Agisoft Metashape

Processing Report
27 June 2024

Survey Data

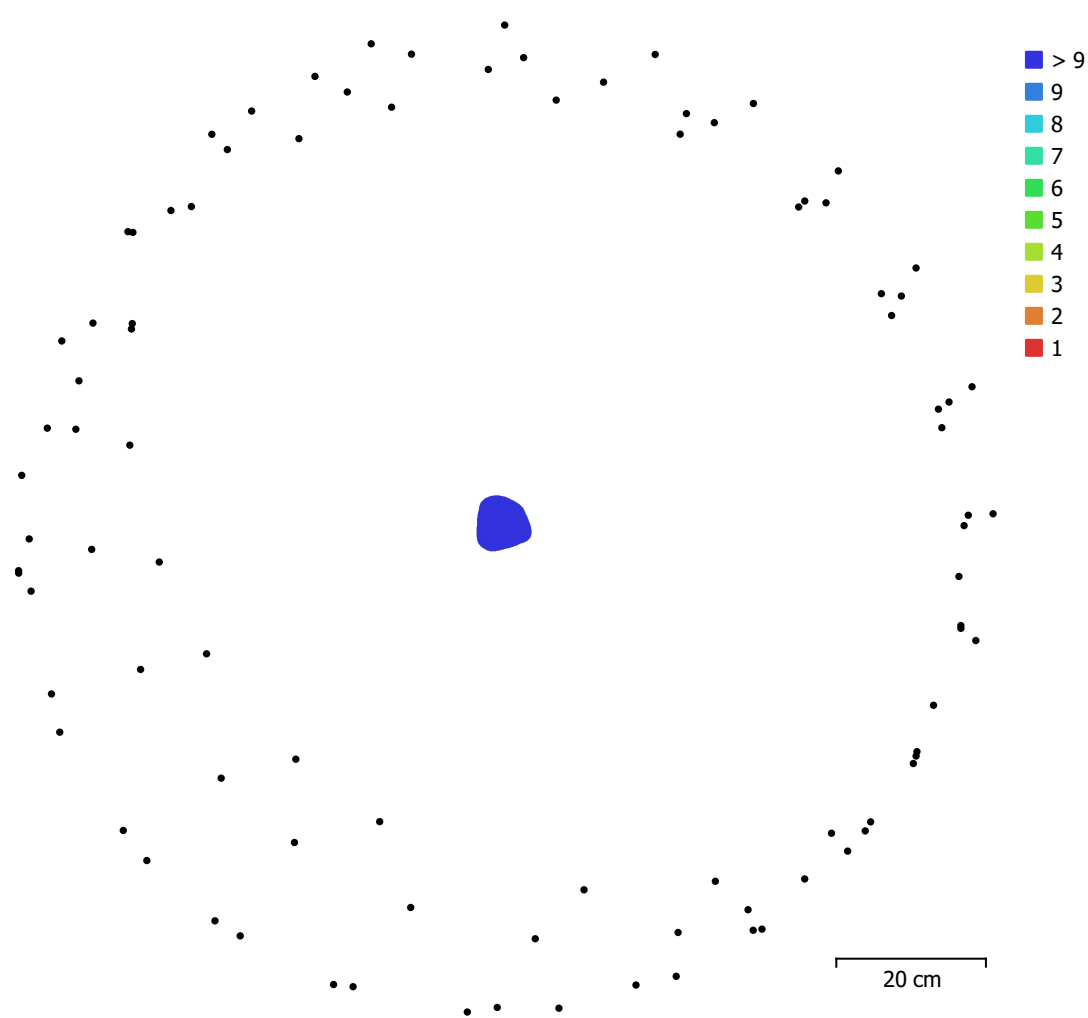
Fig. 1. Camera locations and image overlap.

