

Agisoft Metashape

Processing Report

24 June 2024



Survey Data

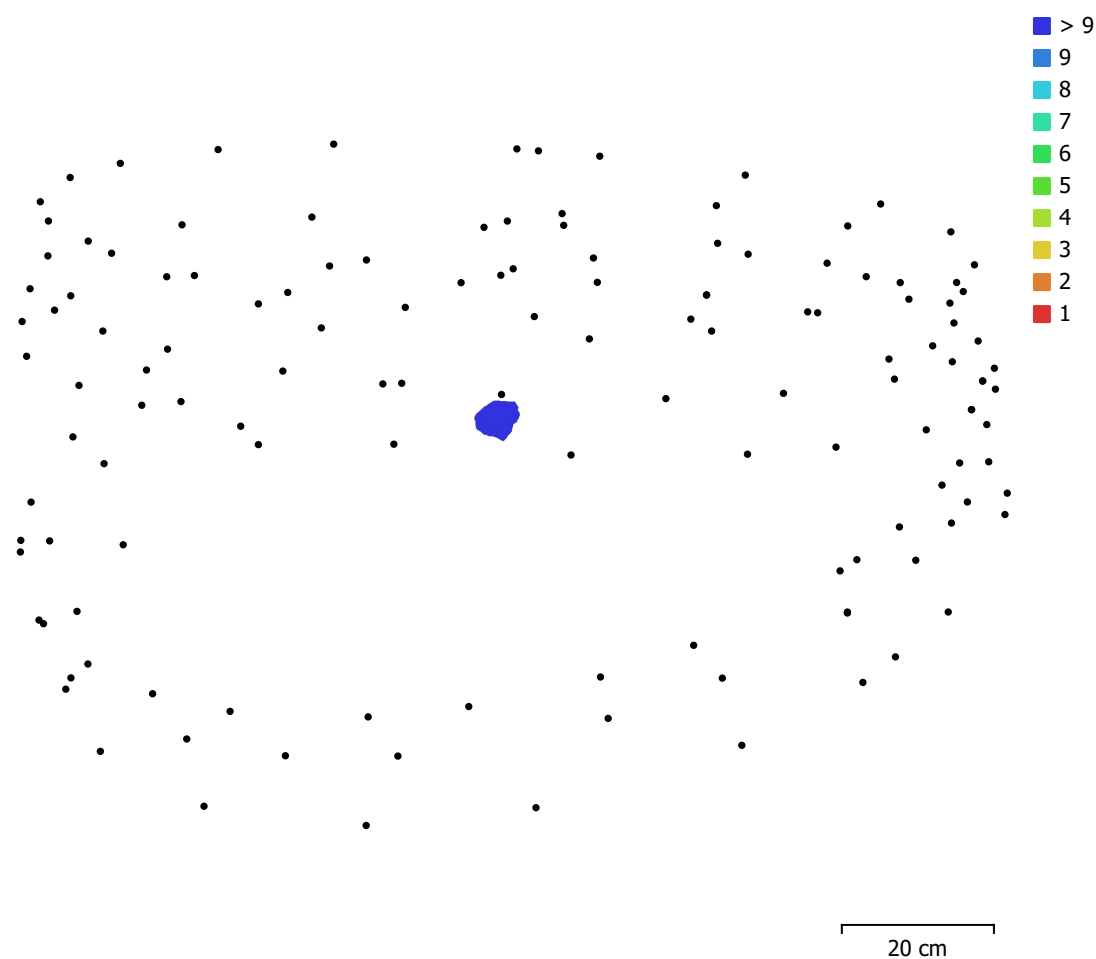


Fig. 1. Camera locations and image overlap.

Number of images:	136	Camera stations:	136
Flying altitude:	63.5 cm	Tie points:	171,362
Ground resolution:	0.0437 mm/pix	Projections:	722,870
Coverage area:	22.4 cm ²	Reprojection error:	0.683 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
DMC-G7 (55mm)	4592 x 2584	55 mm	3.8 x 3.8 μm	No
DMC-G7 (55mm)	4592 x 2584	55 mm	3.8 x 3.8 μm	No

Table 1. Cameras.

