Agisoft Metashape

Processing Report
12 July 2024

Survey Data
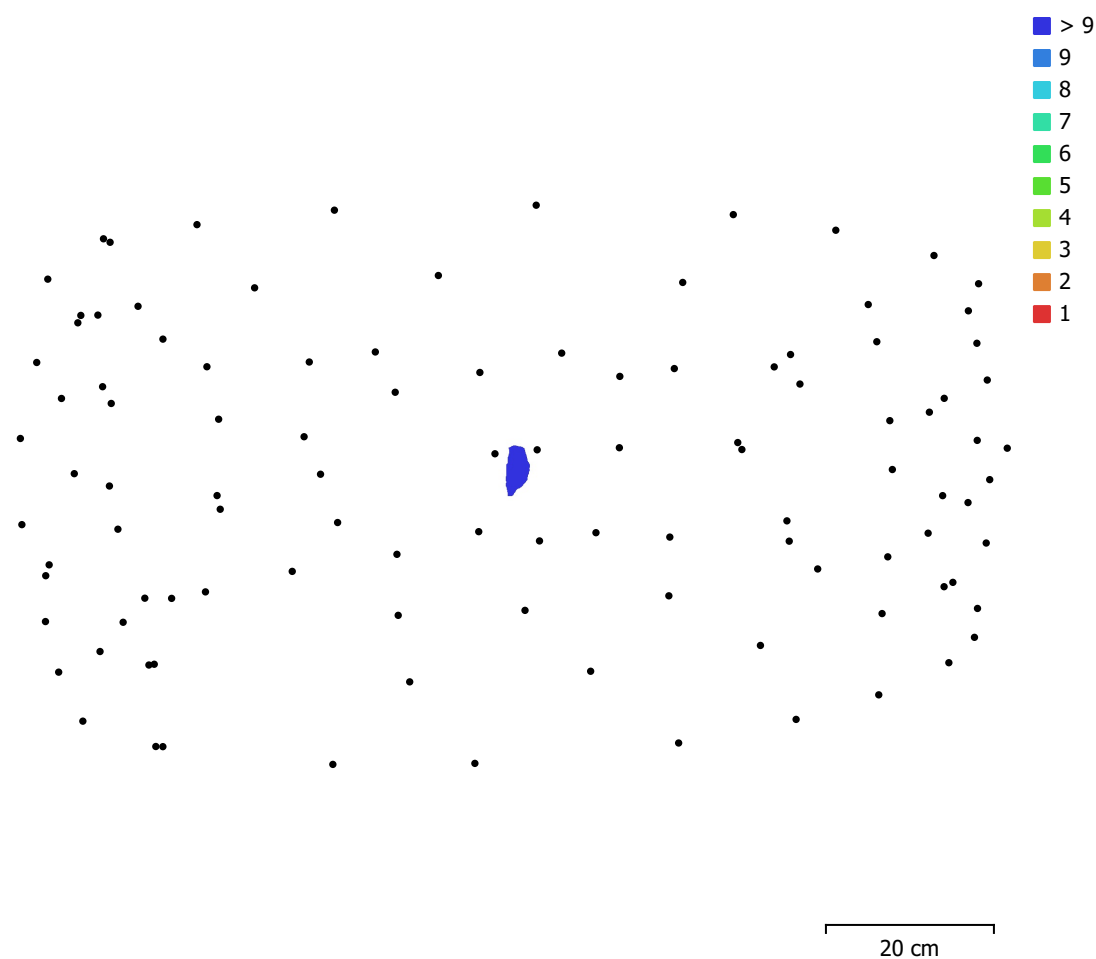
Fig. 1. Camera locations and image overlap.

