

Agisoft Metashape

Processing Report

24 June 2024



Survey Data

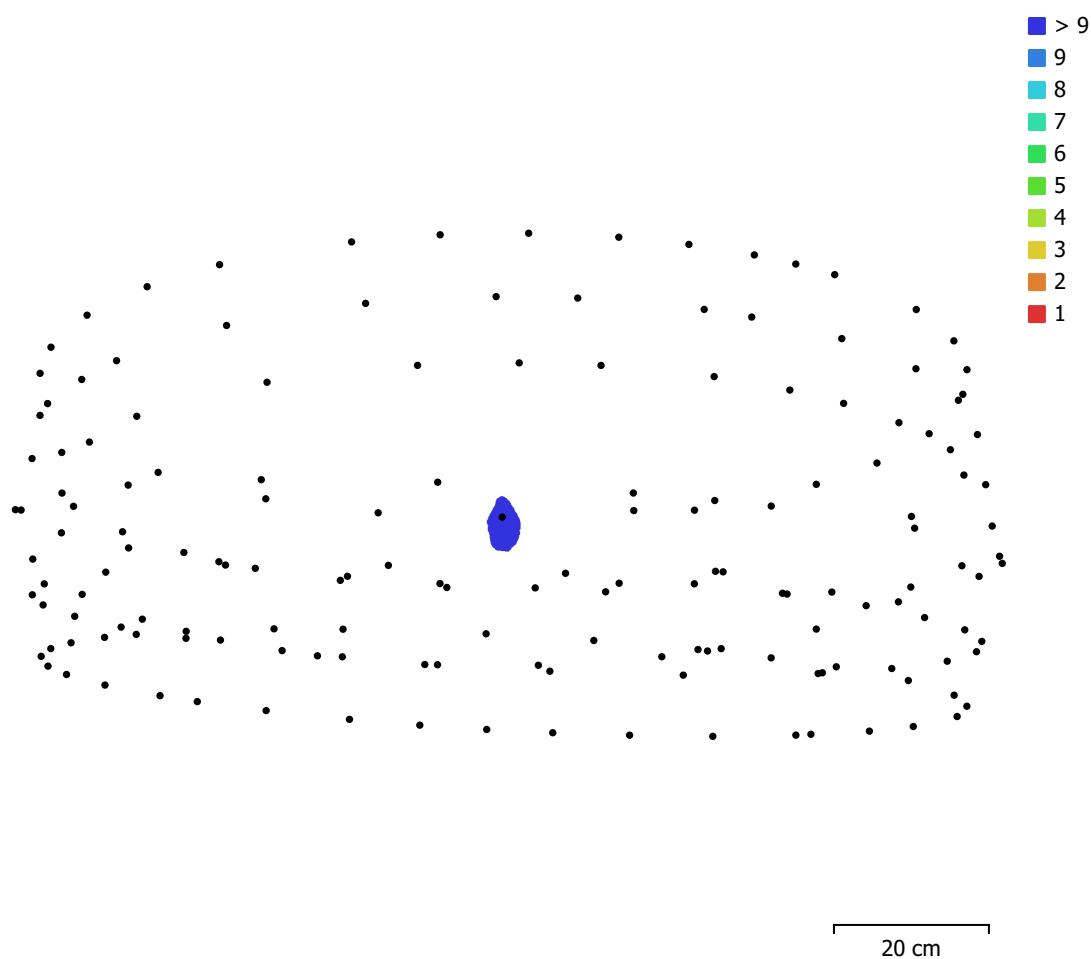


Fig. 1. Camera locations and image overlap.

Number of images:	161	Camera stations:	161
Flying altitude:	61.1 cm	Tie points:	682,767
Ground resolution:	0.0386 mm/pix	Projections:	2,381,414
Coverage area:	22.4 cm ²	Reprojection error:	0.554 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