Camera Calibration

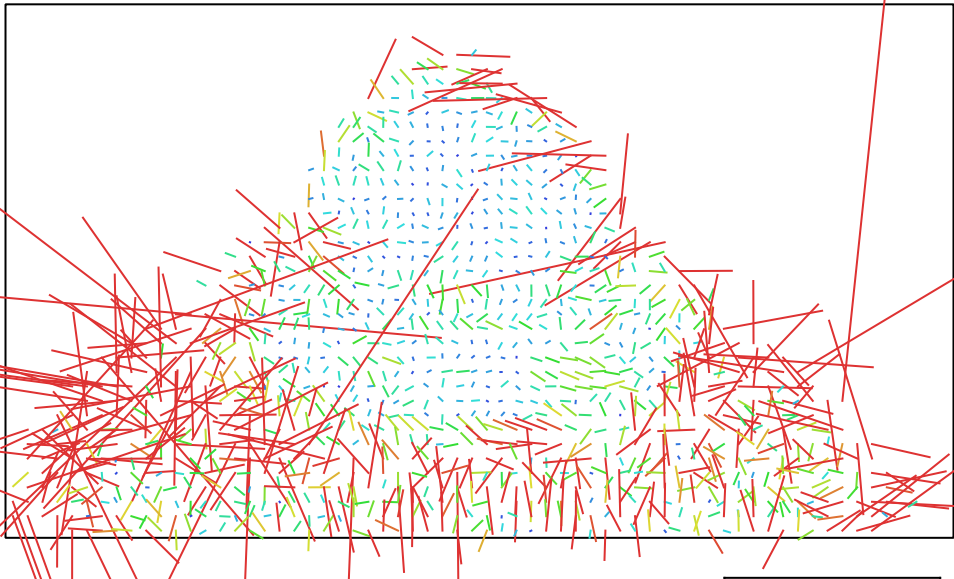


Fig. 2. Image residuals for DMC-G7 (55mm).

DMC-G7 (55mm)

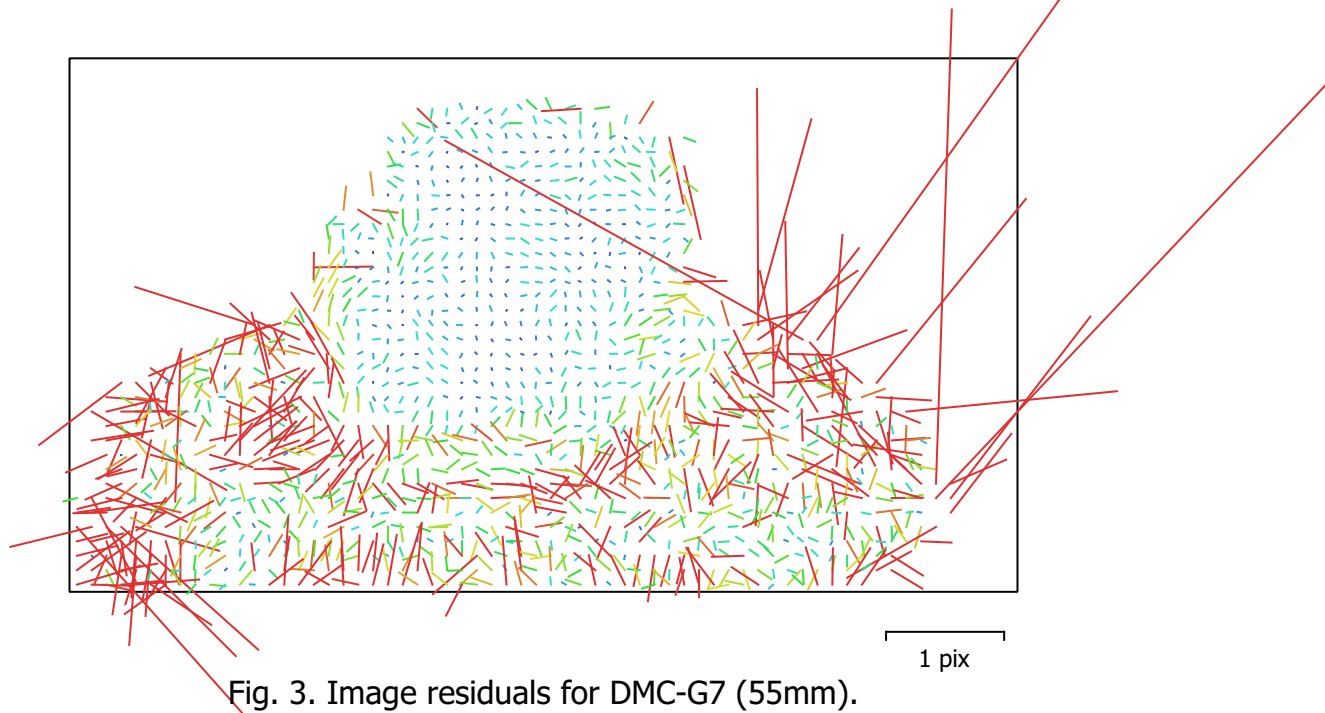
68 images

Type	Resolution	Focal Length	Pixel Size
Frame	4592 x 2584	55 mm	3.8 x 3.8 μm

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	14666.2	4.1	1.00	0.52	-0.13	-0.25	-0.17	0.30	-0.06	0.01
Cx	1053.34	6.3		1.00	-0.07	-0.36	-0.32	0.53	0.09	-0.26
Cy	448.815	4.9			1.00	-0.25	0.11	-0.07	-0.35	-0.37
K1	-0.152876	0.0052				1.00	-0.61	0.36	0.71	0.27
K2	8.48102	0.16					1.00	-0.94	-0.39	-0.01
K3	-103.432	2.4						1.00	0.30	-0.07
P1	0.0298001	0.00022							1.00	0.30
P2	-0.000755921	8.4e-05								1.00

Table 2. Calibration coefficients and correlation matrix.

