

# Agisoft Metashape

Processing Report

27 June 2024



# Survey Data

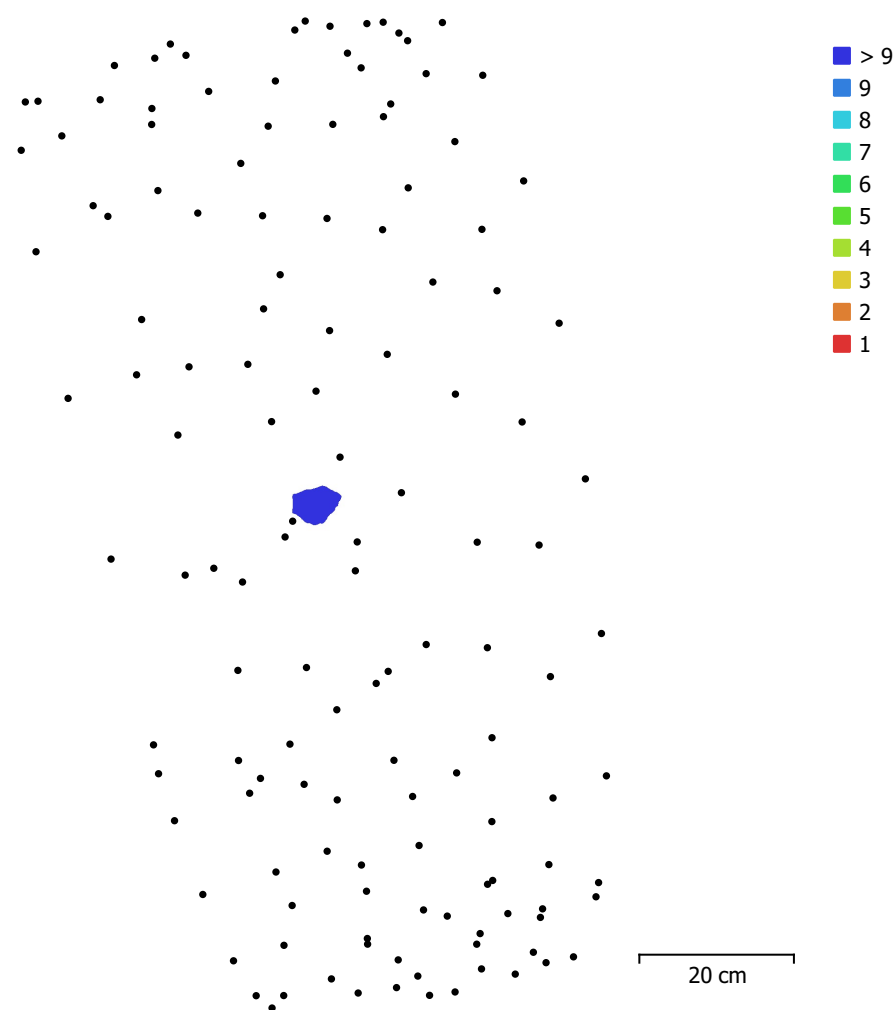


Fig. 1. Camera locations and image overlap.

Number of images:	135	Camera stations:	135
Flying altitude:	62.1 cm	Tie points:	123,200
Ground resolution:	0.0401 mm/pix	Projections:	465,301
Coverage area:	22.5 cm <sup>2</sup>	Reprojection error:	0.781 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

