

Agisoft Metashape

Processing Report
02 September 2024



Survey Data

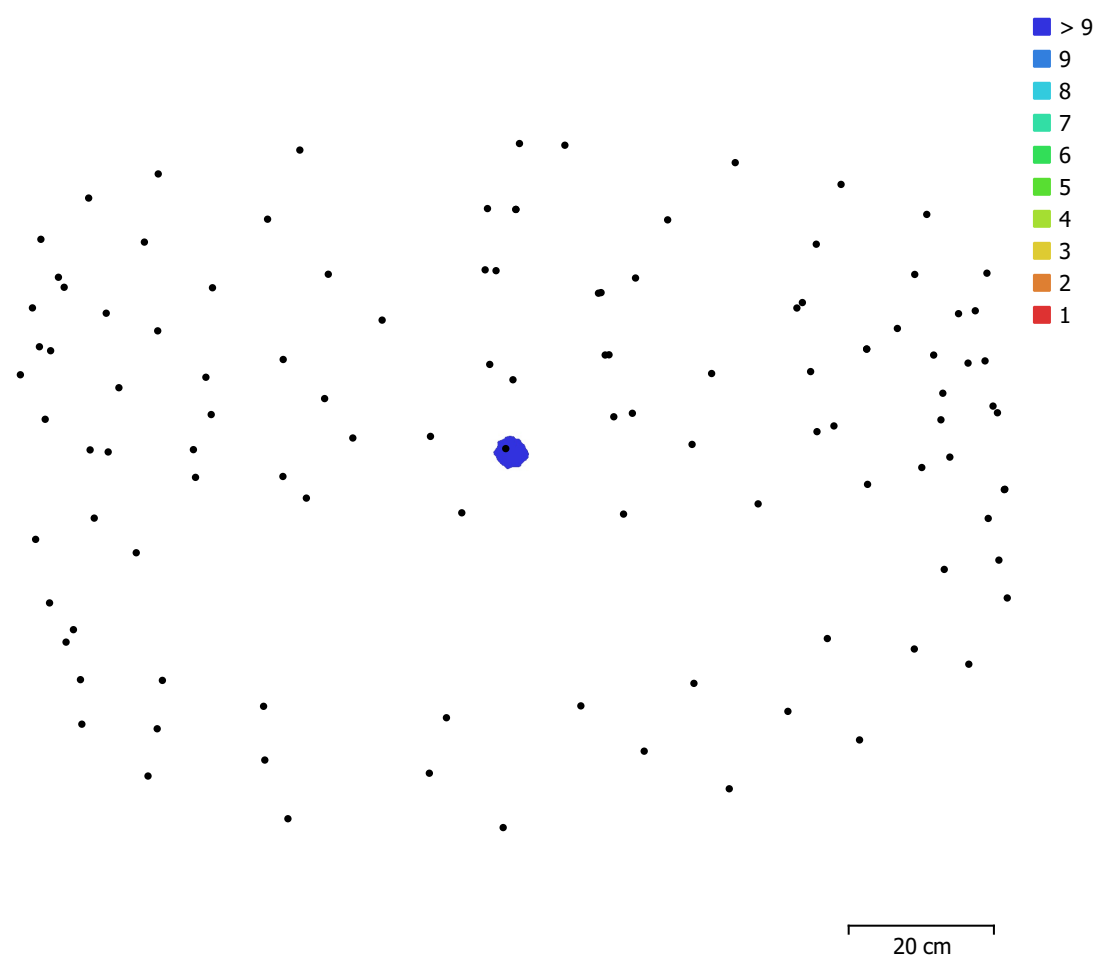


Fig. 1. Camera locations and image overlap.

Number of images:	112	Camera stations:	112
Flying altitude:	66.3 cm	Tie points:	95,165
Ground resolution:	0.042 mm/pix	Projections:	339,362
Coverage area:	15.3 cm ²	Reprojection error:	0.77 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

