Agisoft Metashape

Processing Report
27 June 2024

Survey Data

■	> 9
■	9
■	8
■	7
■	6
■	5
■	4
■	3
■	2
■	1

20 cm
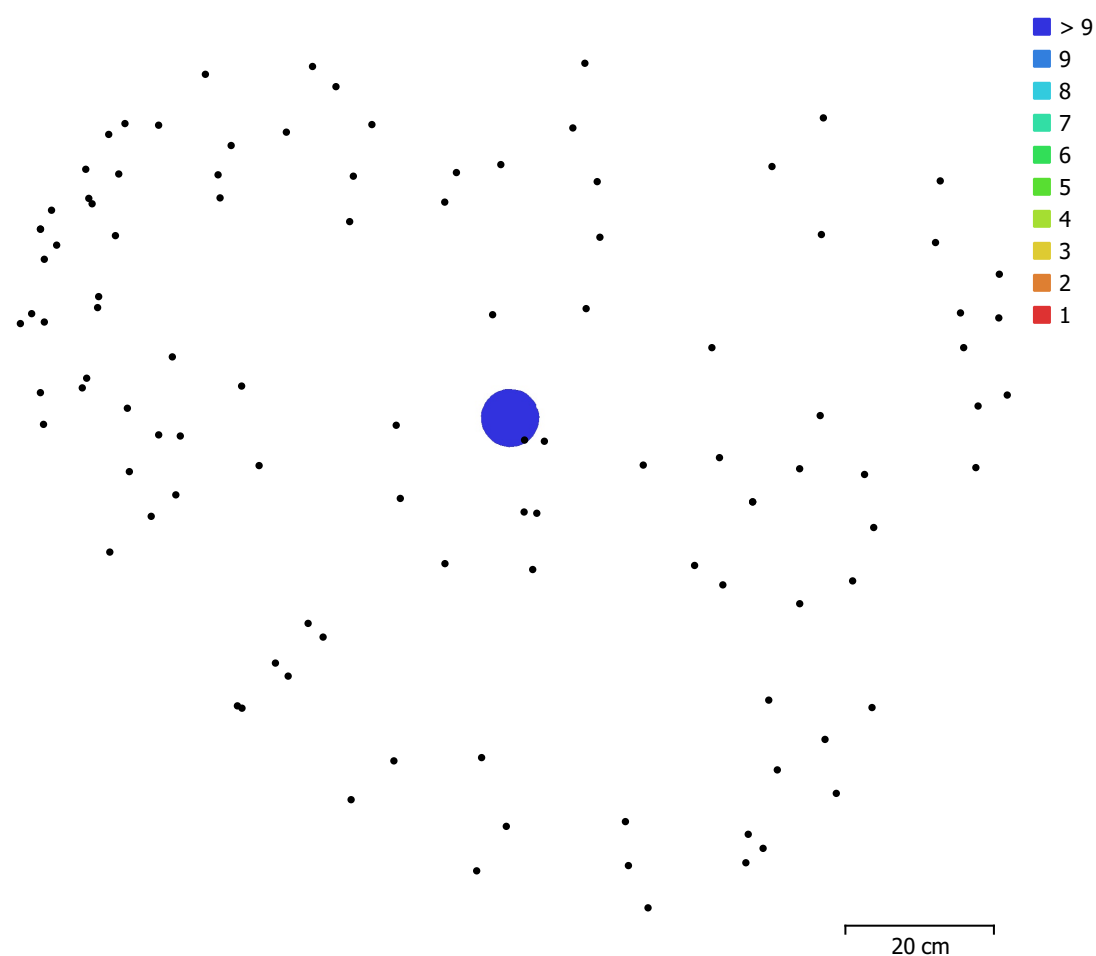
Fig. 1. Camera locations and image overlap.

Number of images:	106	Camera stations:	106
Flying altitude:	63.7 cm	Tie points:	385,240
Ground resolution:	0.0431 mm/pix	Projections:	1,312,443
Coverage area:	48.1 cm²	Reprojection error:	0.481 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
DMC-G7 (55mm)	4592 x 2584	55 mm	3.8 x 3.8 µm	No
DMC-G7 (55mm)	4592 x 2584	55 mm	3.8 x 3.8 µm	No

Table 1. Cameras.