Camera Calibration



DMC-G7 (55mm)

68 images

Type	Resolution	Focal Length	Pixel Size
Frame	4592 x 2584	55 mm	3.8 x 3.8 μm

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	14216.8	4.1	1.00	-0.09	-0.05	-0.11	0.17	-0.19	-0.11	-0.07
Cx	-86.5078	2.6		1.00	0.16	0.18	-0.28	0.35	0.83	0.15
Cy	814.969	3.8			1.00	-0.37	-0.05	0.31	0.17	0.51
K1	-0.158274	0.0053				1.00	-0.81	0.59	0.06	0.02
K2	34.2983	0.47					1.00	-0.94	-0.14	0.03
K3	-1090.09	17						1.00	0.23	0.06
P1	0.00357336	0.0001							1.00	0.20
P2	0.024594	0.00014								1.00

Table 3. Calibration coefficients and correlation matrix.

Scale Bars

Label	Distance (m)	Error (m)
target 19_target 20	0.05	-6.93889e-18
Total		6.93889e-18

Table 4. Control scale bars.

Digital Elevation Model

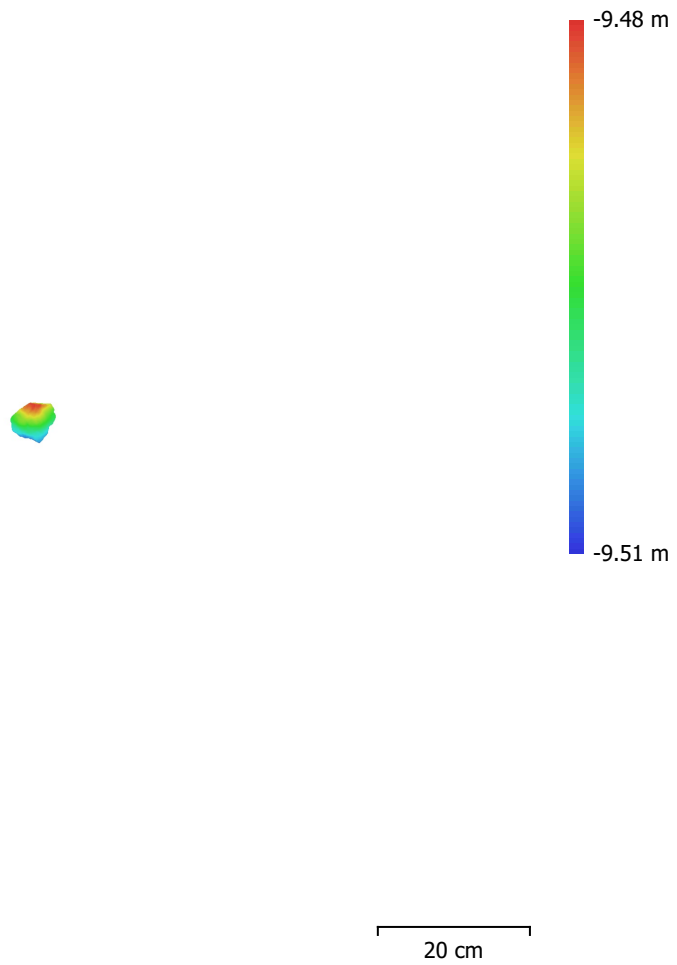


Fig. 4. Reconstructed digital elevation model.

Resolution: 0.139 mm/pix
Point density: 51.8 points/mm²

Processing Parameters

General

Cameras	136
Aligned cameras	136
Markers	4
Scale bars	1
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll

Point Cloud

Points	171,362 of 208,254
RMS reprojection error	0.2021 (0.683452 pix)
Max reprojection error	0.68561 (35.5705 pix)
Mean key point size	2.97805 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	4.75469
File size	19.64 MB

Depth Maps

Count	136
Depth maps generation parameters	
Quality	Ultra High
Filtering mode	Mild
Max neighbors	16
Processing time	8 minutes 21 seconds
Memory usage	8.21 GB
Date created	2024:06:15 15:28:57
Software version	1.8.4.14671
File size	113.44 MB

Model

Faces	293,220
Vertices	146,612
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	8 minutes 21 seconds
Memory usage	8.21 GB

Reconstruction parameters

Surface type	Arbitrary
Source data	Depth maps
Interpolation	Enabled
Strict volumetric masks	No
Processing time	1 minutes 25 seconds
Memory usage	8.64 GB

Texturing parameters

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

Enable ghosting filter	Yes
UV mapping time	36 seconds
UV mapping memory usage	550.57 MB
Blending time	1 minutes 22 seconds
Blending memory usage	14.37 GB
Blending GPU memory usage	11.90 GB
Date created	2024:06:15 15:30:22
Software version	1.8.4.14671
File size	214.41 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