

Agisoft Metashape

Processing Report

03 July 2024



Survey Data

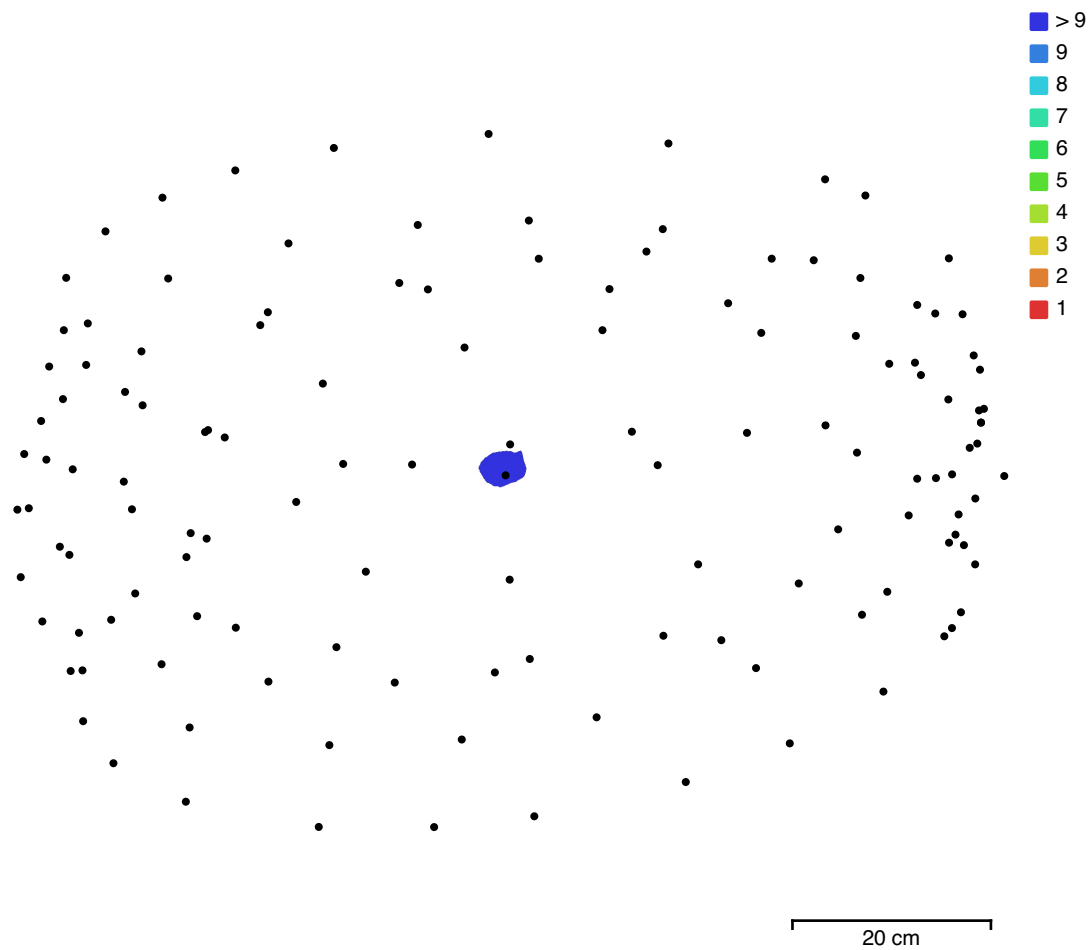


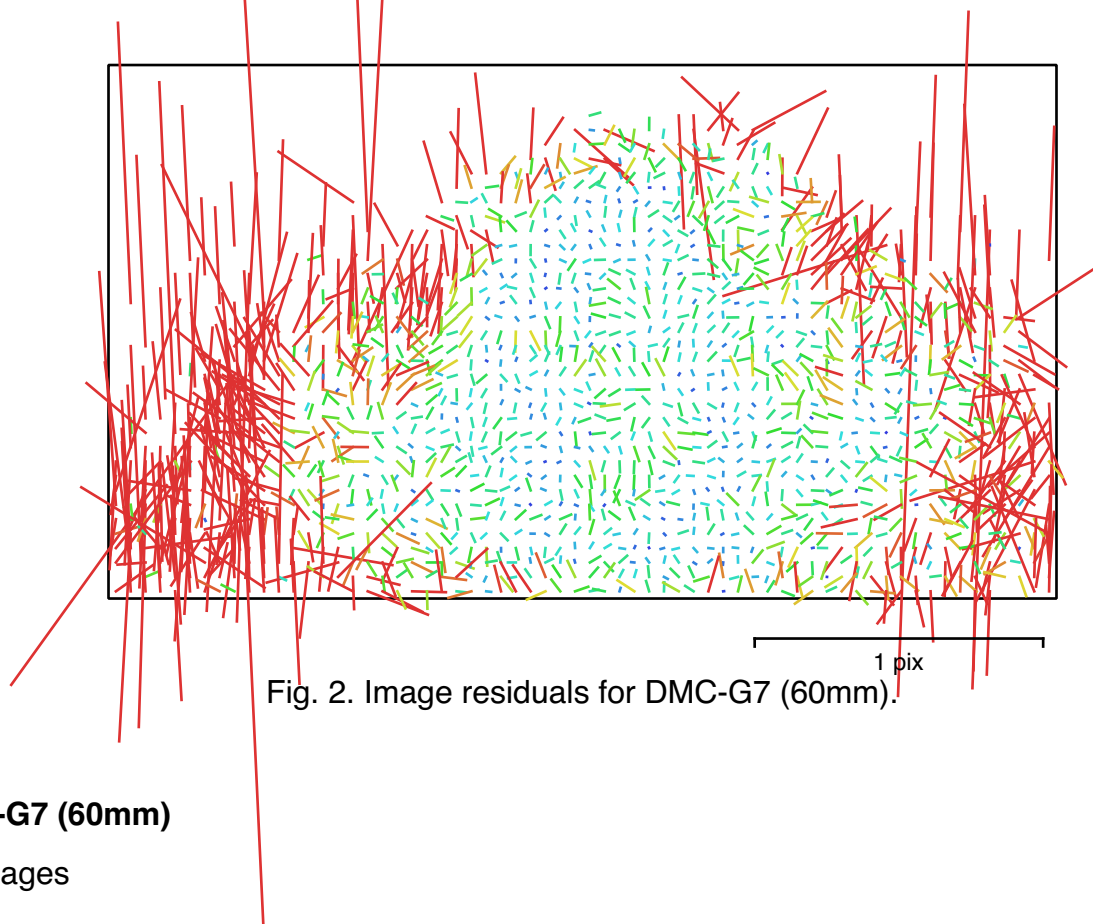
Fig. 1. Camera locations and image overlap.

Number of images:	132	Camera stations:	132
Flying altitude:	45.6 cm	Tie points:	121,473
Ground resolution:	0.0293 mm/pix	Projections:	626,294
Coverage area:	13.3 cm ²	Reprojection error:	0.518 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
DMC-G7 (60mm)	4592 x 2584	60 mm	3.79 x 3.79 μ m	No
DMC-G7 (60mm)	4592 x 2584	60 mm	3.79 x 3.79 μ m	No

Table 1. Cameras.

Camera Calibration



DMC-G7 (60mm)

