

Agisoft Metashape

Processing Report

24 June 2024



Survey Data

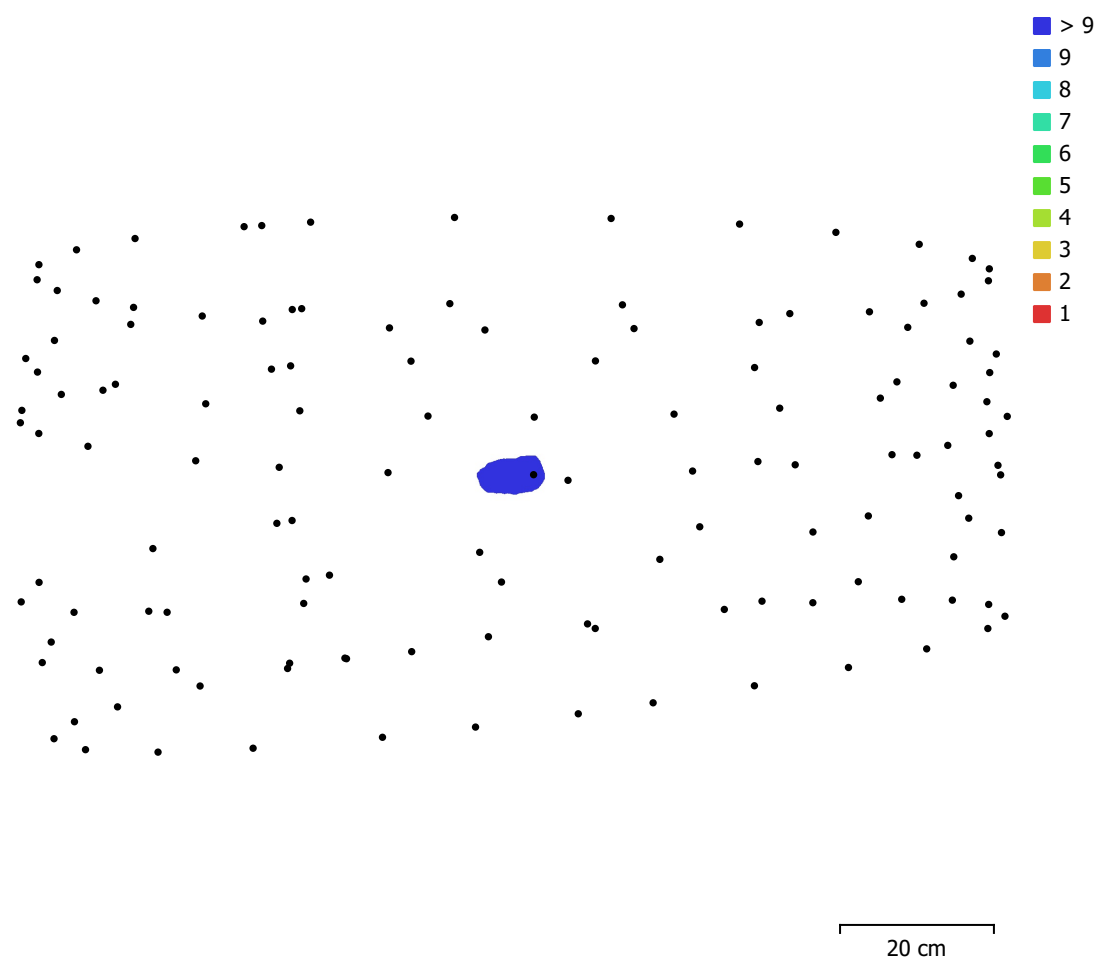


Fig. 1. Camera locations and image overlap.

Number of images:	133	Camera stations:	133
Flying altitude:	62.5 cm	Tie points:	88,878
Ground resolution:	0.0396 mm/pix	Projections:	326,369
Coverage area:	35.1 cm ²	Reprojection error:	0.542 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
DMC-G7 (60mm)	4592 x 2584	60 mm	3.79 x 3.79 μm	No
DMC-G7 (60mm)	4592 x 2584	60 mm	3.79 x 3.79 μm	No

Table 1. Cameras.

