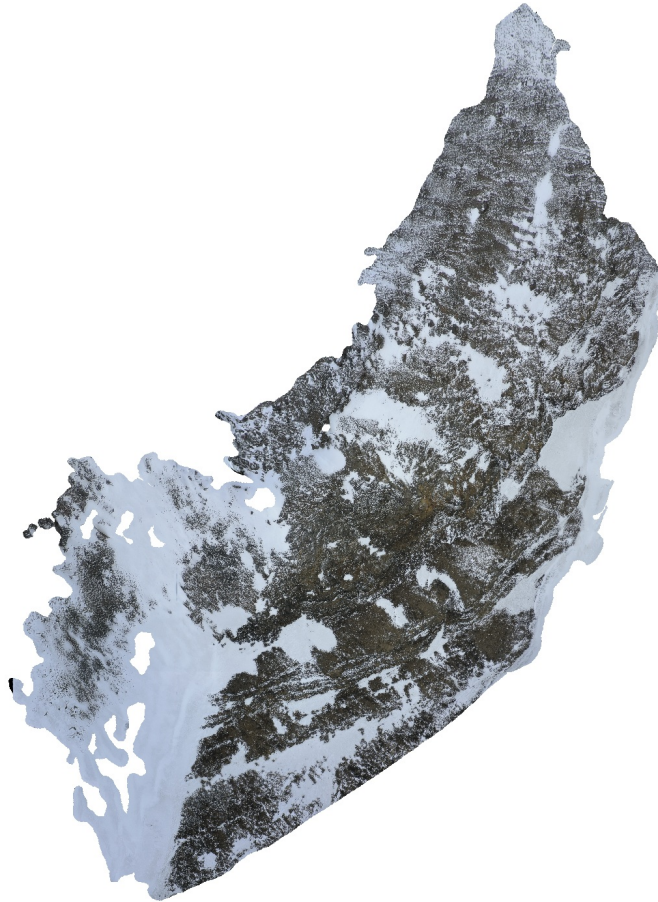


Brattdalen

Processing Report
19 February 2022



Survey Data

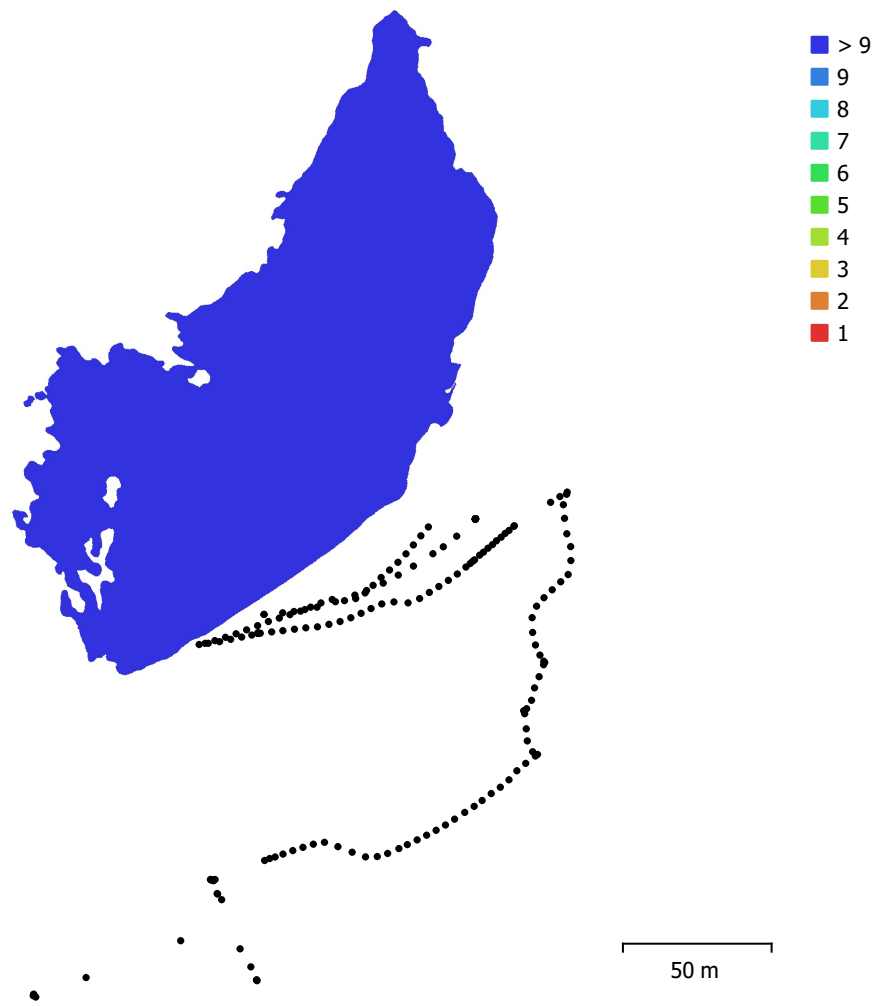


Fig. 1. Camera locations and image overlap.

