

Agisoft Metashape

Processing Report

24 June 2024



Survey Data

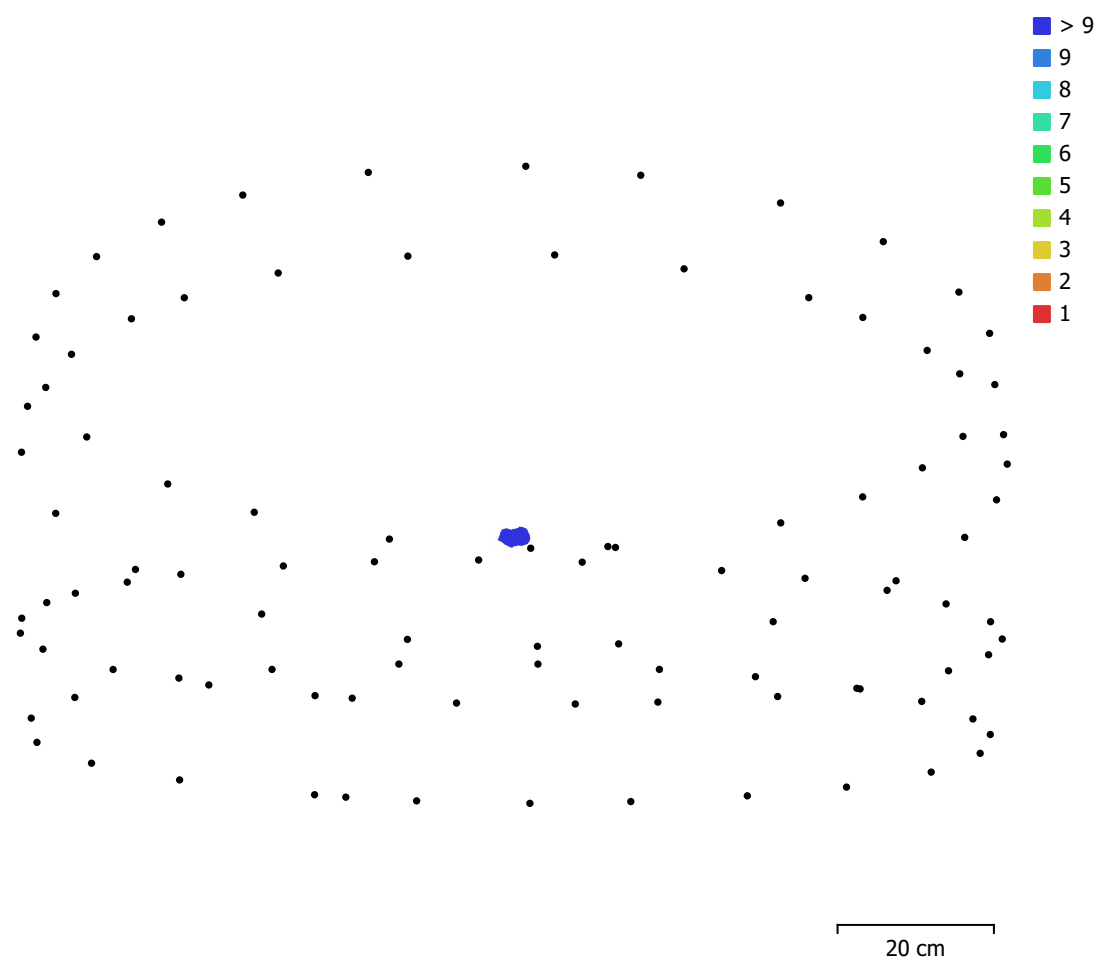


Fig. 1. Camera locations and image overlap.

Number of images:	102	Camera stations:	102
Flying altitude:	64.5 cm	Tie points:	30,928
Ground resolution:	0.0415 mm/pix	Projections:	106,734
Coverage area:	8.01 cm ²	Reprojection error:	0.55 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

