

# Agisoft Metashape

Processing Report

03 July 2024



# Survey Data

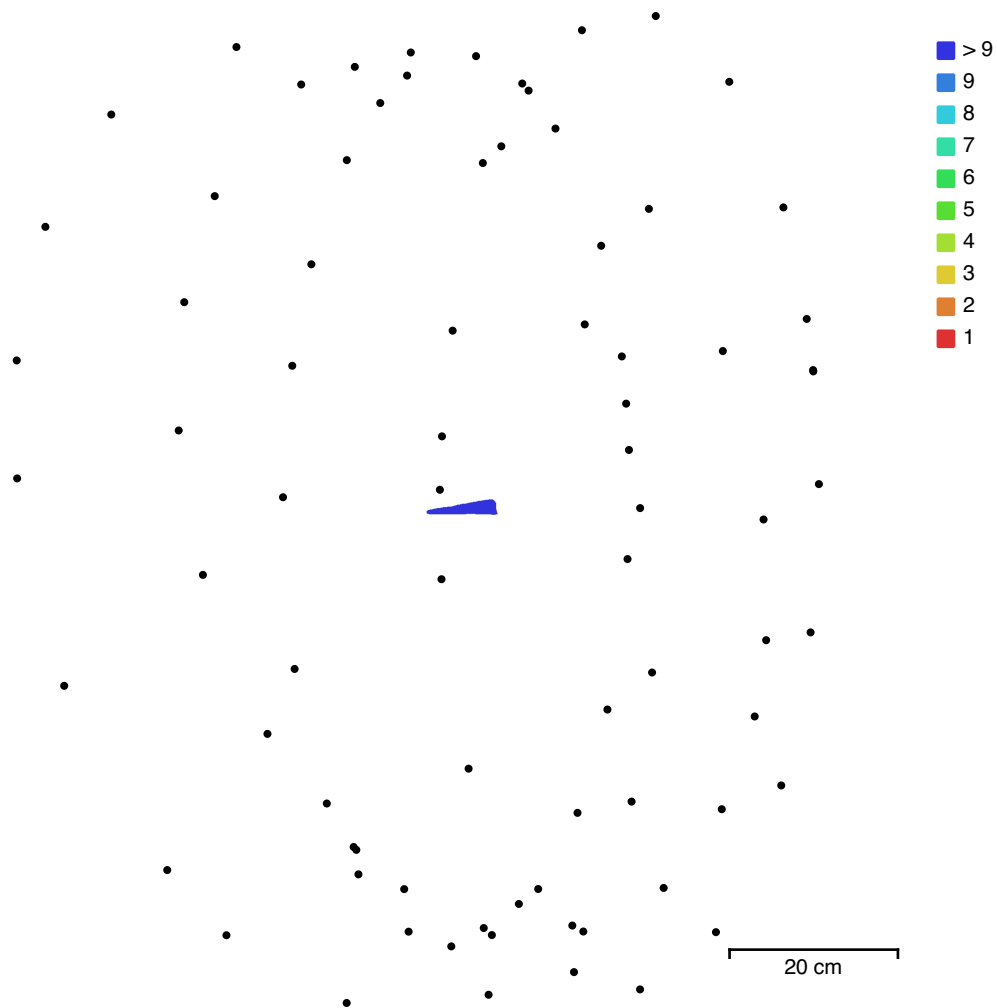


Fig. 1. Camera locations and image overlap.

Number of images:	80	Camera stations:	80
Flying altitude:	54.7 cm	Tie points:	58,320
Ground resolution:	0.0346 mm/pix	Projections:	170,797
Coverage area:	9.76 cm <sup>2</sup>	Reprojection error:	0.516 pix

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

Table 1. Cameras.