Camera Calibration

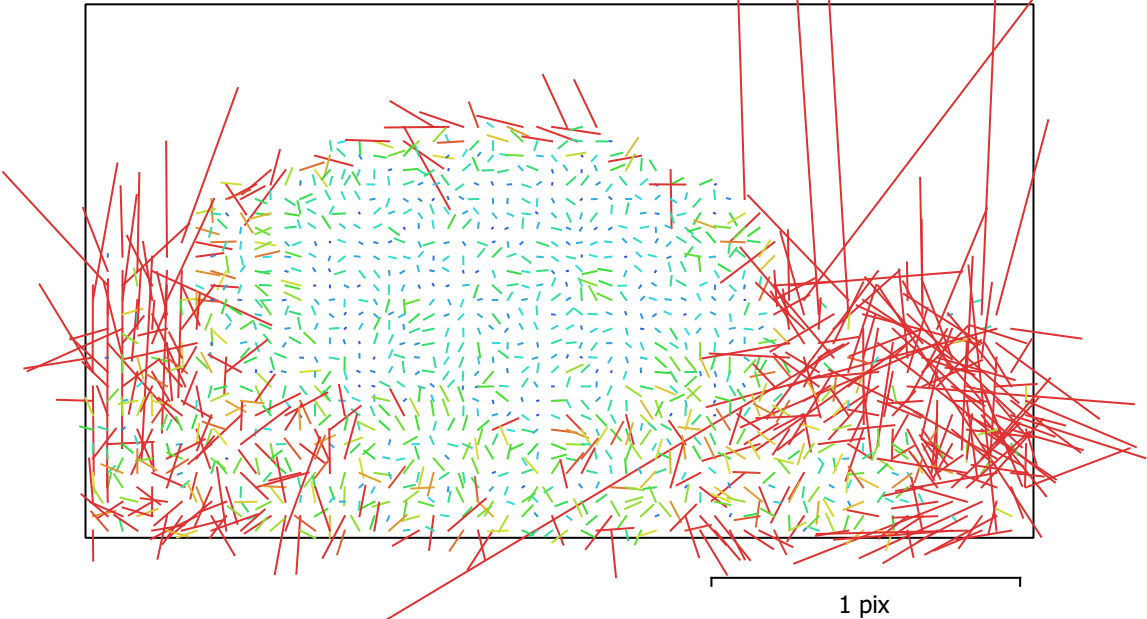


Fig. 2. Image residuals for DMC-G7 (60mm).

DMC-G7 (60mm)

72 images

Type	Resolution	Focal Length	Pixel Size
Frame	4592 x 2584	60 mm	3.79 x 3.79 μm

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	15777	3.7	1.00	0.30	-0.25	-0.27	0.03	0.01	0.19	0.02
Cx	9.93887	5.4		1.00	-0.20	-0.24	0.30	-0.29	0.92	-0.15
Cy	-14.7072	5.6			1.00	0.08	-0.18	0.16	-0.16	0.82
K1	0.195509	0.0033				1.00	-0.80	0.68	-0.07	-0.18
K2	-10.9165	0.36					1.00	-0.96	0.23	-0.09
K3	210.121	11						1.00	-0.24	0.10
P1	0.0016085	0.00014							1.00	-0.17
P2	-0.0048185	0.00014								1.00

Table 2. Calibration coefficients and correlation matrix.

Camera Calibration

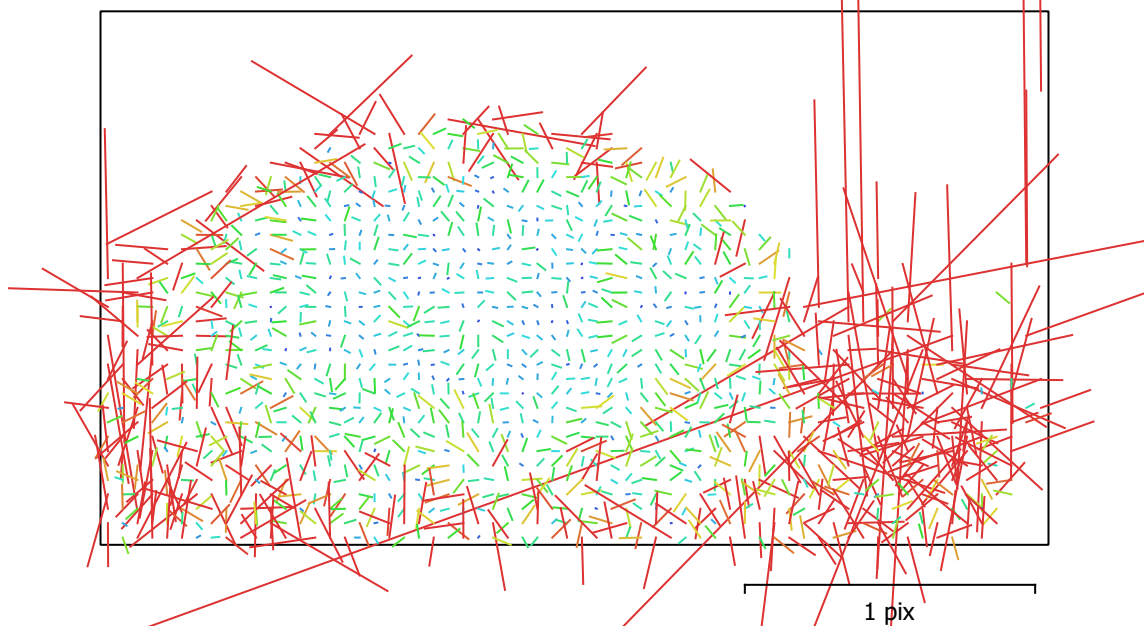


Fig. 3. Image residuals for DMC-G7 (60mm).