Number of images:	93	Camera stations:	93
Flying altitude:	62.6 cm	Tie points:	70,390
Ground resolution:	0.04 mm/pix	Projections:	212,507
Coverage area:	43.3 cm²	Reprojection error:	0.572 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
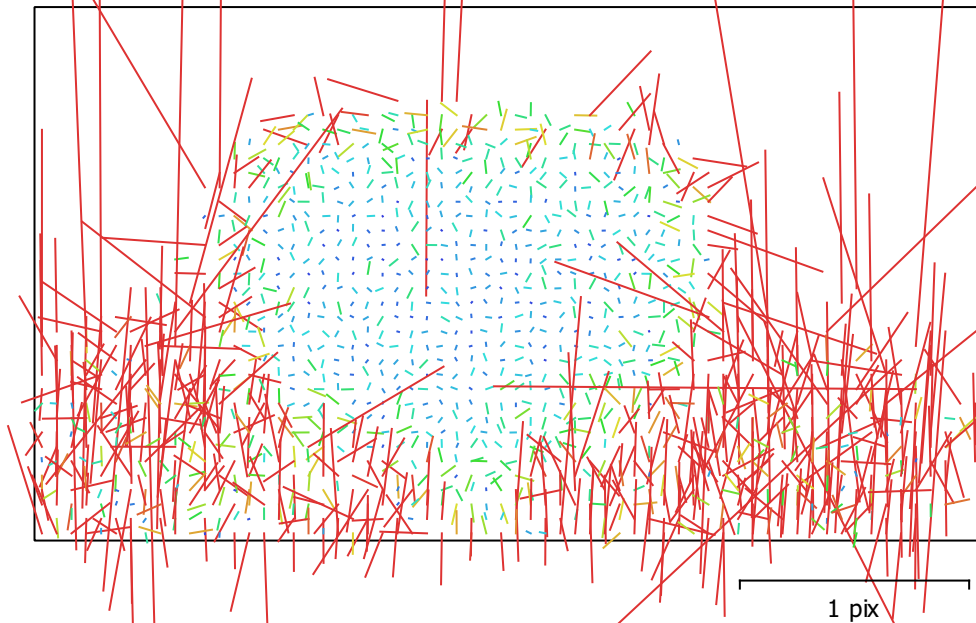
Fig. 2. Image residuals for DMC-G7 (60mm).

DMC-G7 (60mm)

46 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	**15667.1**	8.2	1.00	0.13	-0.20	-0.42	0.16	-0.11	0.03	0.15
Cx	**42.5728**	12		1.00	-0.15	-0.23	0.45	-0.47	0.90	-0.14
Cy	**-1.25678**	13			1.00	0.10	-0.32	0.28	-0.21	0.76
K1	**0.180226**	0.0081				1.00	-0.73	0.64	-0.09	-0.15
K2	**-14.5357**	0.98					1.00	-0.97	0.45	-0.24
K3	**306.954**	29						1.00	-0.46	0.22
P1	**0.000257836**	0.0003							1.00	-0.27
P2	**-0.00427214**	0.00028								1.00

Table 2. Calibration coefficients and correlation matrix.

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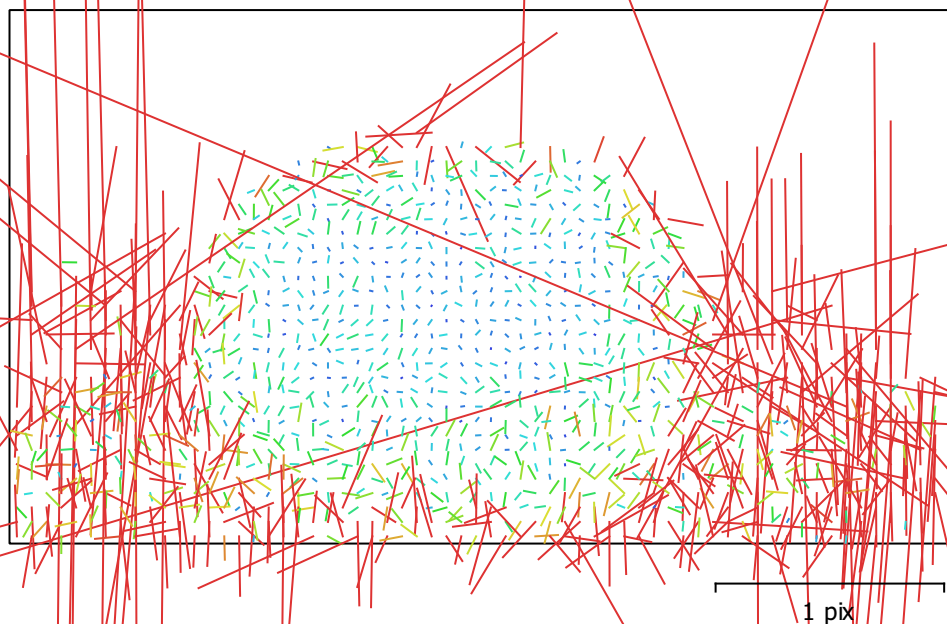
Fig. 3. Image residuals for DMC-G7 (60mm).