# Camera Calibration

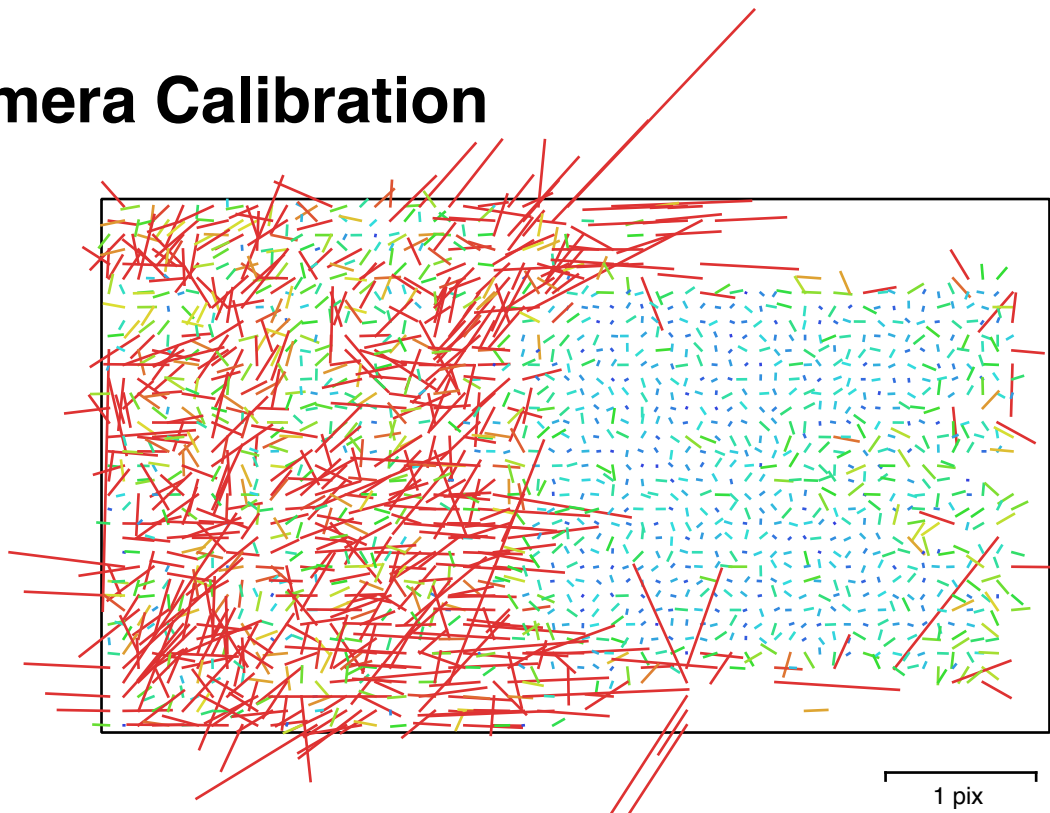


Fig. 2. Image residuals for DMC-G7 (60mm).

## DMC-G7 (60mm)

37 images

Type	Resolution	Focal Length	Pixel Size
Frame	4592 x 2584	60 mm	3.79 x 3.79 $\mu\text{m}$

	Value	Error	K1	P1	P2
F	15831.7				
K1	0.0620081	0.0024	1.00	0.13	-0.00
P1	-0.00291381	0.00022		1.00	0.04
P2	-0.00648237	0.00011			1.00

Table 2. Calibration coefficients and correlation matrix.