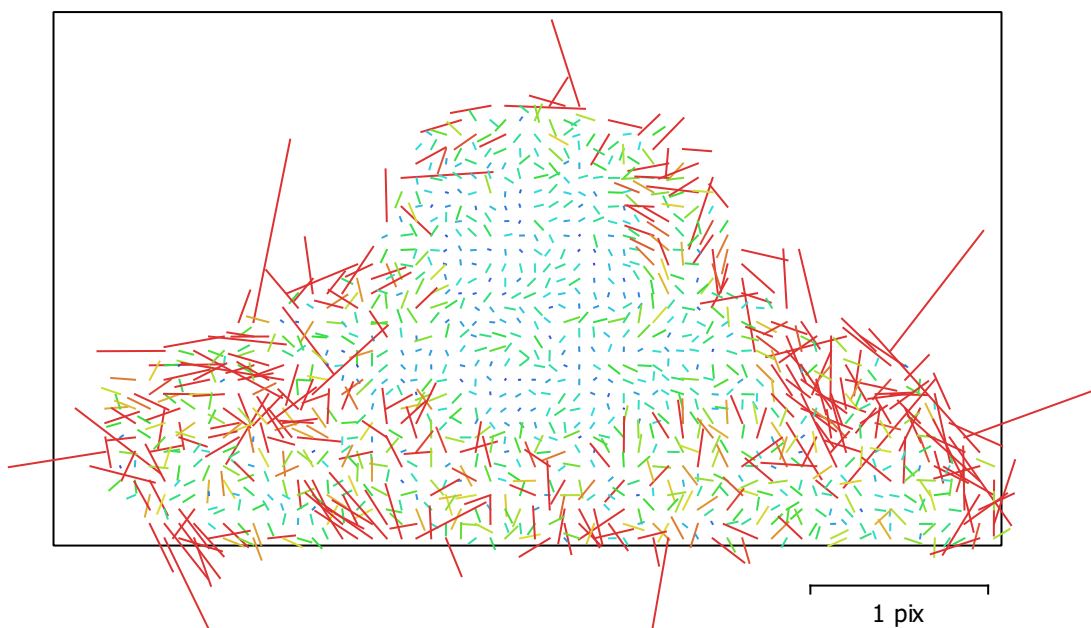


Fig. 2. Image residuals for DMC-G7 (60mm).

DMC-G7 (60mm)

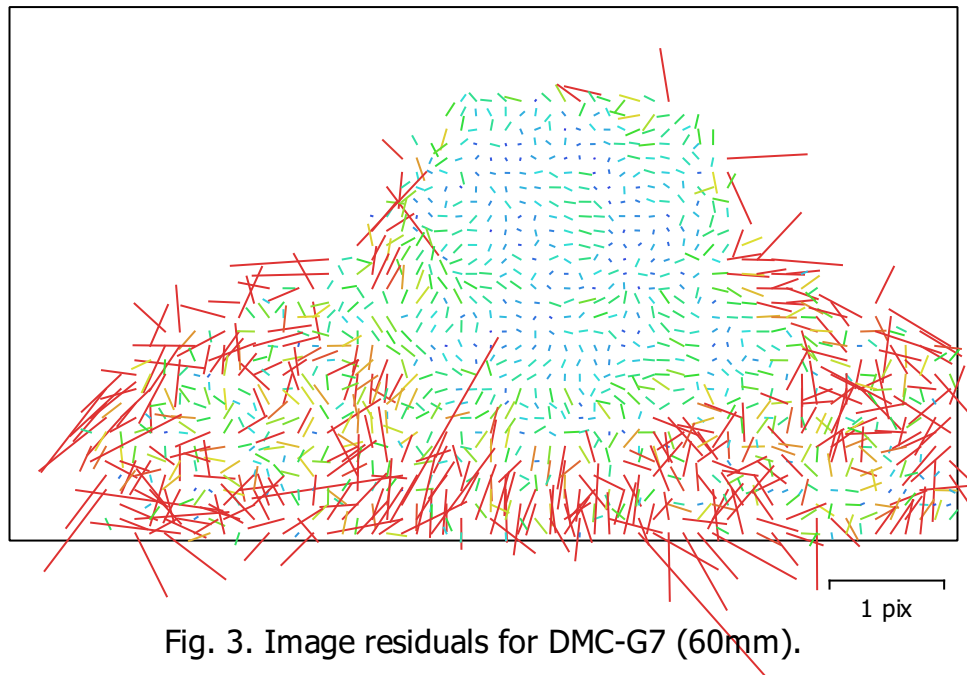
59 images

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	15723.4	6.3	1.00	0.04	-0.29	-0.18	0.09	-0.05	0.03	-0.23
Cx	199.059	9.2		1.00	0.06	-0.01	-0.01	0.04	0.96	0.01
Cy	386.756	12			1.00	-0.18	0.16	-0.14	0.13	0.66
K1	-0.197231	0.01				1.00	-0.91	0.80	-0.04	0.01
K2	23.2351	1.3					1.00	-0.97	0.01	-0.04
K3	-586.573	43						1.00	0.03	0.02
P1	0.00646901	0.00025							1.00	0.03
P2	-0.00552805	0.00024								1.00

Table 2. Calibration coefficients and correlation matrix.