Number of images:	177	Camera stations:	177
Flying altitude:	106 m	Tie points:	36,167
Ground resolution:	2.14 cm/pix	Projections:	501,161
Coverage area:	0.0168 km ²	Reprojection error:	0.513 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
Test_Pro (10.26mm)	5472 x 3648	10.26 mm	2.41 x 2.41 μm	No

Table 1. Cameras.

Camera Calibration

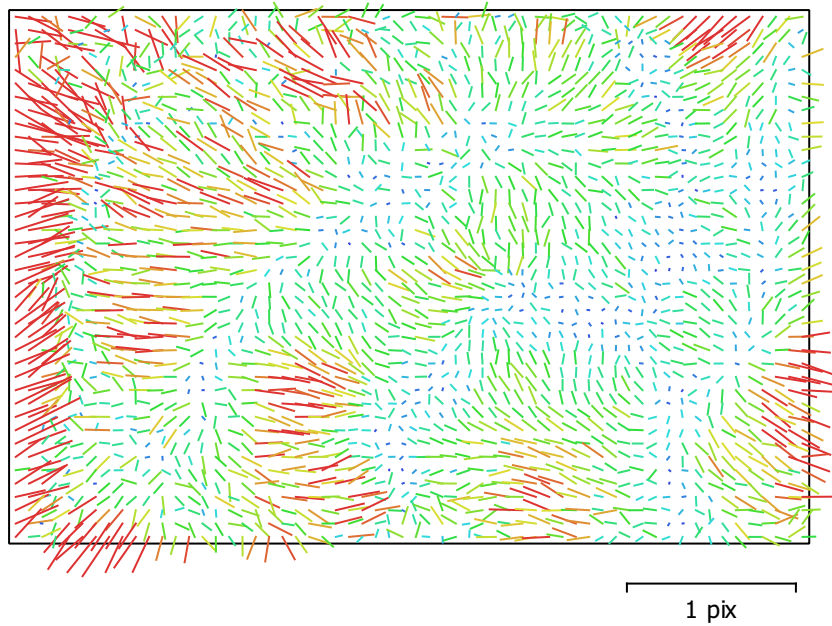


Fig. 2. Image residuals for Test_Pro (10.26mm).

Test_Pro (10.26mm)

177 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	B1	B2	K1	K2	K3	P1	P2
F	4353.05	0.066	1.00	0.11	0.15	-0.21	-0.28	0.01	0.08	-0.08	0.06	0.18
Cx	6.05758	0.1		1.00	-0.19	-0.21	0.36	0.03	-0.01	0.00	0.94	-0.20
Cy	-48.07	0.084			1.00	-0.36	-0.35	-0.00	0.04	-0.05	-0.21	0.88
B1	3.14437	0.038				1.00	0.03	-0.05	-0.00	0.02	-0.14	-0.21
B2	-1.13051	0.035					1.00	-0.02	-0.01	0.01	0.31	-0.21
K1	0.00687511	3.1e-05						1.00	-0.94	0.87	0.04	-0.08
K2	0.0328479	0.00013							1.00	-0.98	-0.01	0.07
K3	-0.0345632	0.00016								1.00	0.01	-0.07
P1	0.000105486	6.2e-06									1.00	-0.25
P2	-0.0035923	4.5e-06										1.00

Table 2. Calibration coefficients and correlation matrix.