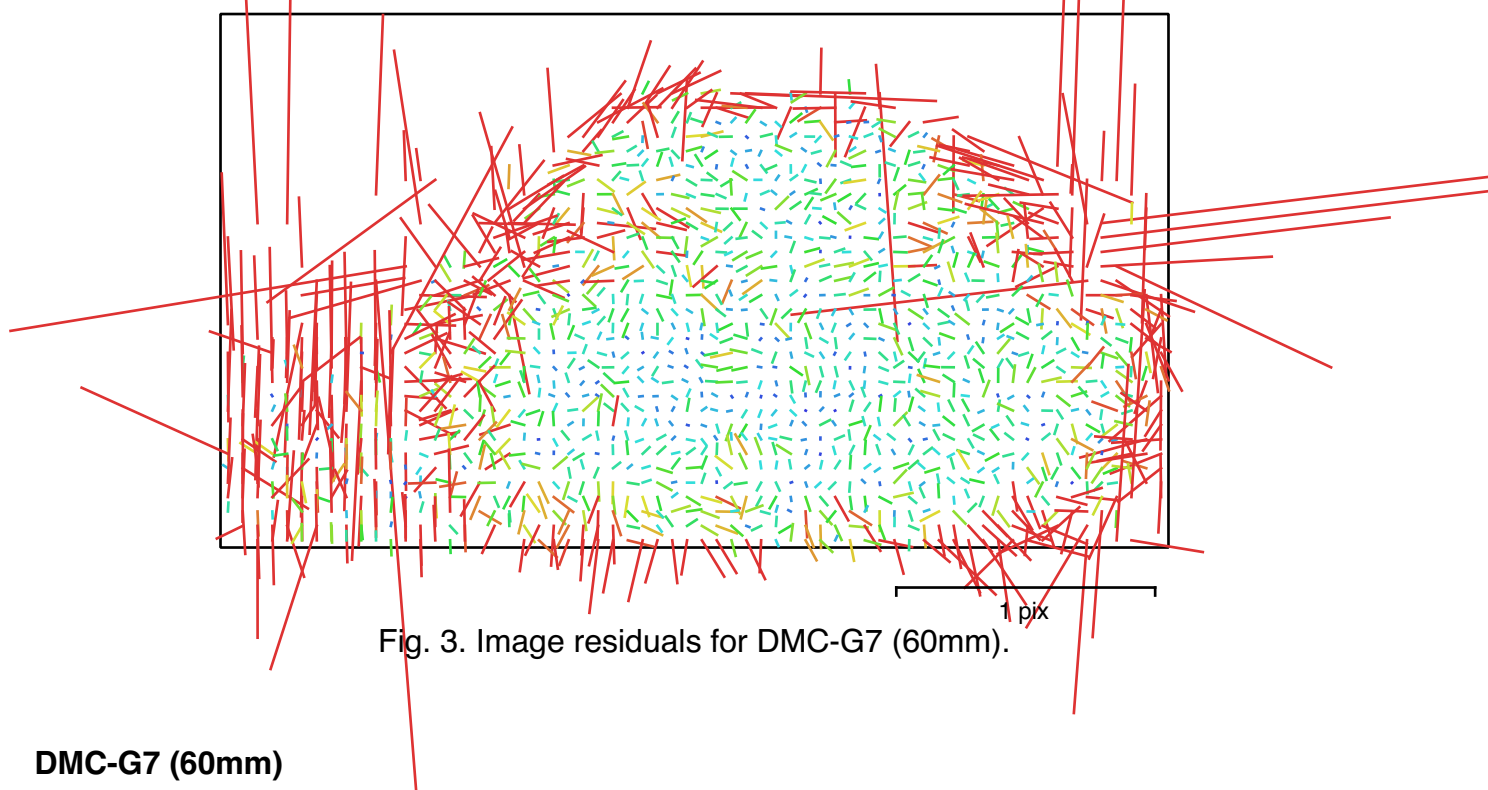
68 images

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

	Value	Error	F	B1	B2	K1	K2	P1	P2
F	15634.4	1.8	1.00	-0.24	0.03	-0.12	-0.12	0.07	0.26
B1	39.9027	0.63		1.00	0.40	-0.15	0.07	-0.28	-0.44
B2	-4.83999	0.26			1.00	-0.06	-0.02	-0.62	-0.42
K1	0.135027	0.0012				1.00	-0.80	-0.09	-0.25
K2	-2.38156	0.053					1.00	-0.04	0.03
P1	0.00205437	2.7e-05						1.00	0.37
P2	-0.00388502	5.7e-05							1.00

Table 2. Calibration coefficients and correlation matrix.