Camera Calibration



DMC-G7 (60mm)

53 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	15814.2	7.1	1.00	0.04	-0.45	-0.15	-0.11	0.18	-0.02	-0.05
Cx	316.549	5.6		1.00	0.14	0.08	-0.07	0.06	0.91	0.16
Cy	-381.233	13			1.00	0.10	0.28	-0.37	0.28	0.53
K1	-0.182032	0.0071				1.00	-0.80	0.66	0.13	-0.33
K2	19.3585	0.61					1.00	-0.97	-0.06	0.30
K3	-370.45	17						1.00	0.04	-0.27
P1	0.00855089	0.00016							1.00	0.19
P2	-0.0155025	0.00024								1.00

Table 3. Calibration coefficients and correlation matrix.

Scale Bars

Label	Distance (m)	Error (m)
target 19_target 20	0.05	1.11161e-13
Total		1.11161e-13

Table 4. Control scale bars.

Digital Elevation Model

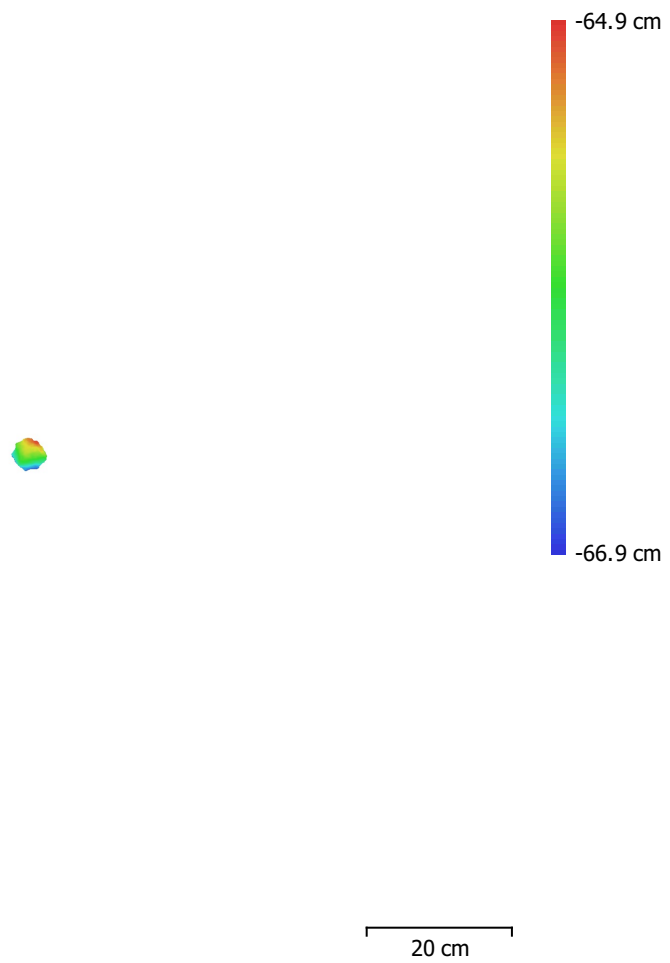


Fig. 4. Reconstructed digital elevation model.

Resolution: 0.139 mm/pix
Point density: 51.7 points/mm²

Processing Parameters

General

Images	112
Aligned images	112
Markers	4
Scale bars	1
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll

Tie Points

Points	95,165 of 124,443
RMS reprojection error	0.214811 (0.769573 pix)
Max reprojection error	0.649849 (28.8608 pix)
Mean key point size	3.19649 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	3.69648
File size	9.57 MB

Depth Maps

Count	112
Depth maps generation parameters	
Quality	Ultra High
Filtering mode	Mild
Max neighbors	16
Processing time	6 minutes 27 seconds
Memory usage	4.08 GB
Date created	2024:06:14 19:34:22
Software version	1.8.4.14671
File size	90.20 MB

Model

Faces	186,938
Vertices	93,471
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	6 minutes 27 seconds
Memory usage	4.08 GB

Reconstruction parameters

Surface type	Arbitrary
Source data	Depth maps
Interpolation	Enabled
Strict volumetric masks	No
Processing time	1 minutes 9 seconds
Memory usage	10.31 GB

Texturing parameters

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

Enable ghosting filter	Yes
UV mapping time	23 seconds
UV mapping memory usage	667.29 MB
Blending time	1 minutes 14 seconds
Blending memory usage	12.69 GB
Blending GPU memory usage	11.90 GB
Date created	2024:06:14 19:35:31
Software version	1.8.4.14671
File size	158.99 MB

System

Software name	Agisoft Metashape Professional
Software version	2.1.2 build 18548
OS	Windows 64 bit
RAM	23.70 GB
CPU	11th Gen Intel(R) Core(TM) i7-1165G7 @ 2.80GHz
GPU(s)	None