

Agisoft Metashape

Processing Report

27 June 2024



Survey Data

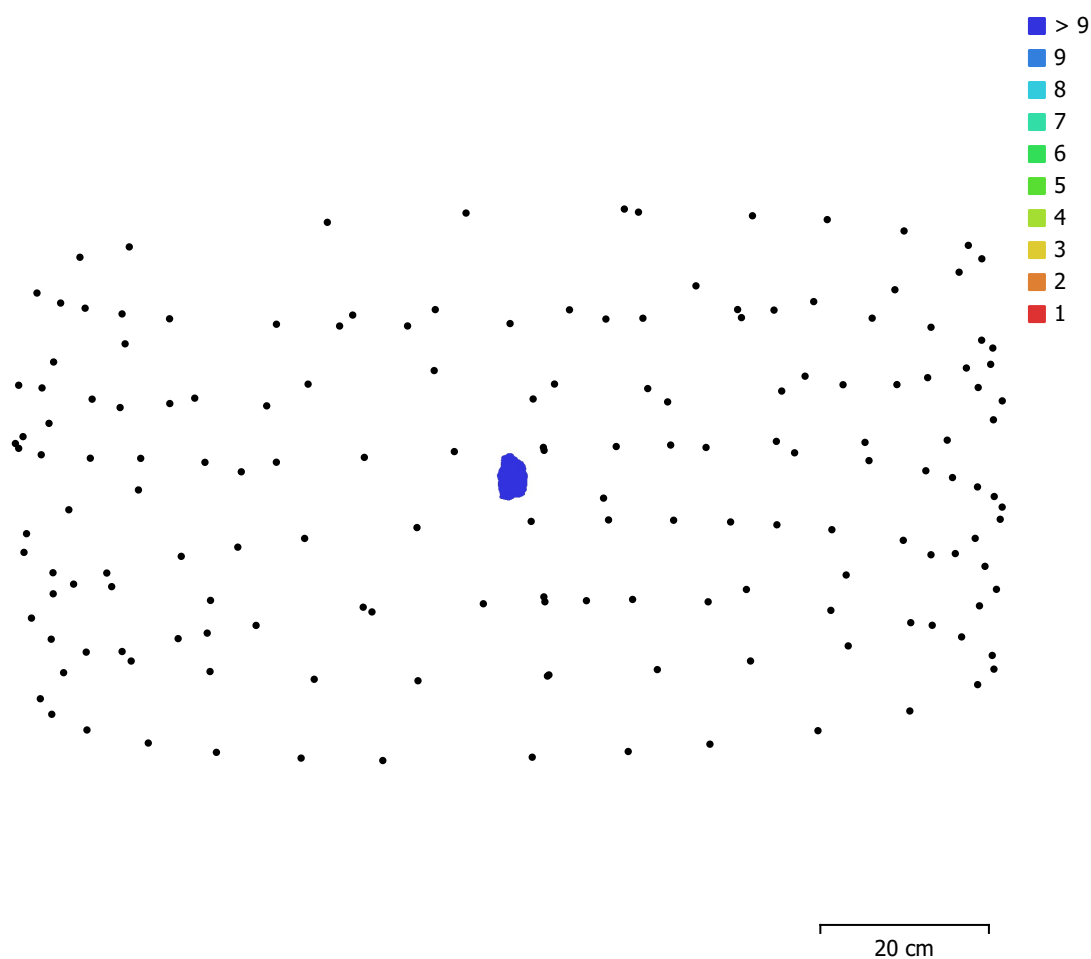


Fig. 1. Camera locations and image overlap.

Number of images:	163	Camera stations:	163
Flying altitude:	57.7 cm	Tie points:	213,684
Ground resolution:	0.0365 mm/pix	Projections:	449,801
Coverage area:	15.8 cm ²	Reprojection error:	0.342 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