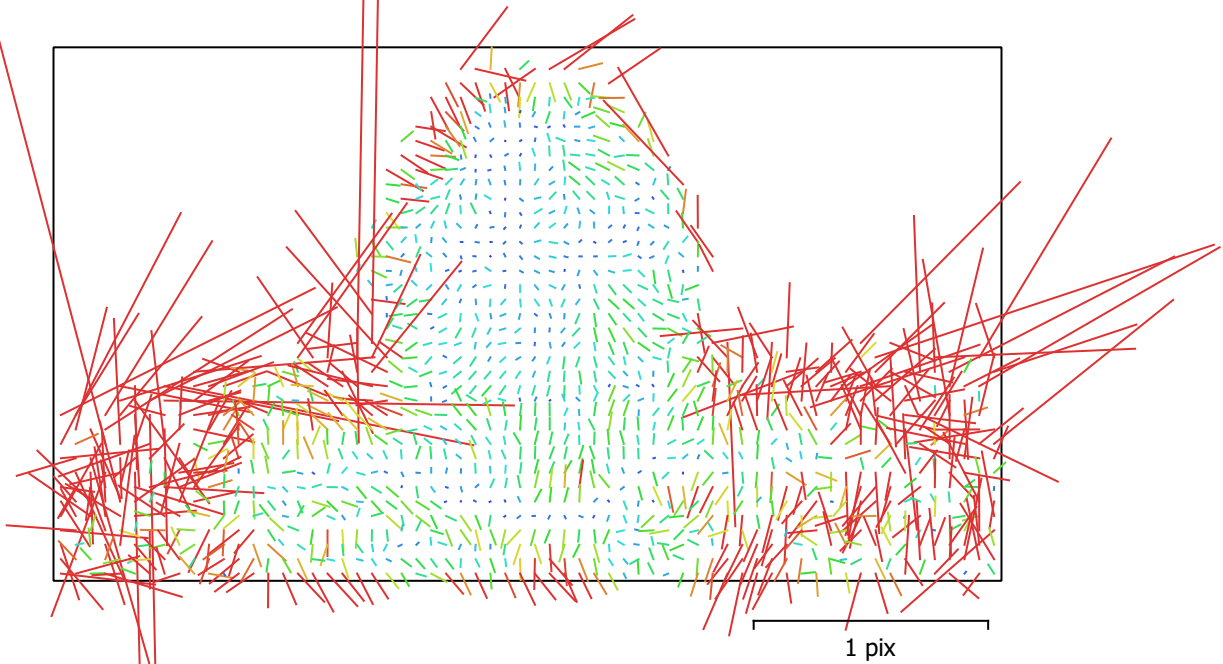


Fig. 2. Image residuals for DMC-G7 (60mm).

DMC-G7 (60mm)

82 images

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

	Value	Error	K1	K2	P1	P2
F	15831.7					
K1	-0.108132	0.0014	1.00	-0.81	-0.06	0.01
K2	2.86359	0.087		1.00	-0.02	-0.06
P1	0.00233685	3.5e-05			1.00	-0.03
P2	-0.0117213	4.7e-05				1.00

Table 2. Calibration coefficients and correlation matrix.

Camera Calibration

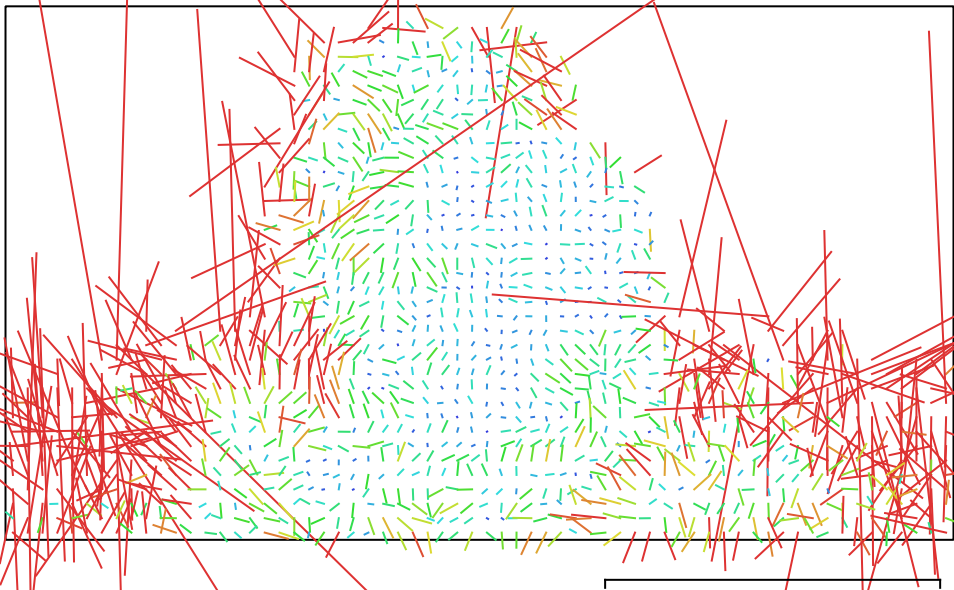


Fig. 3. Image residuals for DMC-G7 (60mm).