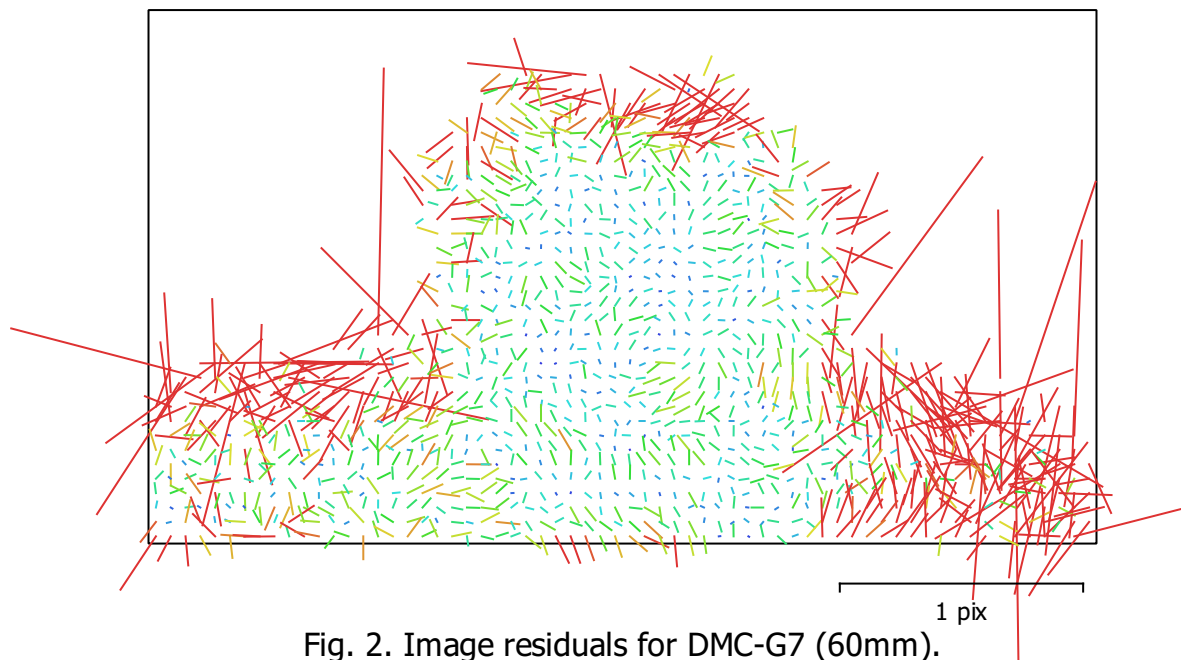


Fig. 2. Image residuals for DMC-G7 (60mm).

## DMC-G7 (60mm)

74 images

Type	Resolution	Focal Length	Pixel Size
<b>Frame</b>	<b>4592 x 2584</b>	<b>60 mm</b>	<b>3.79 x 3.79 <math>\mu</math>m</b>

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
<b>F</b>	<b>15557.7</b>	4.3	1.00	0.00	-0.35	-0.26	0.14	-0.06	-0.02	-0.20
<b>Cx</b>	<b>57.6211</b>	5.2		1.00	-0.08	-0.07	0.07	-0.06	0.96	-0.11
<b>Cy</b>	<b>211.327</b>	8.3			1.00	0.18	-0.37	0.33	-0.01	0.94
<b>K1</b>	<b>0.238681</b>	0.0033				1.00	-0.87	0.77	-0.05	0.15
<b>K2</b>	<b>-10.3791</b>	0.42					1.00	-0.96	0.04	-0.38
<b>K3</b>	<b>187.895</b>	12						1.00	-0.03	0.35
<b>P1</b>	<b>0.00213699</b>	0.00016							1.00	-0.04
<b>P2</b>	<b>-0.00172353</b>	0.00022								1.00

Table 2. Calibration coefficients and correlation matrix.

# Camera Calibration

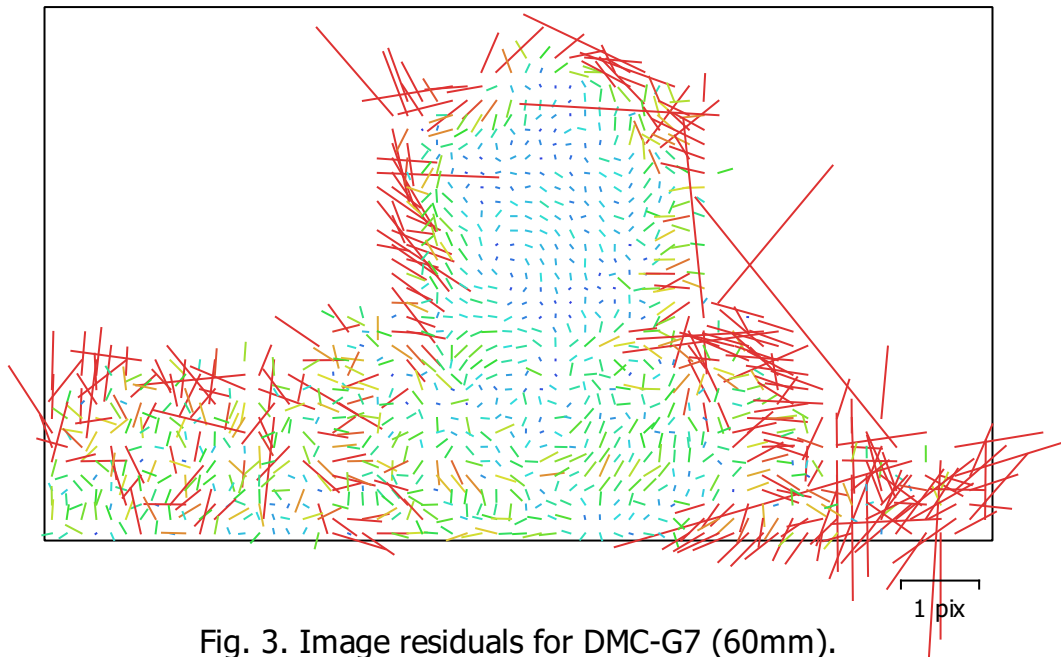


Fig. 3. Image residuals for DMC-G7 (60mm).