Camera Calibration
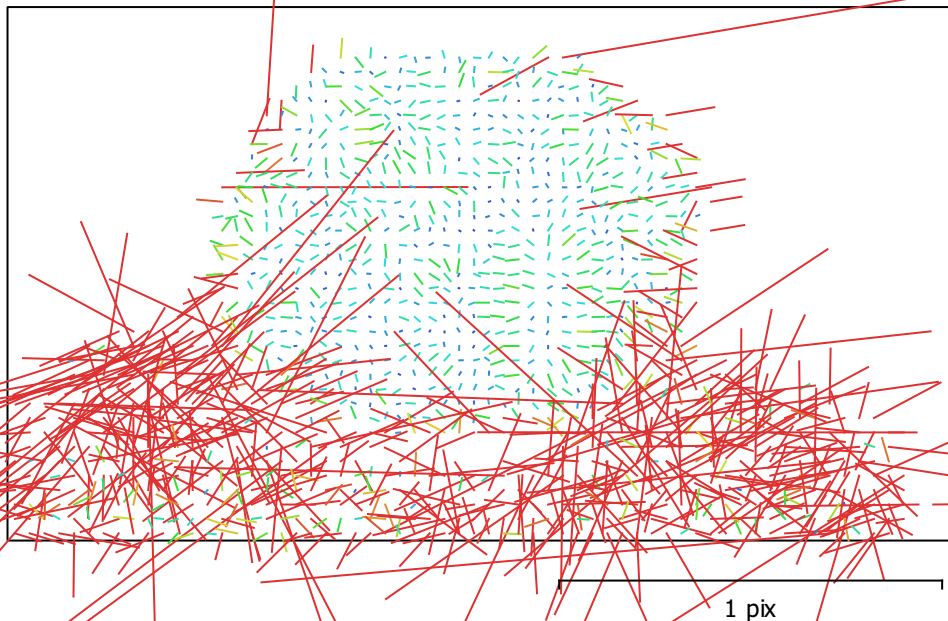
Fig. 2. Image residuals for DMC-G7 (55mm).

DMC-G7 (55mm)

52 images

Type	Resolution	Focal Length	Pixel Size
Frame	**4592 x 2584**	**55 mm**	**3.8 x 3.8 µm**

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	**14775.4**	3.3	1.00	0.07	-0.31	-0.09	0.10	-0.03	0.08	-0.32
Cx	**42.2822**	4.2		1.00	-0.12	-0.15	0.02	0.11	0.96	-0.14
Cy	**50.3029**	10			1.00	0.03	-0.11	-0.01	-0.08	0.99
K1	**0.119654**	0.0022				1.00	-0.84	0.69	-0.07	0.09
K2	**-0.734194**	0.23					1.00	-0.96	-0.02	-0.14
K3	**-41.7497**	6.2						1.00	0.13	0.01
P1	**0.00296909**	0.00011							1.00	-0.09
P2	**-0.00324891**	0.00025								1.00

Table 2. Calibration coefficients and correlation matrix.

Camera Calibration
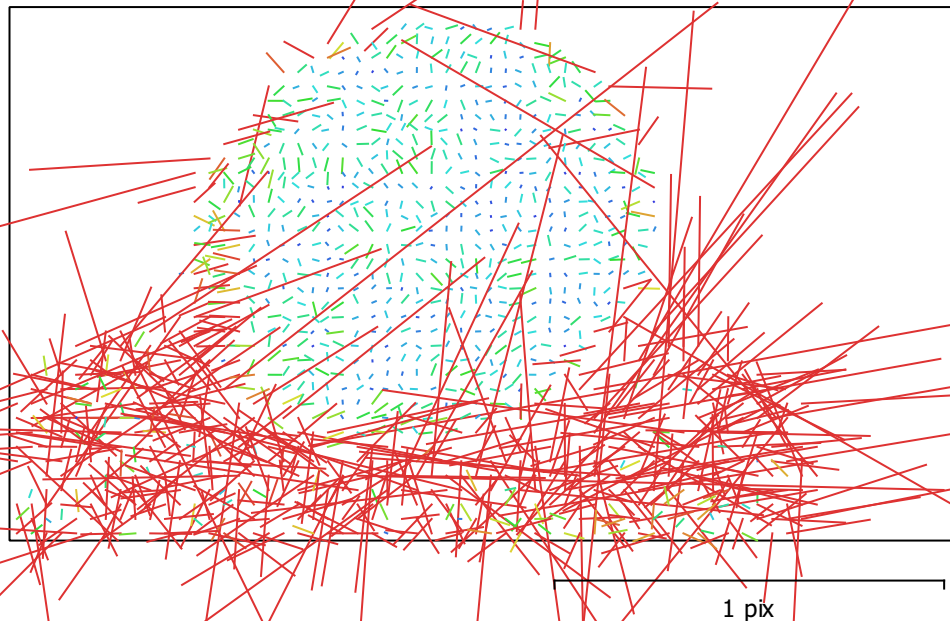
Fig. 3. Image residuals for DMC-G7 (55mm).