Number of images:	106	Camera stations:	106
Flying altitude:	56.1 cm	Tie points:	102,707
Ground resolution:	0.0354 mm/pix	Projections:	333,806
Coverage area:	12.6 cm²	Reprojection error:	1.19 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
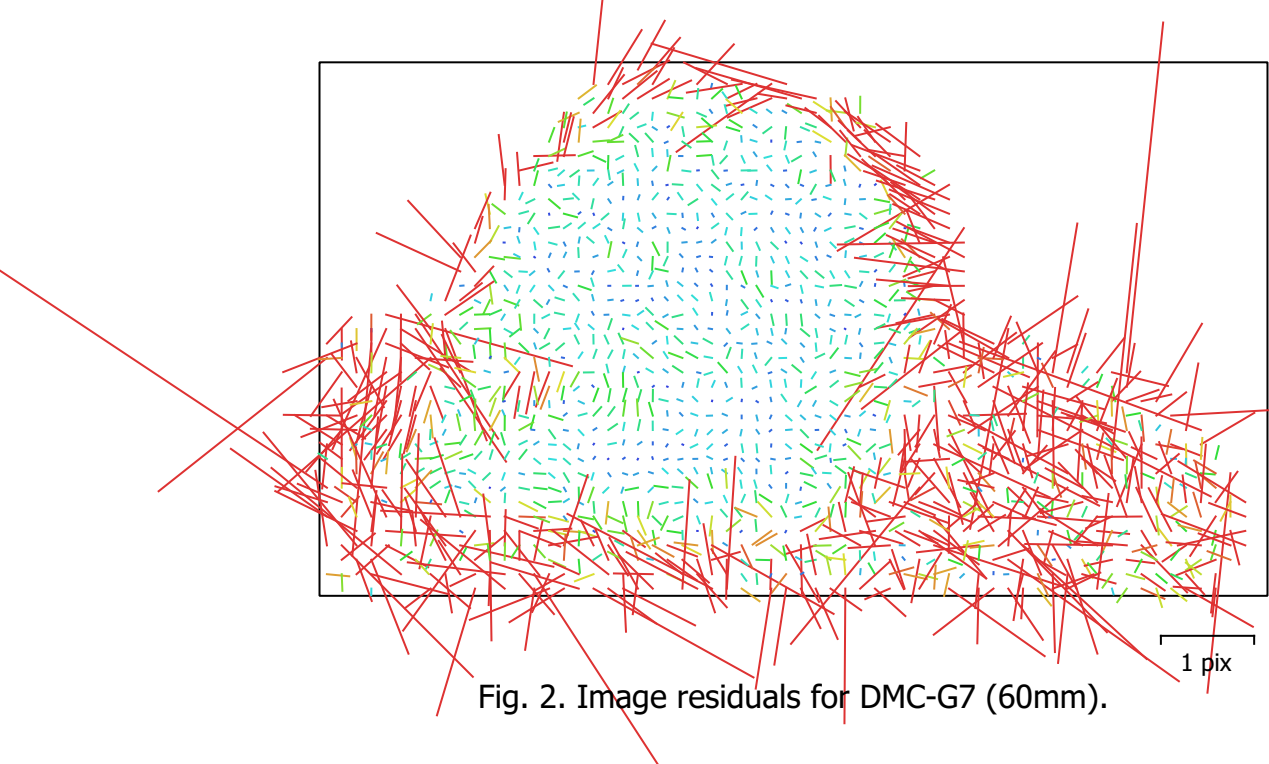
Fig. 2. Image residuals for DMC-G7 (60mm).

DMC-G7 (60mm)

57 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	**-0.0046556**	0.00016	1.00	0.18
P2	**-0.0129889**	0.00021		1.00

Table 2. Calibration coefficients and correlation matrix.

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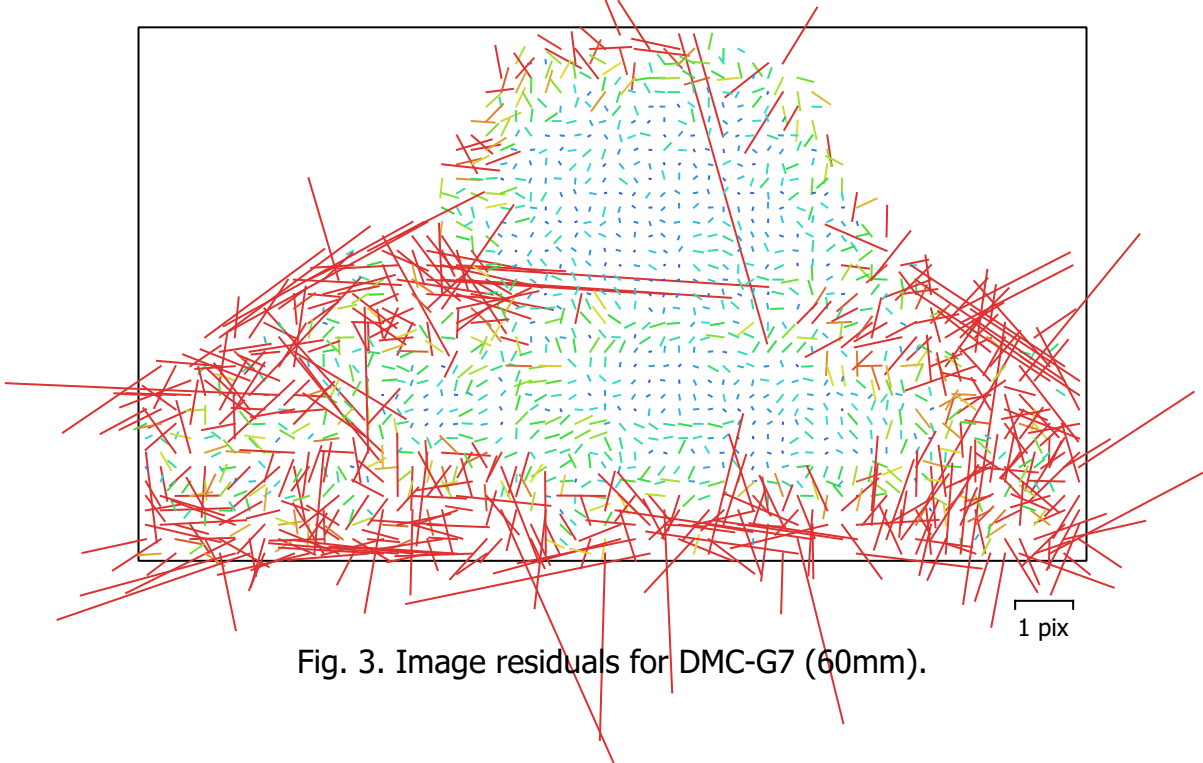
Fig. 3. Image residuals for DMC-G7 (60mm).