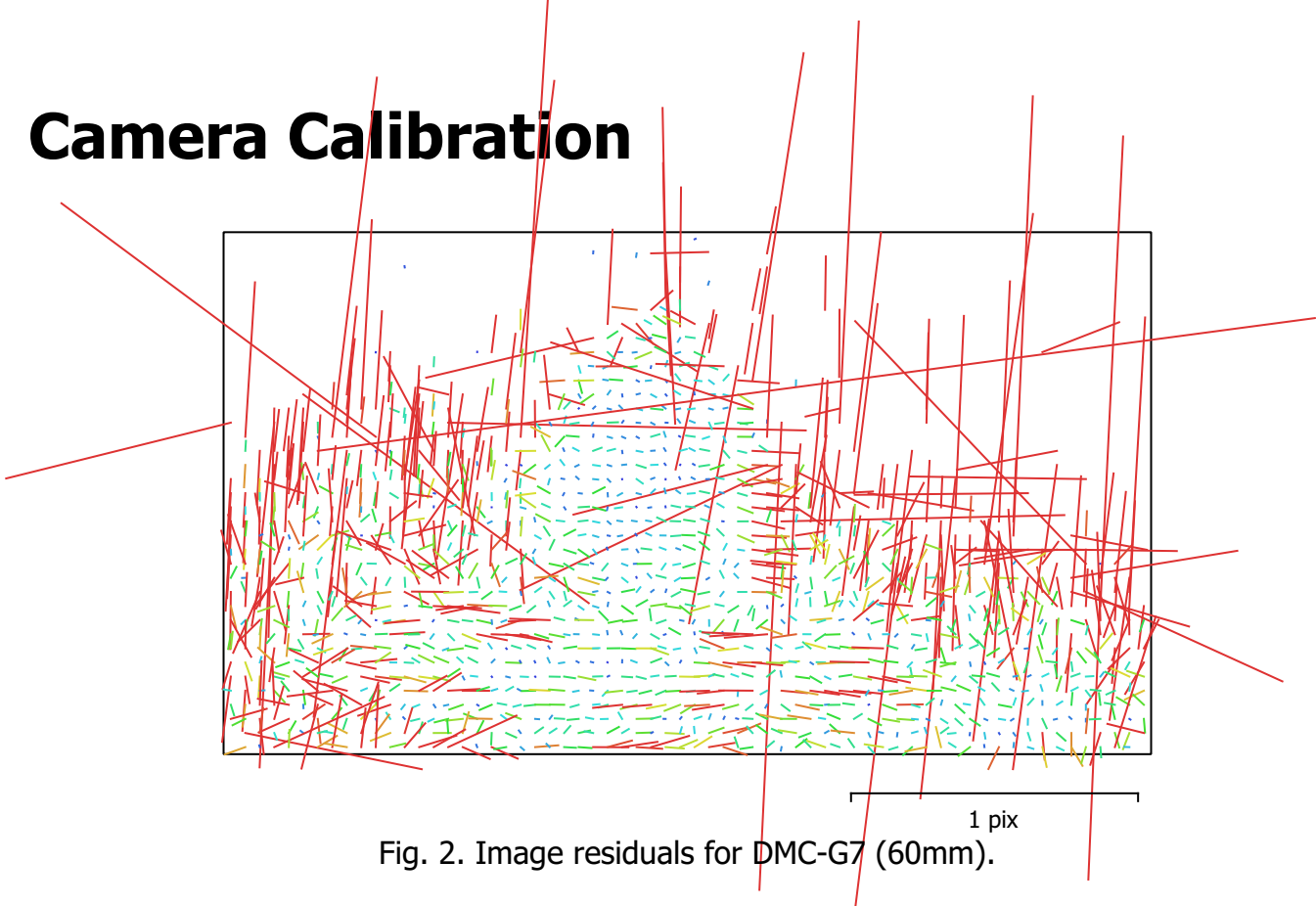


Fig. 2. Image residuals for DMC-G7 (60mm).

DMC-G7 (60mm)

76 images

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

	Value	Error	P1	P2
F	15831.7			
P1	-0.0173509	0.00026	1.00	0.08
P2	0.00588977	0.00031		1.00

Table 2. Calibration coefficients and correlation matrix.