# Camera Calibration

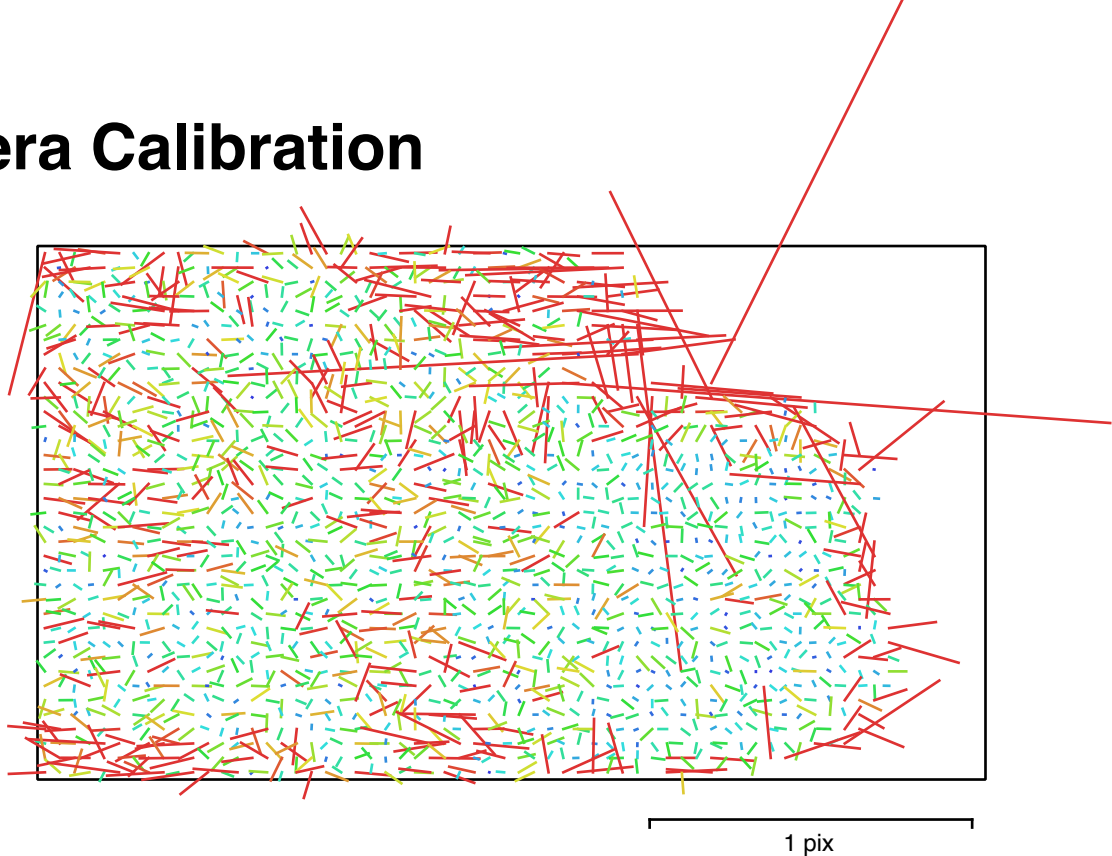


Fig. 3. Image residuals for DMC-G7 (60mm).

## DMC-G7 (60mm)

43 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	0.0944968	0.0012	1.00	0.43	-0.17
P1	0.0042137	0.00011		1.00	-0.07
P2	-0.0034842	5.6e-05			1.00

Table 3. Calibration coefficients and correlation matrix.

# Scale Bars

Label	Distance (m)	Error (m)
point 1_point 2	0.05	1.38778e-17
<b>Total</b>		<b>1.38778e-17</b>

Table 4. Control scale bars.

# Digital Elevation Model

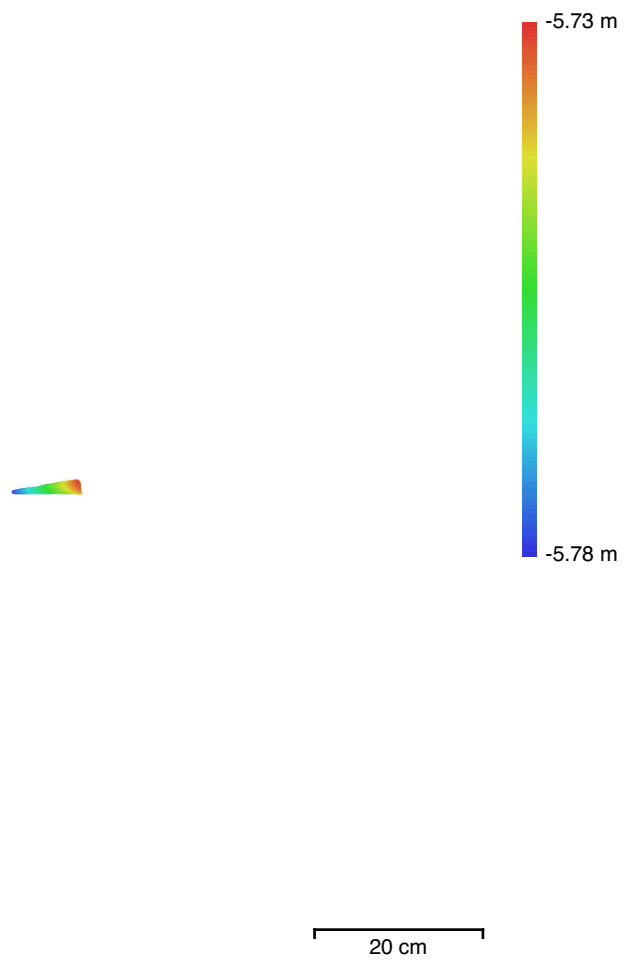


Fig. 4. Reconstructed digital elevation model.

Resolution: 0.173 mm/pix  
Point density: 33.4 points/mm<sup>2</sup>

# Processing Parameters

## General

Images	80
Aligned images	80
Markers	2
Scale bars	1
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll

## Tie Points

Points	58,320 of 83,823
RMS reprojection error	0.140526 (0.515722 pix)
Max reprojection error	0.627545 (14.1242 pix)
Mean key point size	3.09769 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	3.11732
File size	5.57 MB

## Depth Maps

Count	80
<b>Depth maps generation parameters</b>	
Quality	High
Filtering mode	Mild
Max neighbors	16
Processing time	3 minutes 32 seconds
Memory usage	1.53 GB
Date created	2024:06:30 16:28:50
Software version	2.1.1.17821
File size	15.70 MB

## Model

Faces	179,198
Vertices	89,601
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	13 seconds
UV mapping memory usage	275.82 MB
Blending time	2 minutes 51 seconds
Blending memory usage	8.53 GB
File size	55.46 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