DMC-G7 (60mm)

49 images

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

	Value	Error	B2	P1	P2
F	**15831.7**				
B2	**-159.807**	2.5	1.00	-0.38	-0.13
P1	**0.0195979**	0.00026		1.00	-0.06
P2	**-0.0102311**	0.00037			1.00

Table 3. Calibration coefficients and correlation matrix.

Scale Bars

Label	Distance (m)	Error (m)
target 19_target 20	0.05	1.04083e-16
Total		**1.04083e-16**

Table 4. Control scale bars.

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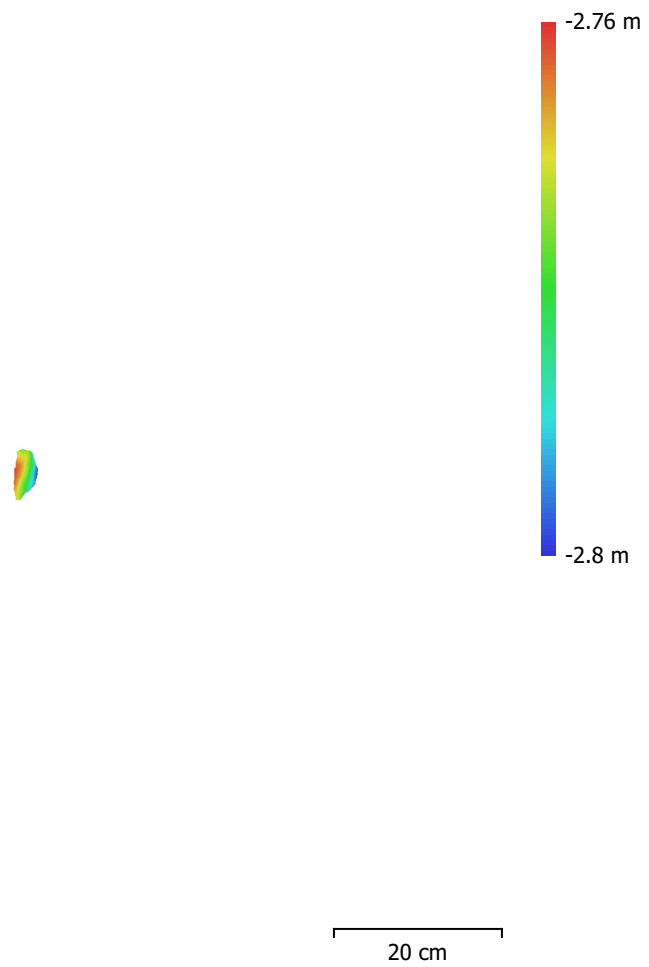
Fig. 4. Reconstructed digital elevation model.

Resolution:	0.103 mm/pix
Point density:	94.5 points/mm²

Processing Parameters

General

Cameras	106
Aligned cameras	106
Markers	3
Scale bars	1
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll

Point Cloud

Points	102,707 of 130,677
RMS reprojection error	0.33364 (1.1885 pix)
Max reprojection error	3.06018 (56.43 pix)
Mean key point size	3.39816 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	3.41677
File size	9.55 MB

Depth Maps

Count	103

Depth maps generation parameters

Quality	Medium
Filtering mode	Mild
Max neighbors	16
Processing time	39 seconds
Memory usage	1.05 GB
Date created	2024:07:12 15:58:49
Software version	1.8.4.14671
File size	8.82 MB

Model

Faces	705,196
Vertices	352,600
Vertex colors	3 bands, uint8
Texture	16,384 x 16,384, 4 bands, uint8

Texturing parameters

Mapping mode	Generic
Blending mode	Mosaic
Texture size	16,384
Enable hole filling	Yes
Enable ghosting filter	Yes
UV mapping time	39 seconds
UV mapping memory usage	518.79 MB
Blending time	48 seconds
Blending memory usage	8.49 GB
Blending GPU memory usage	6.43 GB
File size	126.03 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