Agisoft Metashape

Processing Report
24 June 2024

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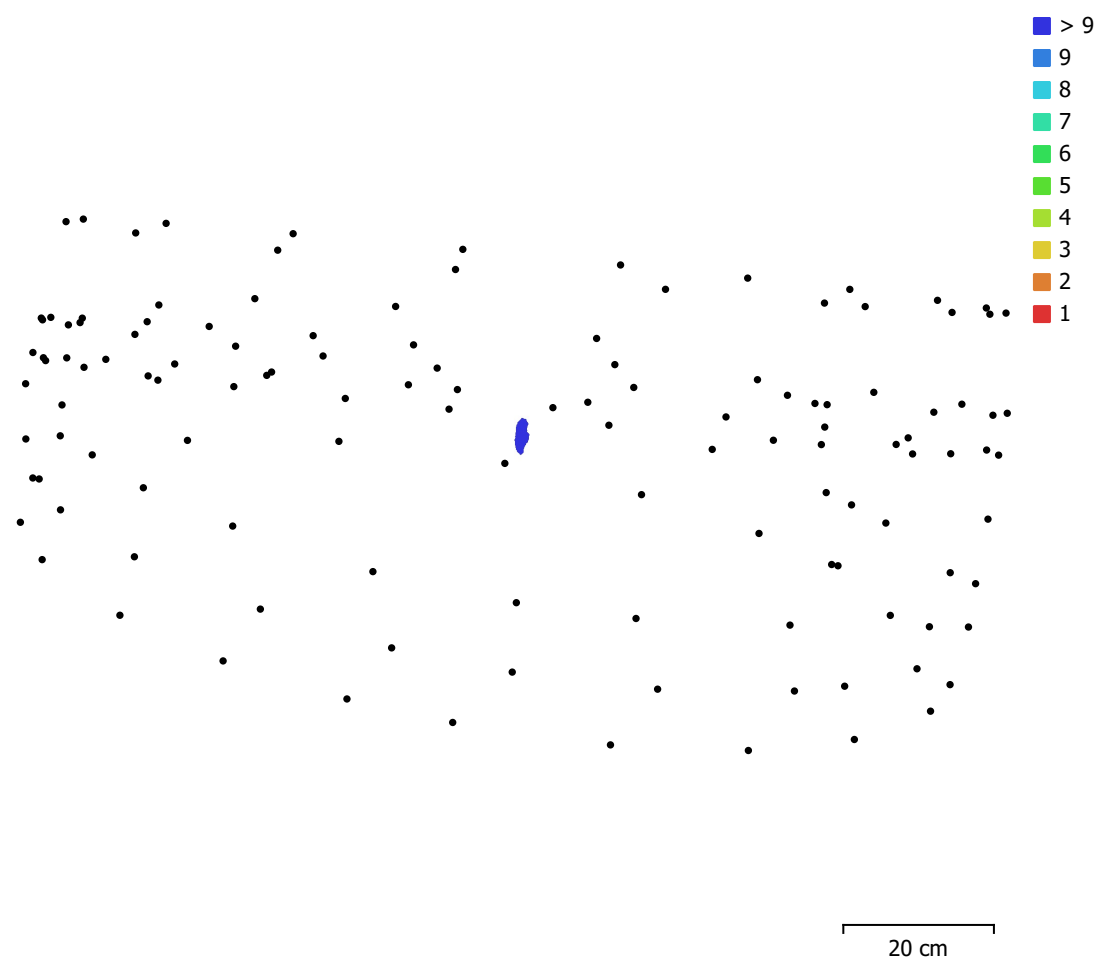
Fig. 1. Camera locations and image overlap.

