

Agisoft Metashape

Processing Report

24 June 2024



Survey Data

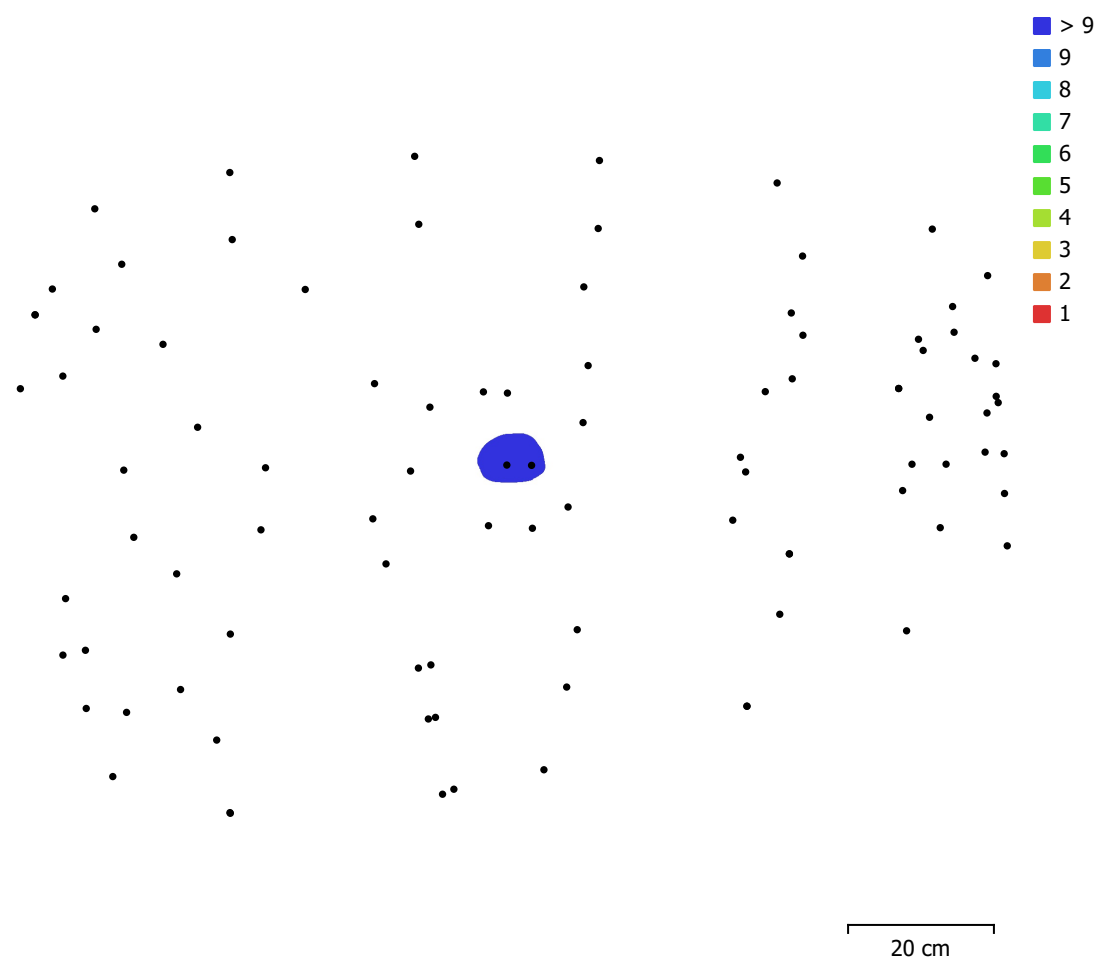


Fig. 1. Camera locations and image overlap.

Number of images:	94	Camera stations:	94
Flying altitude:	64.7 cm	Tie points:	296,068
Ground resolution:	0.0414 mm/pix	Projections:	961,143
Coverage area:	50.9 cm ²	Reprojection error:	0.548 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
DMC-G7 (57mm)	4592 x 2584	57 mm	3.77 x 3.77 μm	No
DMC-G7 (57mm)	4592 x 2584	57 mm	3.77 x 3.77 μm	No

Table 1. Cameras.