Camera Calibration



DMC-G7 (60mm)

64 images

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

	Value	Error	F	B1	K1	K2	P1	P2
F	15594.7	2.6	1.00	-0.27	-0.26	0.11	0.15	0.31
B1	-75.797	0.83		1.00	0.04	-0.11	0.23	-0.22
K1	0.157536	0.0016			1.00	-0.83	-0.41	-0.38
K2	-1.4883	0.052				1.00	0.14	0.15
P1	0.00084104	5e-05					1.00	0.01
P2	-0.00658495	7.9e-05						1.00

Table 3. Calibration coefficients and correlation matrix.

Scale Bars

Label	Distance (m)	Error (m)
point 1_point 2	0.0499702	-2.97669e-05
point 3_point 4	0.0500303	3.03223e-05
Total		3.00459e-05

Table 4. Control scale bars.

Digital Elevation Model

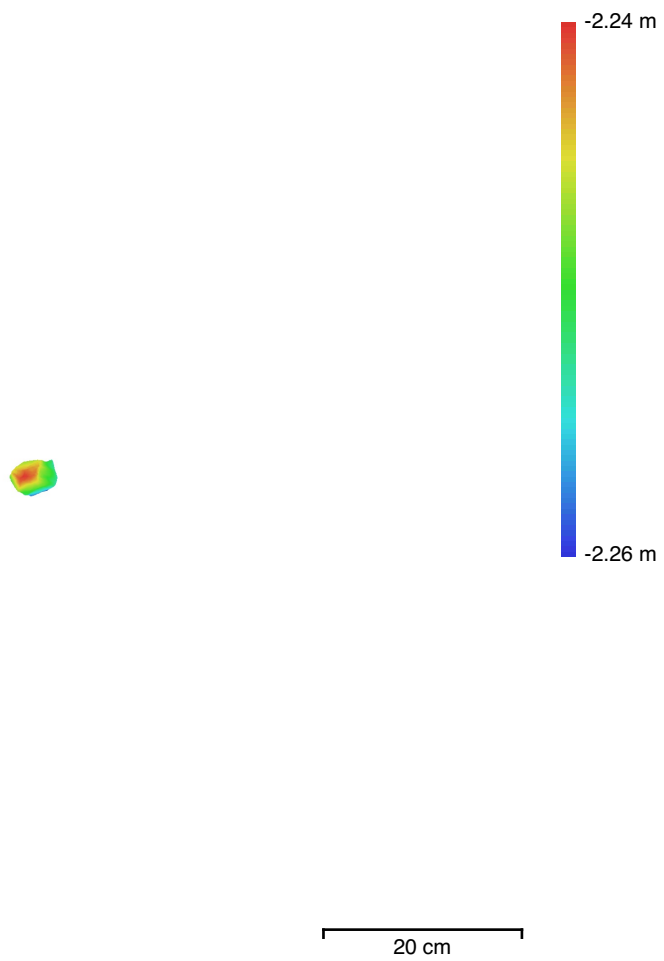


Fig. 4. Reconstructed digital elevation model.

Resolution: 0.081 mm/pix
Point density: 153 points/mm²

Processing Parameters

General

Images	132
Aligned images	132
Markers	4
Scale bars	2
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll

Tie Points

Points	121,473 of 183,976
RMS reprojection error	0.205818 (0.517806 pix)
Max reprojection error	0.885788 (15.1127 pix)
Mean key point size	2.39323 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	6.2431
File size	20.85 MB

Depth Maps

Count	132
Depth maps generation parameters	
Quality	High
Filtering mode	Mild
Max neighbors	16
Processing time	6 minutes 53 seconds
Memory usage	2.06 GB
Date created	2024:07:01 23:25:48
Software version	2.1.1.17821
File size	40.91 MB

Model

Faces	978,794
Vertices	489,399
Vertex colors	3 bands, uint8
Texture	8,192 x 8,192 x 2, 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	34 seconds
UV mapping memory usage	807.32 MB
Blending time	7 minutes 58 seconds
Blending memory usage	8.31 GB
File size	104.44 MB

System

Software name	Agisoft Metashape Professional
Software version	2.1.2 build 18358
OS	Mac OS 64 bit
RAM	8.00 GB
CPU	
GPU(s)	Apple M1