	> 9
	9
	8
	7
	6
	5
	4
	3
	2
	1

20 cm

Number of images:	127	Camera stations:	127
Flying altitude:	64.4 cm	Tie points:	77,130
Ground resolution:	0.0407 mm/pix	Projections:	288,076
Coverage area:	6.6 cm²	Reprojection error:	0.6 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
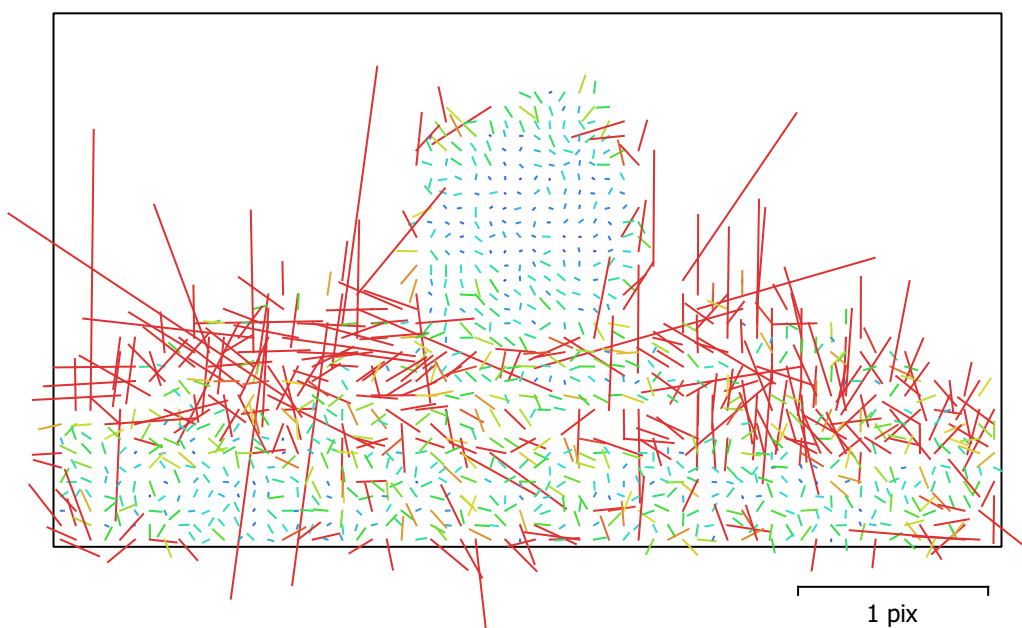
Fig. 2. Image residuals for DMC-G7 (60mm).

DMC-G7 (60mm)

64 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	0.0602128	0.0014	1.00	0.07	-0.25
P1	0.00139848	5.9e-05		1.00	0.02
P2	-0.00283576	0.00015			1.00

Table 2. Calibration coefficients and correlation matrix.

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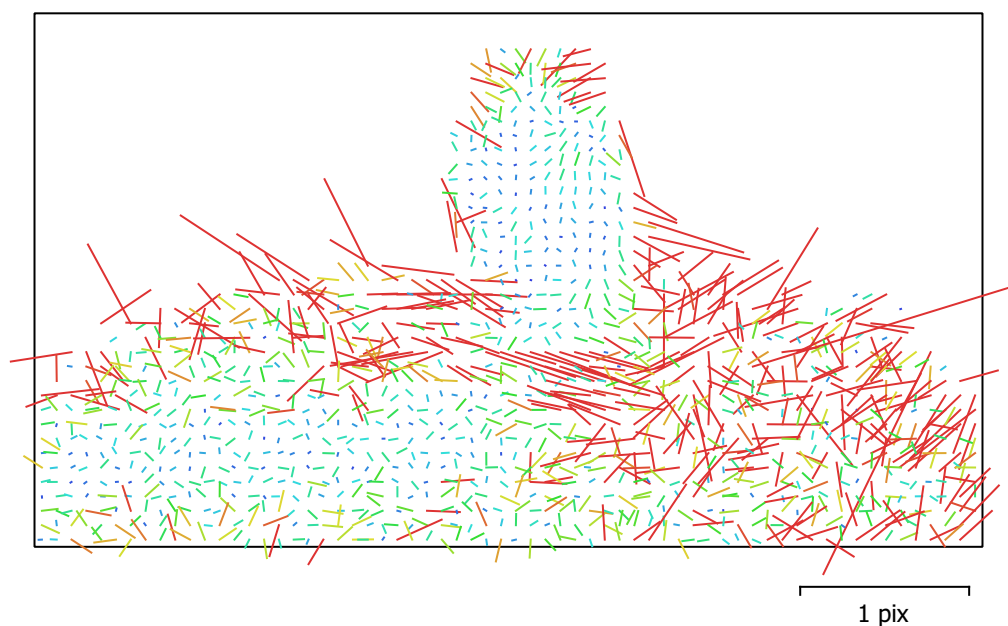
Fig. 3. Image residuals for DMC-G7 (60mm).