DMC-G7 (55mm)

54 images

Type	Resolution	Focal Length	Pixel Size
Frame	**4592 x 2584**	**55 mm**	**3.8 x 3.8 µm**

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	**14778.3**	3.7	1.00	0.08	-0.23	-0.27	0.17	-0.09	0.01	-0.23
Cx	**-11.8209**	5.7		1.00	-0.07	-0.32	0.30	-0.14	0.95	-0.10
Cy	**-171.644**	11			1.00	0.00	-0.10	-0.05	-0.03	0.98
K1	**0.129559**	0.003				1.00	-0.84	0.73	-0.15	0.03
K2	**-2.53814**	0.3					1.00	-0.96	0.22	-0.12
K3	**-27.0485**	6.7						1.00	-0.09	-0.04
P1	**0.00191049**	0.00016							1.00	-0.04
P2	**-0.00810864**	0.00028								1.00

Table 3. Calibration coefficients and correlation matrix.

Scale Bars

Label	Distance (m)	Error (m)
target 19_target 20	0.05	1.06547e-13
Total		**1.06547e-13**

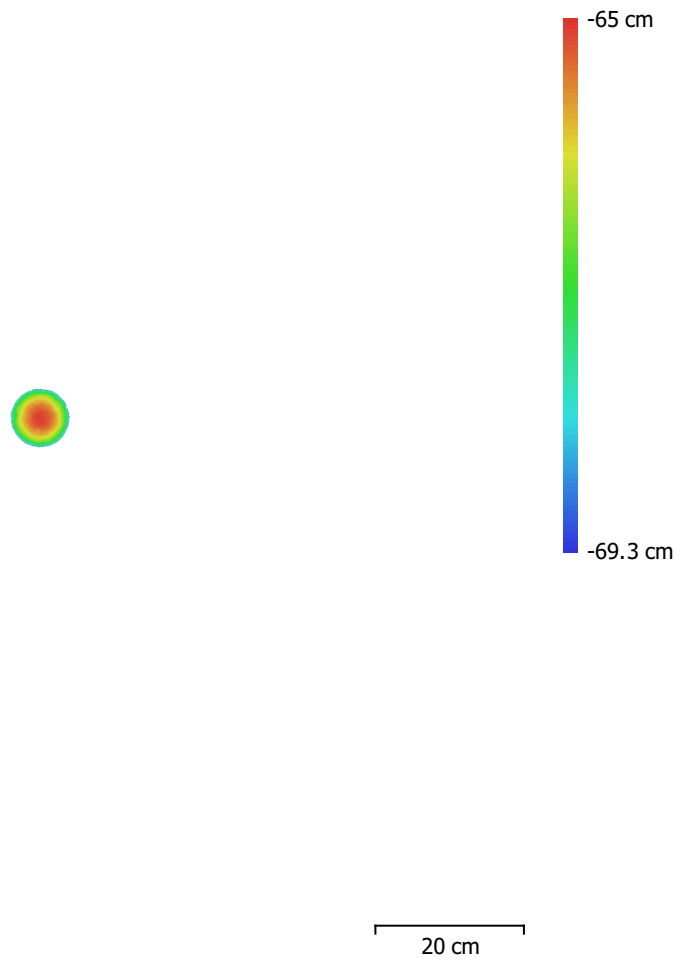Table 4. Control scale bars.

Digital Elevation Model

Fig. 4. Reconstructed digital elevation model.

Resolution: 0.771 mm/pix
Point density: 1.68 points/mm²

Processing Parameters

General

Cameras	106
Aligned cameras	106
Markers	4
Scale bars	1

Tie Points

Points	385,240 of 428,751
RMS reprojection error	0.131082 (0.481478 pix)
Max reprojection error	0.401871 (36.2692 pix)
Mean key point size	3.0713 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	3.67673
File size	34.11 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	7 minutes 9 seconds
Memory usage	4.84 GB

Reconstruction parameters

Surface type	Arbitrary
Source data	Depth maps
Interpolation	Enabled
Strict volumetric masks	No
Processing time	2 minutes 23 seconds
Memory usage	7.89 GB

Texturing parameters

Mapping mode	Generic
Blending mode	Mosaic
Texture size	8,192
Enable hole filling	Yes
Enable ghosting filter	Yes
UV mapping time	8 seconds
UV mapping memory usage	27.76 MB
Blending time	42 seconds
Blending memory usage	2.65 GB
Blending GPU memory usage	1.87 GB
Date created	2024:06:01 20:47:06
Software version	1.8.4.14671
File size	56.27 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