DMC-G7 (60mm)

47 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	**15678.9**	8	1.00	0.10	-0.36	-0.49	0.25	-0.16	0.01	-0.06
Cx	**117.094**	12		1.00	-0.10	-0.10	0.11	-0.05	0.94	-0.08
Cy	**42.4365**	17			1.00	0.17	-0.28	0.19	-0.10	0.87
K1	**0.103698**	0.0076				1.00	-0.76	0.65	0.02	-0.13
K2	**0.512945**	0.71					1.00	-0.96	0.11	-0.16
K3	**-51.5281**	19						1.00	-0.05	0.11
P1	**0.003798**	0.00034							1.00	-0.14
P2	**-0.00279276**	0.00034								1.00

Table 3. Calibration coefficients and correlation matrix.

Scale Bars

Label	Distance (m)	Error (m)
target 15_target 16	0.0500402	4.02184e-05
target 19_target 20	0.0499597	-4.02762e-05
Total		**4.02473e-05**

Table 4. Control scale bars.

Digital Elevation Model
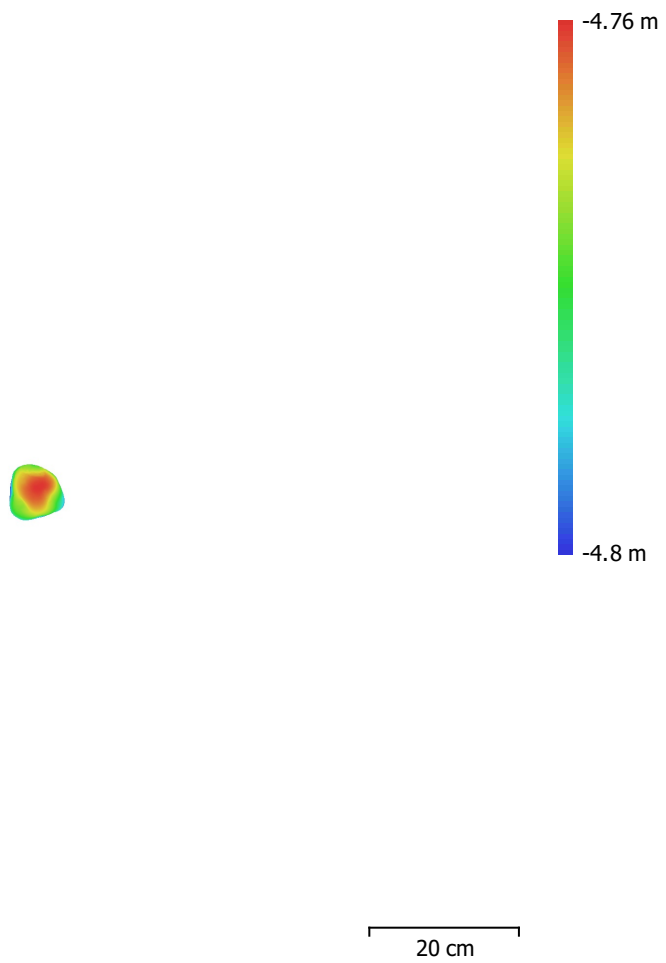
Fig. 4. Reconstructed digital elevation model.

Resolution:	0.657 mm/pix
Point density:	2.32 points/mm²

Processing Parameters

General

Cameras	93
Aligned cameras	93
Markers	8
Scale bars	2

Tie Points

Points	70,390 of 99,598
RMS reprojection error	0.138813 (0.572001 pix)
Max reprojection error	0.442292 (38.5517 pix)
Mean key point size	2.88325 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	3.08068
File size	6.59 MB

Model

Faces	50,000
Vertices	25,002
Vertex colors	3 bands, uint8
Texture	8,192 x 8,192, 4 bands, uint8

Depth maps generation parameters

Quality	Ultra High
Filtering mode	Mild
Max neighbors	16
Processing time	5 minutes 29 seconds
Memory usage	4.76 GB

Reconstruction parameters

Surface type	Arbitrary
Source data	Depth maps
Interpolation	Enabled
Strict volumetric masks	No
Processing time	1 minutes 34 seconds
Memory usage	8.20 GB

Texturing parameters

Mapping mode	Generic
Blending mode	Mosaic
Texture size	8,192
Enable hole filling	Yes
Enable ghosting filter	Yes
UV mapping time	6 seconds
UV mapping memory usage	86.59 MB
Blending time	58 seconds
Blending memory usage	4.13 GB
Blending GPU memory usage	1.87 GB
Date created	2024:06:01 13:03:16
Software version	1.8.4.14671
File size	56.07 MB

System

Software name	Agisoft Metashape Standard
Software version	2.1.1 build 17821
OS	Windows 64 bit

RAM	15.70 GB
CPU	Intel(R) Core(TM) i9-9980HK CPU @ 2.40GHz
GPU(s)	Quadro T2000