Camera Locations

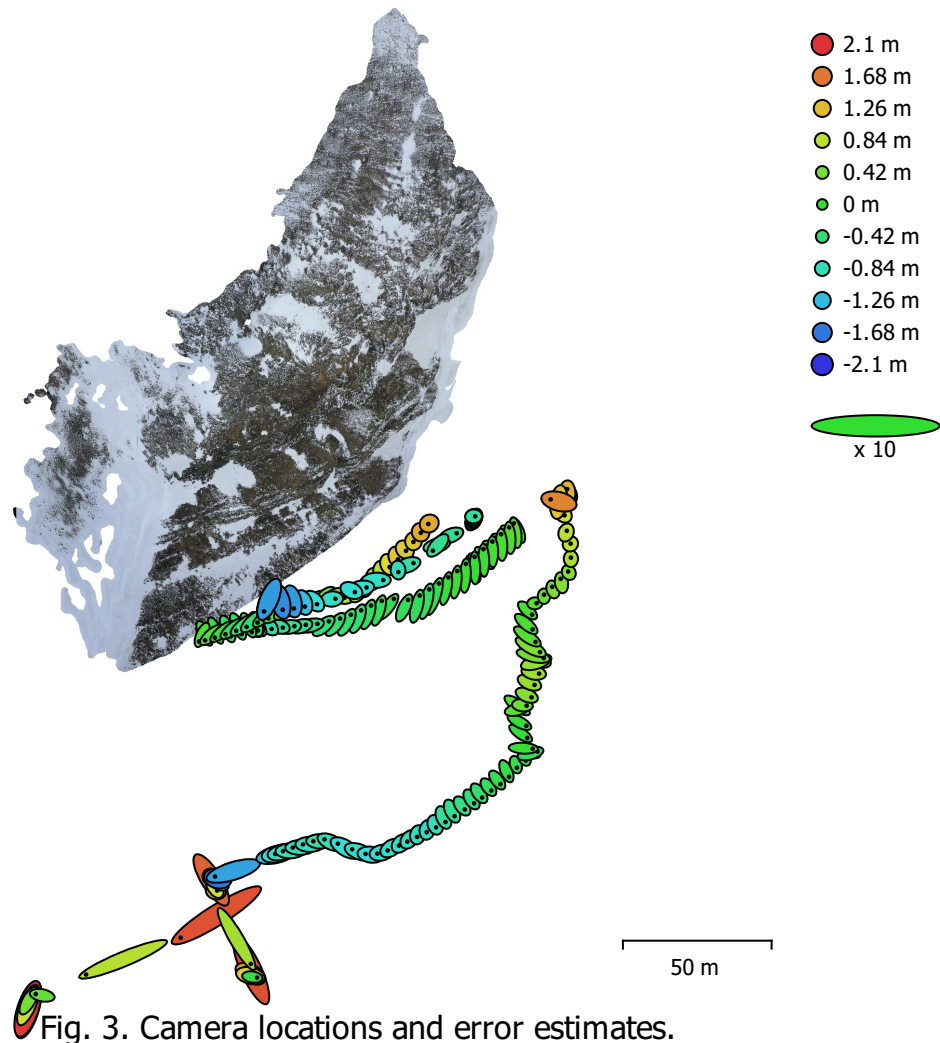


Fig. 3. Camera locations and error estimates.

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 (cm)	Y error (cm)	Z error (cm)	XY error (cm)	Total error (cm)
42.0777	43.4325	77.1338	60.4724	98.0129

Table 3. Average camera location error.
 X - Longitude, Y - Latitude, Z - Altitude.