Camera Calibration

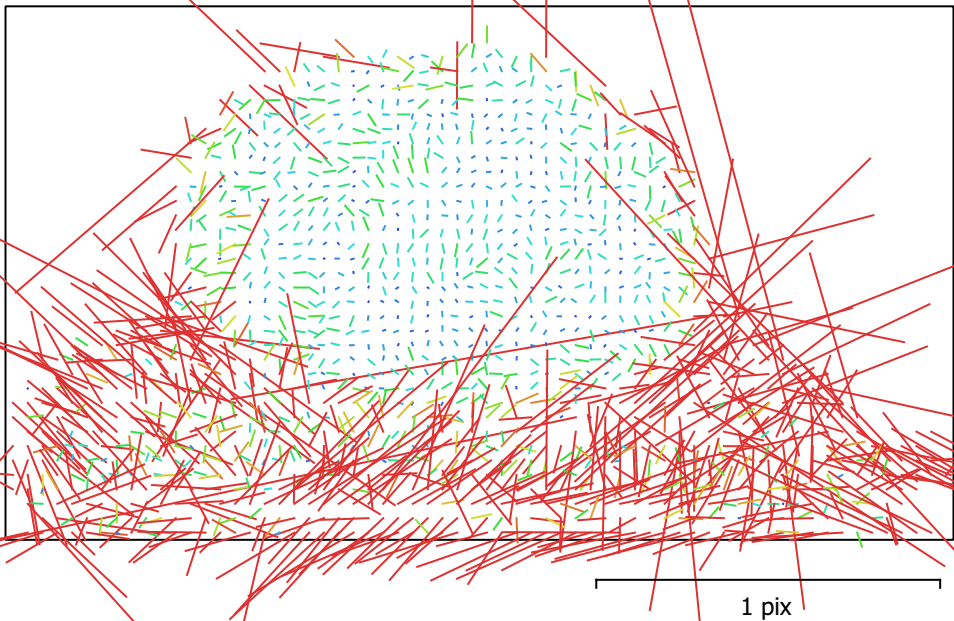


Fig. 2. Image residuals for DMC-G7 (57mm).

DMC-G7 (57mm)

43 images

Type	Resolution	Focal Length	Pixel Size
Frame	4592 x 2584	57 mm	3.77 x 3.77 μm

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	15658.9	4.2	1.00	0.22	-0.21	-0.06	-0.05	0.07	0.14	-0.15
Cx	433.269	7.9		1.00	0.12	-0.28	0.38	-0.43	0.92	0.12
Cy	-135.729	7.8			1.00	-0.14	0.10	-0.05	0.18	0.87
K1	0.103334	0.0034				1.00	-0.84	0.74	-0.03	-0.08
K2	-2.36932	0.25					1.00	-0.97	0.26	0.03
K3	61.2713	5.3						1.00	-0.32	0.00
P1	0.0115298	0.00023							1.00	0.19
P2	-0.00789973	0.00017								1.00

Table 2. Calibration coefficients and correlation matrix.

Camera Calibration

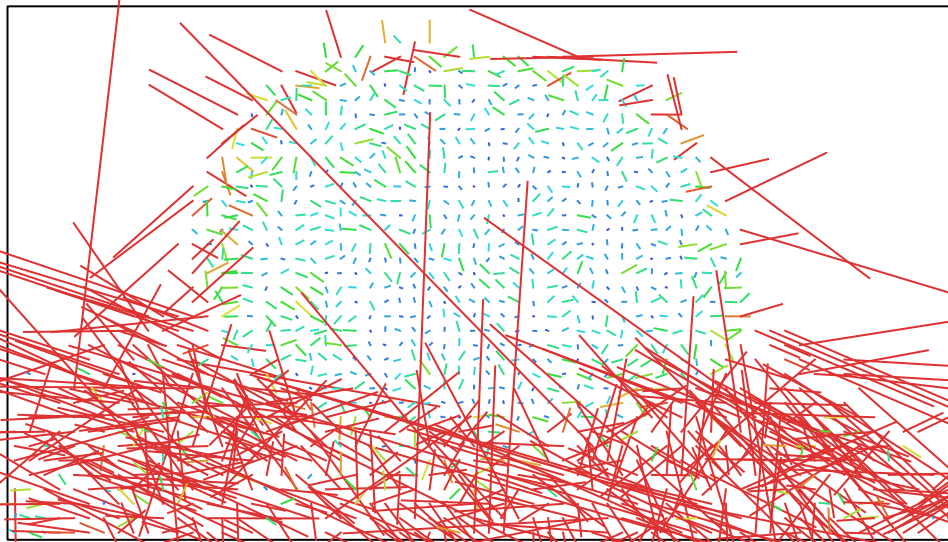


Fig. 3. Image residuals for DMC-G7 (57mm).

DMC-G7 (57mm)

51 images

Type	Resolution	Focal Length	Pixel Size
Frame	4592 x 2584	57 mm	3.77 x 3.77 μm

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	15523.9	4.8	1.00	0.28	-0.25	-0.34	0.08	-0.01	0.14	-0.26
Cx	131.239	3.8		1.00	-0.43	0.02	-0.17	0.21	0.88	-0.42
Cy	87.3788	9.6			1.00	-0.18	0.26	-0.40	-0.36	0.95
K1	0.146357	0.0038				1.00	-0.84	0.70	0.13	-0.08
K2	3.50117	0.43					1.00	-0.94	-0.18	0.18
K3	-402.625	14						1.00	0.19	-0.33
P1	0.0046033	0.00012							1.00	-0.34
P2	-0.0016555	0.00026								1.00

Table 3. Calibration coefficients and correlation matrix.