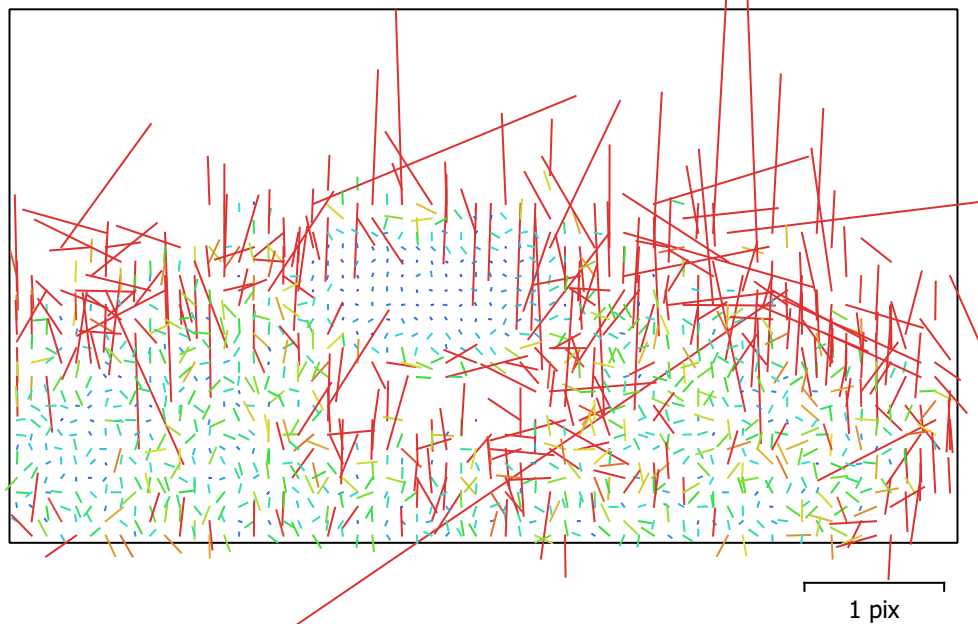


Fig. 2. Image residuals for DMC-G7 (60mm).

DMC-G7 (60mm)

50 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	15465.6	7.3	1.00	0.23	-0.76	-0.24	0.22	-0.22	0.20	-0.23
Cx	31.2387	16		1.00	-0.18	-0.48	0.51	-0.52	0.97	-0.12
Cy	241.103	19			1.00	0.08	-0.12	0.15	-0.18	0.61
K1	0.321836	0.016				1.00	-0.92	0.87	-0.44	-0.07
K2	-17.7262	1.3					1.00	-0.98	0.51	-0.09
K3	357.984	32						1.00	-0.52	0.12
P1	0.00286323	0.00039							1.00	-0.18
P2	-0.00477197	0.00033								1.00

Table 2. Calibration coefficients and correlation matrix.

Camera Calibration

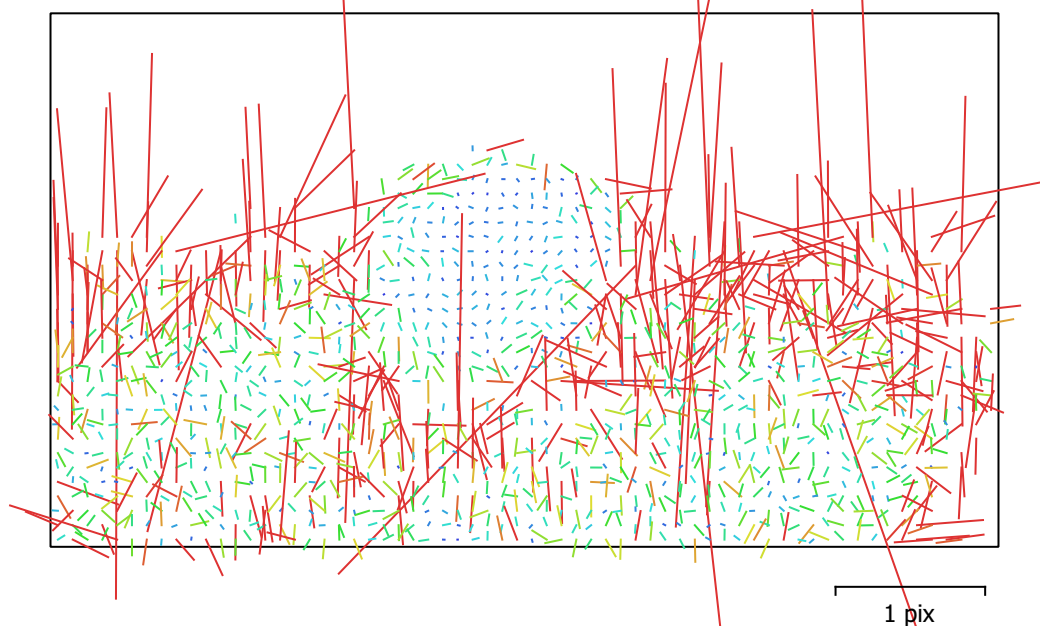


Fig. 3. Image residuals for DMC-G7 (60mm).