Camera Calibration

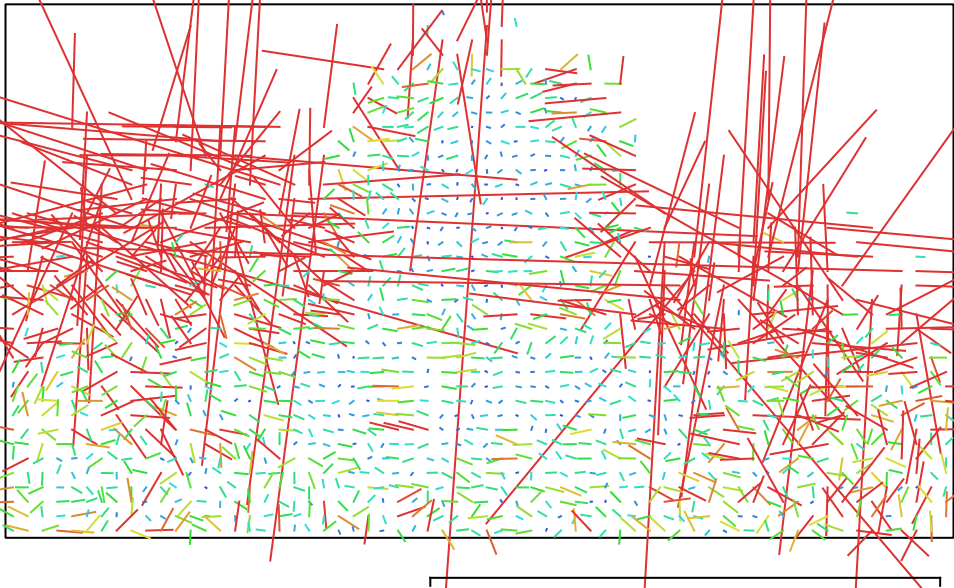


Fig. 3. Image residuals for DMC-G7 (60mm).

DMC-G7 (60mm)

87 images

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

	Value	Error	K1	P1	P2
F	15831.7				
K1	0.0953937	0.00072	1.00	-0.18	-0.12
P1	-0.00410001	0.0001		1.00	0.04
P2	-0.0133683	0.00011			1.00

Table 3. Calibration coefficients and correlation matrix.

Scale Bars

Label	Distance (m)	Error (m)
target 15_target 16	0.0494901	-0.000509864
target 19_target 20	0.0505001	0.000500117
Total		0.000505014

Table 4. Control scale bars.

Digital Elevation Model

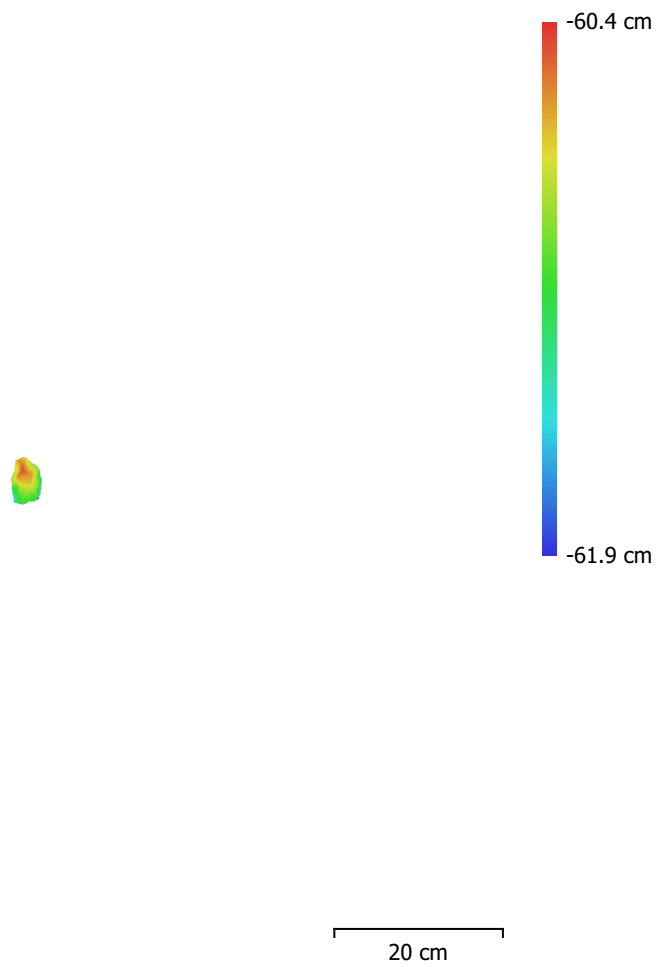


Fig. 4. Reconstructed digital elevation model.

Resolution: 0.0998 mm/pix
Point density: 100 points/mm²

Processing Parameters

General

Cameras	163
Aligned cameras	163
Markers	8
Scale bars	2
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll

Point Cloud

Points	213,684 of 509,087
RMS reprojection error	0.122498 (0.341627 pix)
Max reprojection error	0.558385 (7.74239 pix)
Mean key point size	2.1892 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	2.29332
File size	24.18 MB

Depth Maps

Count	162
Depth maps generation parameters	
Quality	High
Filtering mode	Moderate
Max neighbors	16
Processing time	2 minutes 7 seconds
Memory usage	1.48 GB
Date created	2024:06:27 16:41:54
Software version	1.8.4.14671
File size	41.91 MB

Model

Faces	594,468
Vertices	297,254
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	1 minutes 0 seconds
UV mapping memory usage	490.83 MB
Blending time	1 minutes 25 seconds
Blending memory usage	13.13 GB
Blending GPU memory usage	11.92 GB
File size	175.22 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