## DMC-G7 (60mm)

61 images

Type	Resolution	Focal Length	Pixel Size
<b>Frame</b>	<b>4592 x 2584</b>	<b>60 mm</b>	<b>3.79 x 3.79 <math>\mu\text{m}</math></b>

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
<b>F</b>	<b>15426.8</b>	10	1.00	0.10	0.08	-0.24	0.11	-0.16	0.39	0.13
<b>Cx</b>	<b>-884.561</b>	9		1.00	0.30	-0.18	0.81	-0.90	0.06	-0.16
<b>Cy</b>	<b>23.9179</b>	4.4			1.00	-0.36	0.38	-0.39	0.41	-0.02
<b>K1</b>	<b>-0.949014</b>	0.0085				1.00	-0.61	0.47	-0.51	-0.02
<b>K2</b>	<b>50.3175</b>	0.75					1.00	-0.97	0.07	-0.20
<b>K3</b>	<b>-783.693</b>	17						1.00	-0.10	0.18
<b>P1</b>	<b>-0.00272871</b>	0.00039							1.00	-0.02
<b>P2</b>	<b>-0.00885791</b>	0.00019								1.00

Table 3. Calibration coefficients and correlation matrix.

# Scale Bars

Label	Distance (m)	Error (m)
target 15_target 16	0.05	-6.93889e-18
Total		<b>6.93889e-18</b>

Table 4. Control scale bars.

# Digital Elevation Model

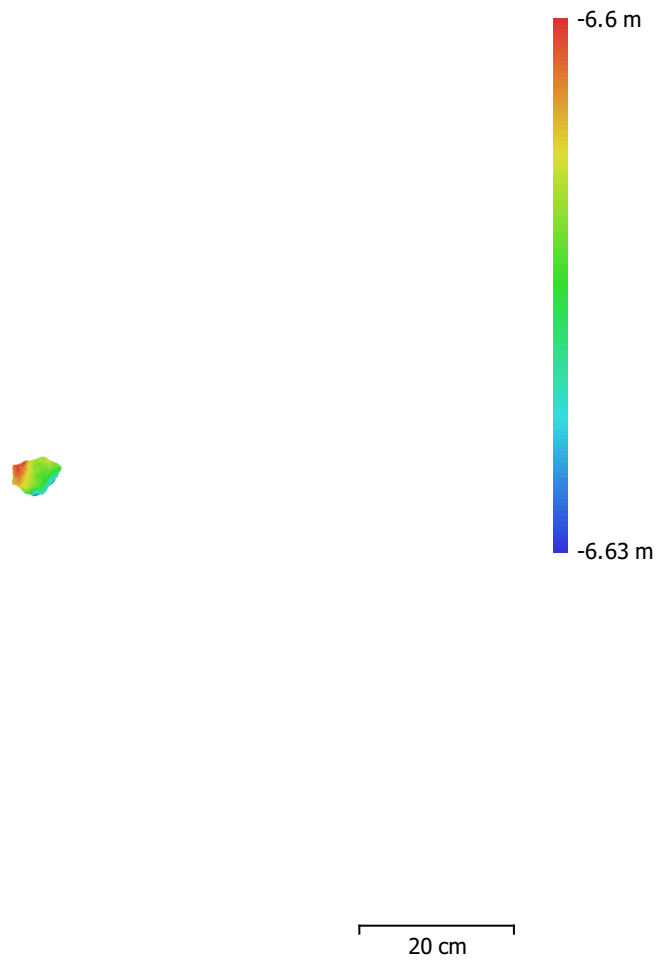


Fig. 4. Reconstructed digital elevation model.

Resolution: 0.396 mm/pix  
Point density: 6.37 points/mm<sup>2</sup>

# Processing Parameters

## General

Cameras	135
Aligned cameras	135
Markers	4
Scale bars	1

## Tie Points

Points	123,200 of 171,713
RMS reprojection error	0.232235 (0.780922 pix)
Max reprojection error	0.976341 (50.947 pix)
Mean key point size	2.9551 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	4.49033
File size	15.09 MB

## Model

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

## Texturing parameters

Mapping mode	Generic
Blending mode	Mosaic
Texture size	8,192
Enable hole filling	Yes
Enable ghosting filter	Yes
UV mapping time	17 seconds
UV mapping memory usage	51.42 MB
Blending time	39 seconds
Blending memory usage	2.46 GB
Blending GPU memory usage	1.87 GB
File size	38.81 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