DMC-G7 (60mm)

79 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	0.068272	0.00066	1.00	0.08	-0.09
P1	0.00171678	2.7e-05		1.00	0.08
P2	-0.00600656	3.4e-05			1.00

Table 3. Calibration coefficients and correlation matrix.

Scale Bars

Label	Distance (m)	Error (m)
target 15_target 16	0.049648	-0.000352015
target 19_target 20	0.0503482	0.000348174
Total		0.0003501

Table 4. Control scale bars.

Digital Elevation Model

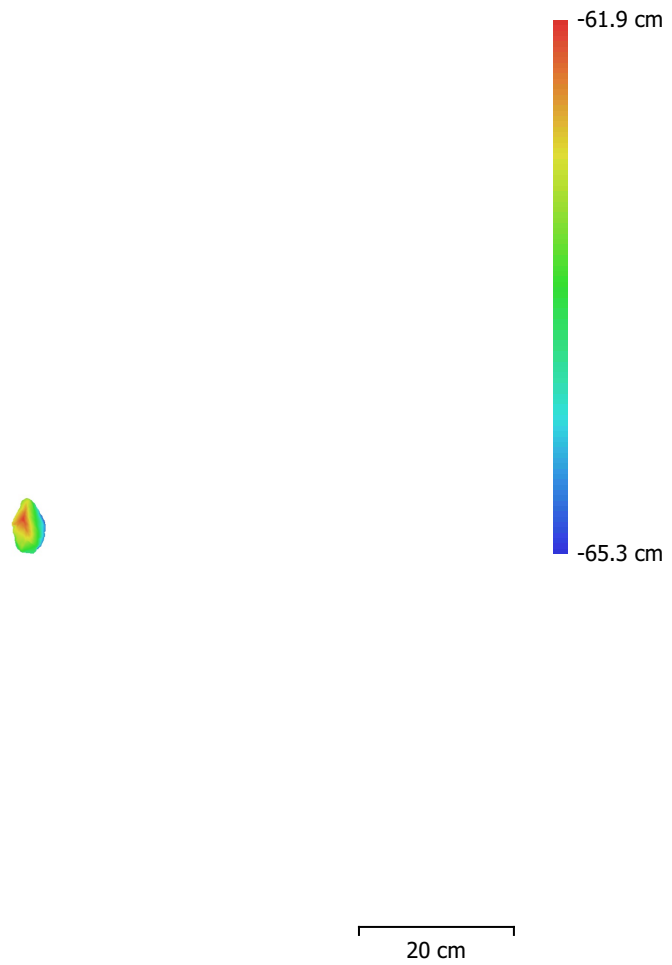


Fig. 4. Reconstructed digital elevation model.

Resolution: 0.128 mm/pix
Point density: 60.7 points/mm²

Processing Parameters

General

Cameras	161
Aligned cameras	161
Markers	6
Scale bars	2
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll

Point Cloud

Points	682,767 of 794,252
RMS reprojection error	0.253259 (0.55429 pix)
Max reprojection error	0.814547 (39.7404 pix)
Mean key point size	2.02149 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	3.89803
File size	65.16 MB

Depth Maps

Count	161
Depth maps generation parameters	
Quality	Ultra High
Filtering mode	Mild
Max neighbors	16
Processing time	10 minutes 20 seconds
Memory usage	8.06 GB
Date created	2024:06:14 20:40:07
Software version	1.8.4.14671
File size	232.79 MB

Model

Faces	316,374
Vertices	158,189
Vertex colors	3 bands, uint8
Texture	16,000 x 16,000 x 2, 4 bands, uint8

Depth maps generation parameters

Quality	Ultra High
Filtering mode	Mild
Max neighbors	16
Processing time	10 minutes 20 seconds
Memory usage	8.06 GB

Reconstruction parameters

Surface type	Arbitrary
Source data	Depth maps
Interpolation	Enabled
Strict volumetric masks	No
Processing time	2 minutes 3 seconds
Memory usage	8.41 GB

Texturing parameters

Mapping mode	Generic
Blending mode	Mosaic
Texture size	16,000
Enable hole filling	Yes

Enable ghosting filter	Yes
UV mapping time	19 seconds
UV mapping memory usage	798.85 MB
Blending time	1 minutes 28 seconds
Blending memory usage	13.69 GB
Blending GPU memory usage	11.90 GB
Date created	2024:06:14 20:42:10
Software version	1.8.4.14671
File size	203.50 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