DMC-G7 (60mm)

63 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	**0.00233318**	7.3e-05	1.00	-0.08
P2	**-0.00289814**	0.00014		1.00

Table 3. Calibration coefficients and correlation matrix.

Scale Bars

Label	Distance (m)	Error (m)
target 19_target 20	0.05	6.73073e-16
Total		**6.73073e-16**

Table 4. Control scale bars.

Digital Elevation Model

-67.1 cm

-69.1 cm

20 cm
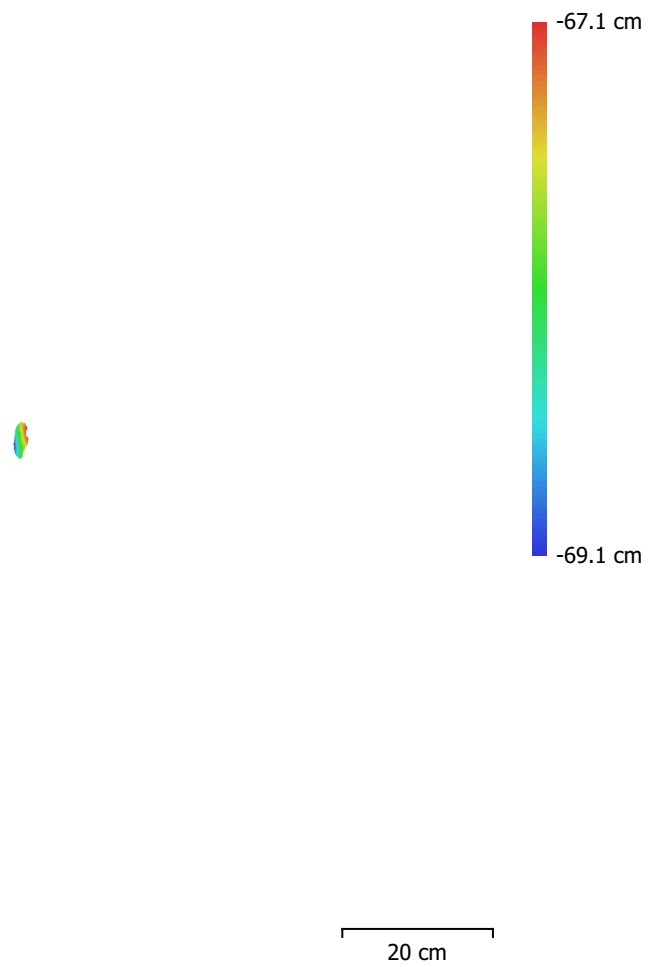
Fig. 4. Reconstructed digital elevation model.

Resolution: 0.148 mm/pix
Point density: 45.4 points/mm²

Processing Parameters

General

Cameras	127
Aligned cameras	127
Markers	4
Scale bars	1
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll

Point Cloud

Points	77,130 of 103,824
RMS reprojection error	0.171133 (0.599702 pix)
Max reprojection error	0.555408 (36.0807 pix)
Mean key point size	2.95794 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	3.9577
File size	8.35 MB

Depth Maps

Count	127

    Depth maps generation parameters

Quality	Ultra High
Filtering mode	Mild
Max neighbors	16
Processing time	7 minutes 27 seconds
Memory usage	6.75 GB
Date created	2024:06:14 14:41:30
Software version	1.8.4.14671
File size	56.99 MB

Model

Faces	68,920
Vertices	34,462
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	7 minutes 27 seconds
Memory usage	6.75 GB

    Reconstruction parameters

Surface type	Arbitrary
Source data	Depth maps
Interpolation	Enabled
Strict volumetric masks	No
Processing time	1 minutes 5 seconds
Memory usage	10.91 GB

    Texturing parameters

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

Enable ghosting filter	Yes
UV mapping time	9 seconds
UV mapping memory usage	893.29 MB
Blending time	1 minutes 15 seconds
Blending memory usage	12.64 GB
Blending GPU memory usage	11.89 GB
Date created	2024:06:14 14:42:35
Software version	1.8.4.14671
File size	110.14 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