Scale Bars

Label	Distance (m)	Error (m)
target 19_target 20	0.05	2.77556e-17
Total		2.77556e-17

Table 4. Control scale bars.

Digital Elevation Model

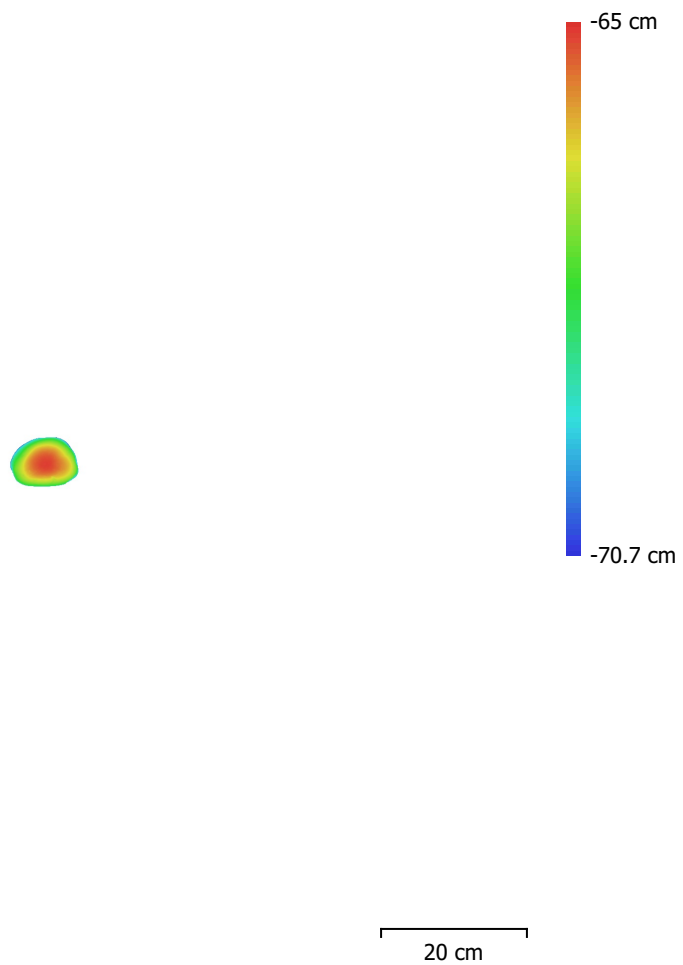


Fig. 4. Reconstructed digital elevation model.

Resolution: 0.149 mm/pix
Point density: 44.8 points/mm²

Processing Parameters

General

Cameras	94
Aligned cameras	94
Markers	4
Scale bars	1
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll

Point Cloud

Points	296,068 of 339,603
RMS reprojection error	0.141238 (0.547717 pix)
Max reprojection error	0.429123 (28.8465 pix)
Mean key point size	3.14187 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	3.35518
File size	25.15 MB

Depth Maps

Count	94
Depth maps generation parameters	
Quality	Ultra High
Filtering mode	Mild
Max neighbors	16
Processing time	5 minutes 53 seconds
Memory usage	4.58 GB
Date created	2024:06:14 19:31:55
Software version	1.8.4.14671
File size	298.07 MB

Model

Faces	961,740
Vertices	480,872
Vertex colors	3 bands, uint8
Texture	16,000 x 16,000 x 2, 4 bands, uint8

Depth maps generation parameters

Quality	Ultra High
Filtering mode	Mild
Max neighbors	16
Processing time	5 minutes 53 seconds
Memory usage	4.58 GB

Reconstruction parameters

Surface type	Arbitrary
Source data	Depth maps
Interpolation	Enabled
Strict volumetric masks	No
Processing time	2 minutes 11 seconds
Memory usage	8.23 GB

Texturing parameters

Mapping mode	Generic
Blending mode	Mosaic
Texture size	16,000
Enable hole filling	Yes

Enable ghosting filter	Yes
UV mapping time	32 seconds
UV mapping memory usage	900.45 MB
Blending time	1 minutes 27 seconds
Blending memory usage	14.05 GB
Blending GPU memory usage	11.94 GB
Date created	2024:06:14 19:34:05
Software version	1.8.4.14671
File size	309.97 MB

System

Software name	Agisoft Metashape Professional
Software version	1.8.4 build 14671
OS	Windows 64 bit
RAM	127.71 GB
CPU	Intel(R) Core(TM) i9-10940X CPU @ 3.30GHz
GPU(s)	Quadro RTX 5000