DMC-G7 (60mm)

61 images

Type

Resolution

Focal Length

Pixel Size

Frame

4592 x 2584

60 mm

3.79 x 3.79 μ m

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	15807.6	3.9	1.00	0.19	-0.31	-0.09	-0.07	0.11	0.13	-0.11
Cx	-36.2599	6.4		1.00	-0.26	-0.21	0.30	-0.28	0.93	-0.22
Cy	-84.4578	7.1			1.00	0.00	-0.07	0.07	-0.24	0.87
K1	0.173294	0.0031				1.00	-0.83	0.71	-0.08	-0.18
K2	-8.12035	0.34					1.00	-0.96	0.26	-0.03
K3	148.227	11						1.00	-0.25	0.05
P1	4.60429e-05	0.00016							1.00	-0.24
P2	-0.00633387	0.00016								1.00

Table 3. Calibration coefficients and correlation matrix.

Scale Bars

Label	Distance (m)	Error (m)
target 15_target 16	0.0499472	-5.28192e-05
target 19_target 20	0.0500527	5.27175e-05
Total		5.27684e-05

Table 4. Control scale bars.

Digital Elevation Model

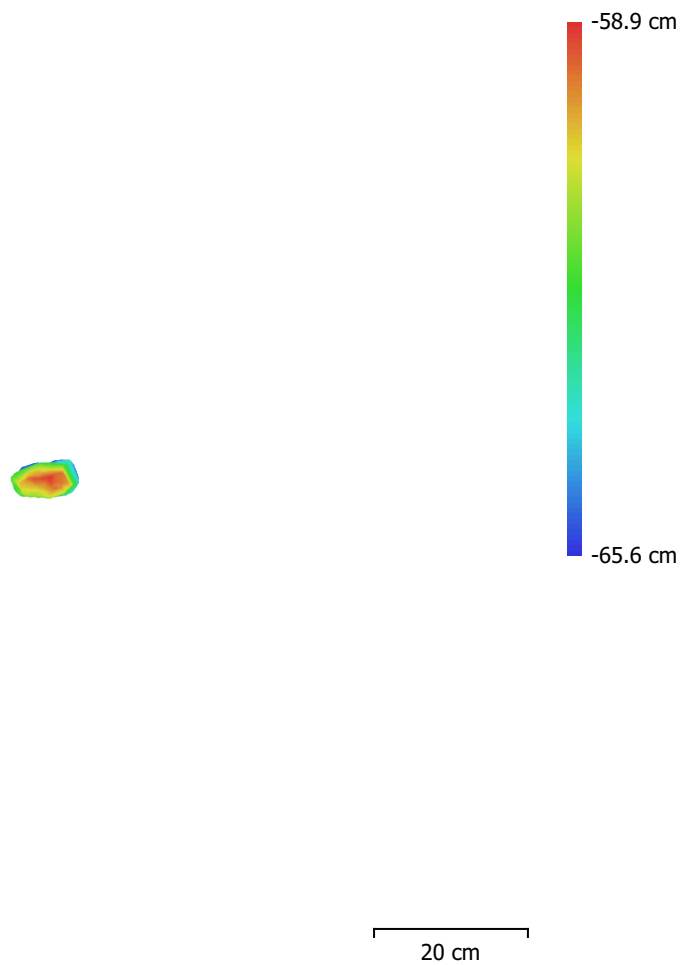


Fig. 4. Reconstructed digital elevation model.

Resolution: 0.154 mm/pix
Point density: 42.3 points/mm²

Processing Parameters

General

Cameras	133
Aligned cameras	133
Markers	8
Scale bars	2
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll

Point Cloud

Points	88,878 of 128,855
RMS reprojection error	0.115228 (0.541709 pix)
Max reprojection error	0.359619 (28.3059 pix)
Mean key point size	3.04129 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	3.90801
File size	10.10 MB

Depth Maps

Count	133
Depth maps generation parameters	
Quality	Ultra High
Filtering mode	Mild
Max neighbors	16
Processing time	9 minutes 36 seconds
Memory usage	6.89 GB
Date created	2024:06:01 18:08:33
Software version	1.8.4.14671
File size	319.37 MB

Model

Faces	836,004
Vertices	418,004
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	9 minutes 36 seconds
Memory usage	6.89 GB

Reconstruction parameters

Surface type	Arbitrary
Source data	Depth maps
Interpolation	Enabled
Strict volumetric masks	No
Processing time	2 minutes 25 seconds
Memory usage	8.30 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	838.24 MB
Blending time	1 minutes 29 seconds
Blending memory usage	12.63 GB
Blending GPU memory usage	11.93 GB
Date created	2024:06:01 18:10:58
Software version	1.8.4.14671
File size	321.64 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