DMC-G7 (60mm)

52 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	15626.1	6.1	1.00	0.11	-0.67	0.06	0.03	-0.05	0.11	-0.36
Cx	449.484	18		1.00	0.14	0.19	-0.07	0.01	0.95	0.01
Cy	-26.4515	17			1.00	-0.12	-0.04	0.08	0.10	0.77
K1	0.165415	0.0077				1.00	-0.82	0.72	0.28	-0.36
K2	-4.07218	0.4					1.00	-0.98	-0.03	0.07
K3	51.5875	7.1						1.00	-0.02	-0.01
P1	0.0137796	0.00048							1.00	-0.09
P2	-0.0046376	0.0003								1.00

Table 3. Calibration coefficients and correlation matrix.

Scale Bars

Label	Distance (m)	Error (m)
target 15_target 16	0.0500353	3.5253e-05
target 19_target 20	0.0499647	-3.53001e-05
Total		3.52765e-05

Table 4. Control scale bars.

Digital Elevation Model

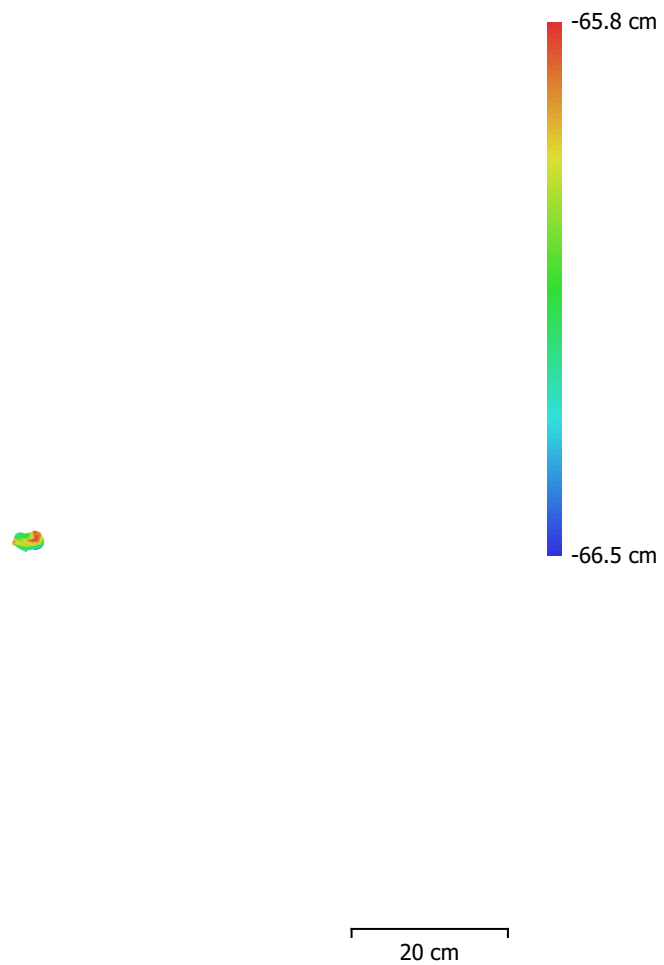


Fig. 4. Reconstructed digital elevation model.

Resolution: 0.107 mm/pix
Point density: 88.1 points/mm²

Processing Parameters

General

Cameras	102
Aligned cameras	102
Markers	9
Scale bars	2
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll

Point Cloud

Points	30,928 of 61,733
RMS reprojection error	0.139809 (0.550478 pix)
Max reprojection error	0.441768 (18.3863 pix)
Mean key point size	2.75339 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	3.45161
File size	4.15 MB

Depth Maps

Count	92
Depth maps generation parameters	
Quality	Ultra High
Filtering mode	Mild
Max neighbors	16
Processing time	5 minutes 3 seconds
Memory usage	5.29 GB
Date created	2024:06:01 10:45:32
Software version	1.8.4.14671
File size	32.84 MB

Model

Faces	222,482
Vertices	111,243
Vertex colors	3 bands, uint8
Texture	16,000 x 16,000 x 2, 4 bands, uint8

Texturing parameters

Mapping mode	Generic
Blending mode	Mosaic
Texture size	16,000
Enable hole filling	Yes
Enable ghosting filter	Yes
UV mapping time	24 seconds
UV mapping memory usage	695.07 MB
Blending time	1 minutes 17 seconds
Blending memory usage	14.04 GB
Blending GPU memory usage	11.90 GB
File size	177.58 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