Digital Elevation Model

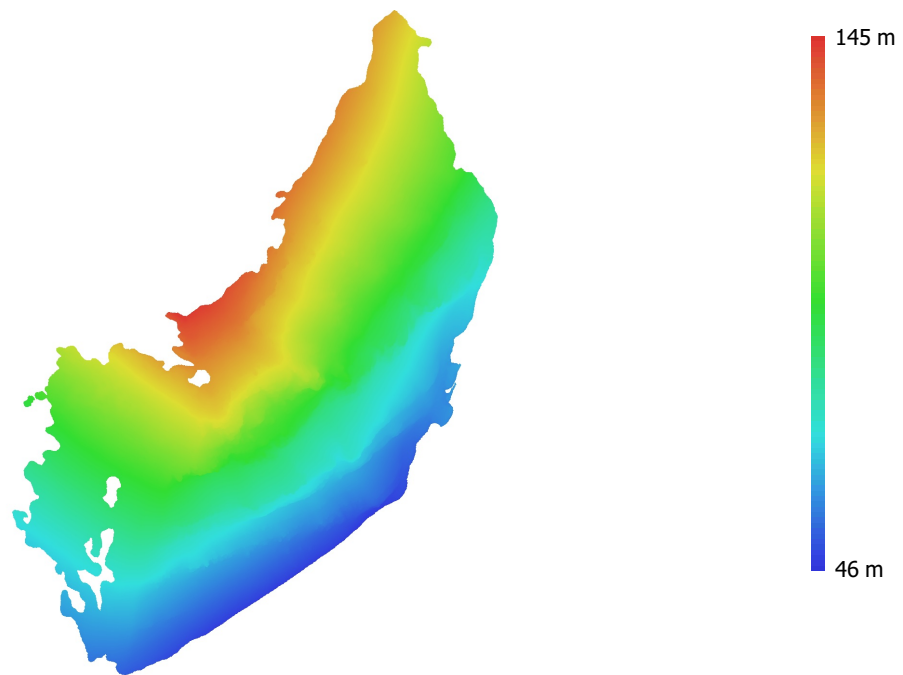


Fig. 4. Reconstructed digital elevation model.

Resolution: 4.28 cm/pix
Point density: 545 points/m²

Processing Parameters

General

Cameras	177
Aligned cameras	177
Coordinate system	WGS 84 (EPSG::4326)
Rotation angles	Yaw, Pitch, Roll

Point Cloud

Points	36,167 of 53,983
RMS reprojection error	0.26418 (0.513487 pix)
Max reprojection error	1.0965 (24.246 pix)
Mean key point size	1.87901 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	17.0428

Alignment parameters

Accuracy	Highest
Generic preselection	Yes
Reference preselection	Source
Key point limit	40,000
Tie point limit	4,000
Exclude stationary tie points	Yes
Guided image matching	No
Adaptive camera model fitting	Yes
Matching time	1 minutes 45 seconds
Matching memory usage	503.09 MB
Alignment time	2 minutes 21 seconds
Alignment memory usage	135.47 MB

Optimization parameters

Parameters	f, cx, cy, k1-k3, p1, p2
Adaptive camera model fitting	Yes
Optimization time	4 seconds
Software version	1.7.3.12473
File size	15.04 MB

Depth Maps

Count	177
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Depth maps generation parameters

Quality	High
Filtering mode	Mild
Max neighbors	100
Processing time	15 minutes 14 seconds
Memory usage	9.77 GB
Software version	1.7.3.12473
File size	1.12 GB

Dense Point Cloud

Points	13,634,966
Point colors	3 bands, uint8

Depth maps generation parameters

Quality	High
Filtering mode	Mild
Max neighbors	100
Processing time	15 minutes 14 seconds

Memory usage	9.77 GB
Dense cloud generation parameters	
Processing time	53 minutes 40 seconds
Memory usage	12.22 GB
Software version	1.7.3.12473
File size	490.82 MB
Model	
Faces	2,698,741
Vertices	1,352,992
Vertex colors	3 bands, uint8
Texture	4,096 x 4,096 x 10, 4 bands, uint8
Depth maps generation parameters	
Quality	High
Filtering mode	Mild
Max neighbors	100
Processing time	15 minutes 14 seconds
Memory usage	9.77 GB
Reconstruction parameters	
Surface type	Arbitrary
Source data	Dense cloud
Interpolation	Enabled
Strict volumetric masks	No
Processing time	5 minutes 24 seconds
Memory usage	6.67 GB
Texturing parameters	
Mapping mode	Generic
Blending mode	Mosaic
Texture size	4,096
Enable hole filling	Yes
Enable ghosting filter	Yes
UV mapping time	4 minutes 1 seconds
UV mapping memory usage	3.54 GB
Blending time	19 minutes 31 seconds
Blending memory usage	6.29 GB
Software version	1.7.3.12473
File size	312.13 MB
Tiled Model	
Texture	3 bands, uint8
Depth maps generation parameters	
Quality	High
Filtering mode	Mild
Max neighbors	100
Processing time	15 minutes 14 seconds
Memory usage	9.77 GB
Reconstruction parameters	
Source data	Dense cloud
Tile size	128
Face count	Low
Enable ghosting filter	No
Processing time	14 minutes 6 seconds
Memory usage	2.78 GB
Software version	1.7.3.12473
File size	280.01 MB
System	
Software name	Agisoft Metashape Professional
Software version	1.7.2 build 12040

OS
RAM
CPU
GPU(s)

Windows 64 bit
127.71 GB
Intel(R) Xeon(R) Gold 5122 CPU @ 3.60GHz
Quadro P5000