

Agisoft Metashape

Processing Report
22 May 2022



Survey Data

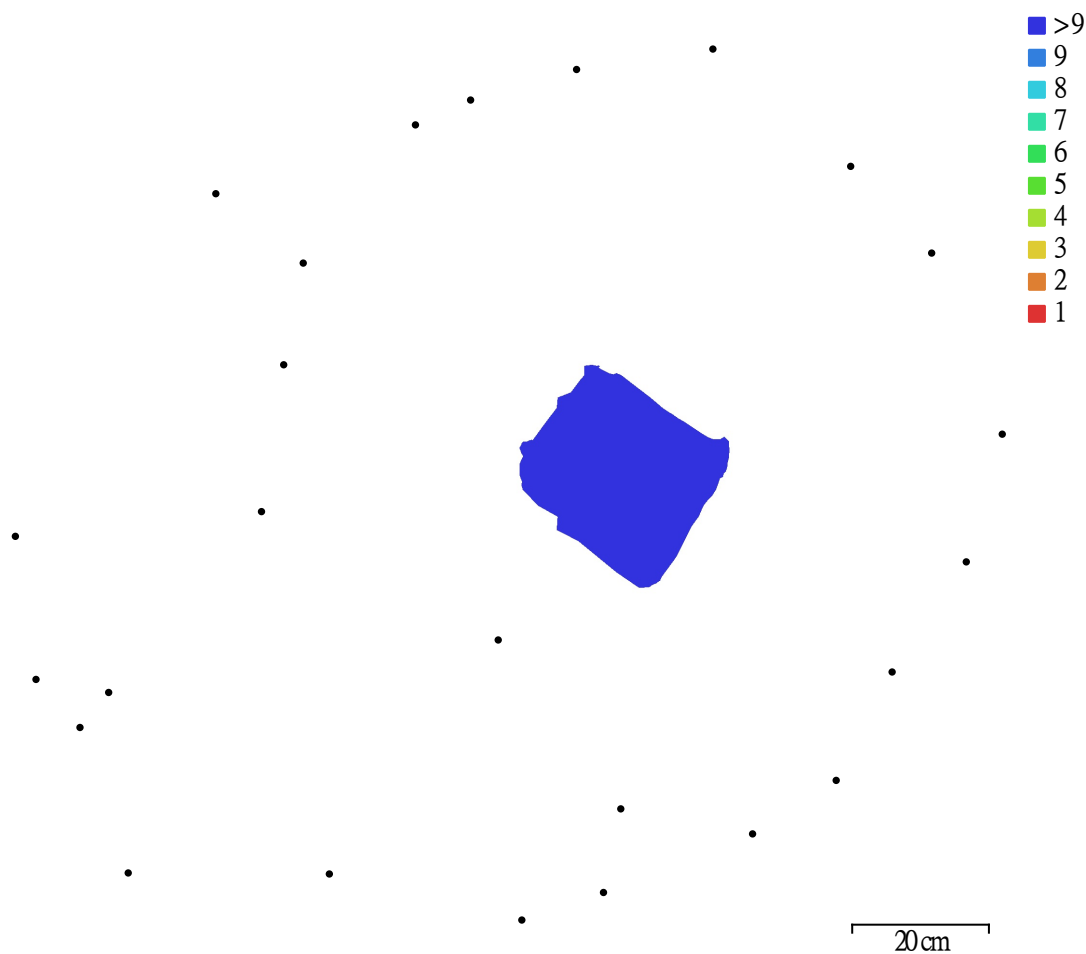


Fig. 1. Camera locations and image overlap.

Number of images:	25	Camera stations:	25
Flying altitude:	78.6 cm	Tie points:	16,964
Ground resolution:	0.264 mm/pix	Projections:	59,060
Coverage area:	598 cm ²	Reprojection error:	2.55 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
iPhone 13 mini, iPhone 13 mini back du...	4032 x 3024	5.1 mm	1.68 x 1.68 μm	No

Table 1. Cameras.

Camera Calibration

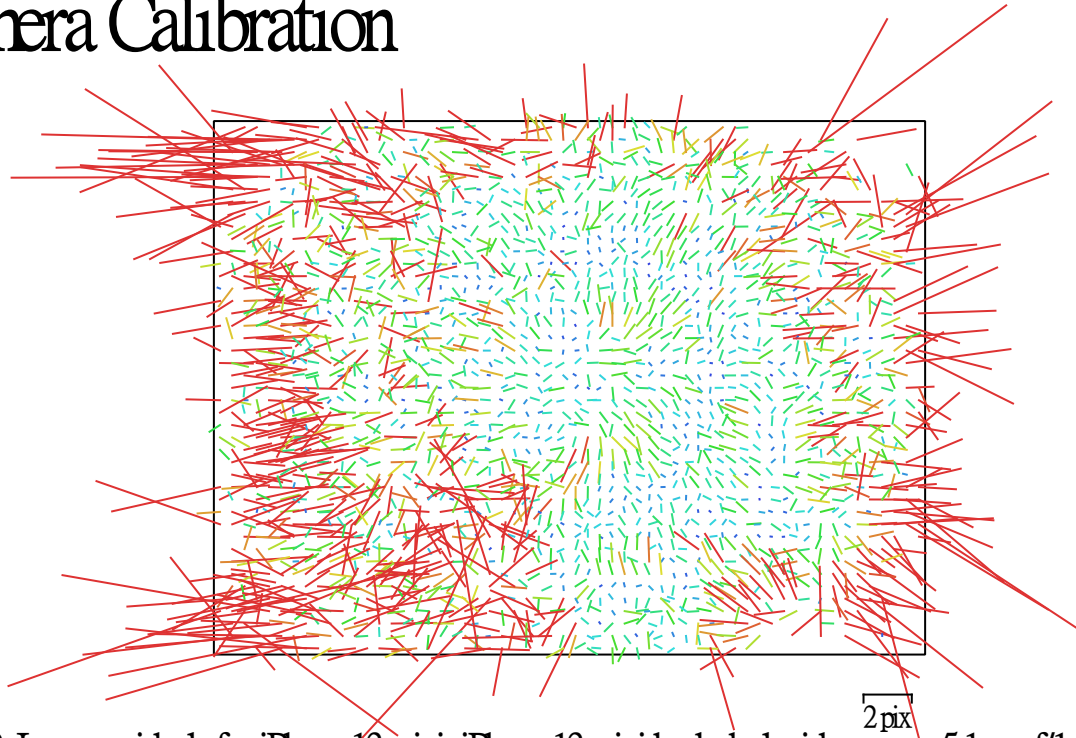


Fig. 2. Image residuals for iPhone 13 mini, iPhone 13 mini back dual wide camera 5.1mm f/1.6 (5.1mm).

iPhone 13 mini, iPhone 13 mini back dual wide camera 5.1mm f/1.6 (5.1mm)

25 images

Type	Resolution	Focal Length	Pixel Size
Frame	4032 x 3024	5.1 mm	1.68 x 1.68 μm

	Value	Error	F	K1	P1	P2
F	3146.68	0.48	1.00	0.27	0.36	-0.17
K1	0.000335783	0.00025		1.00	-0.36	-0.18
P1	-0.0047287	4.9e-05			1.00	-0.15
P2	0.00046805	2e-05				1.00

Table 2. Calibration coefficients and correlation matrix.

Camera Locations

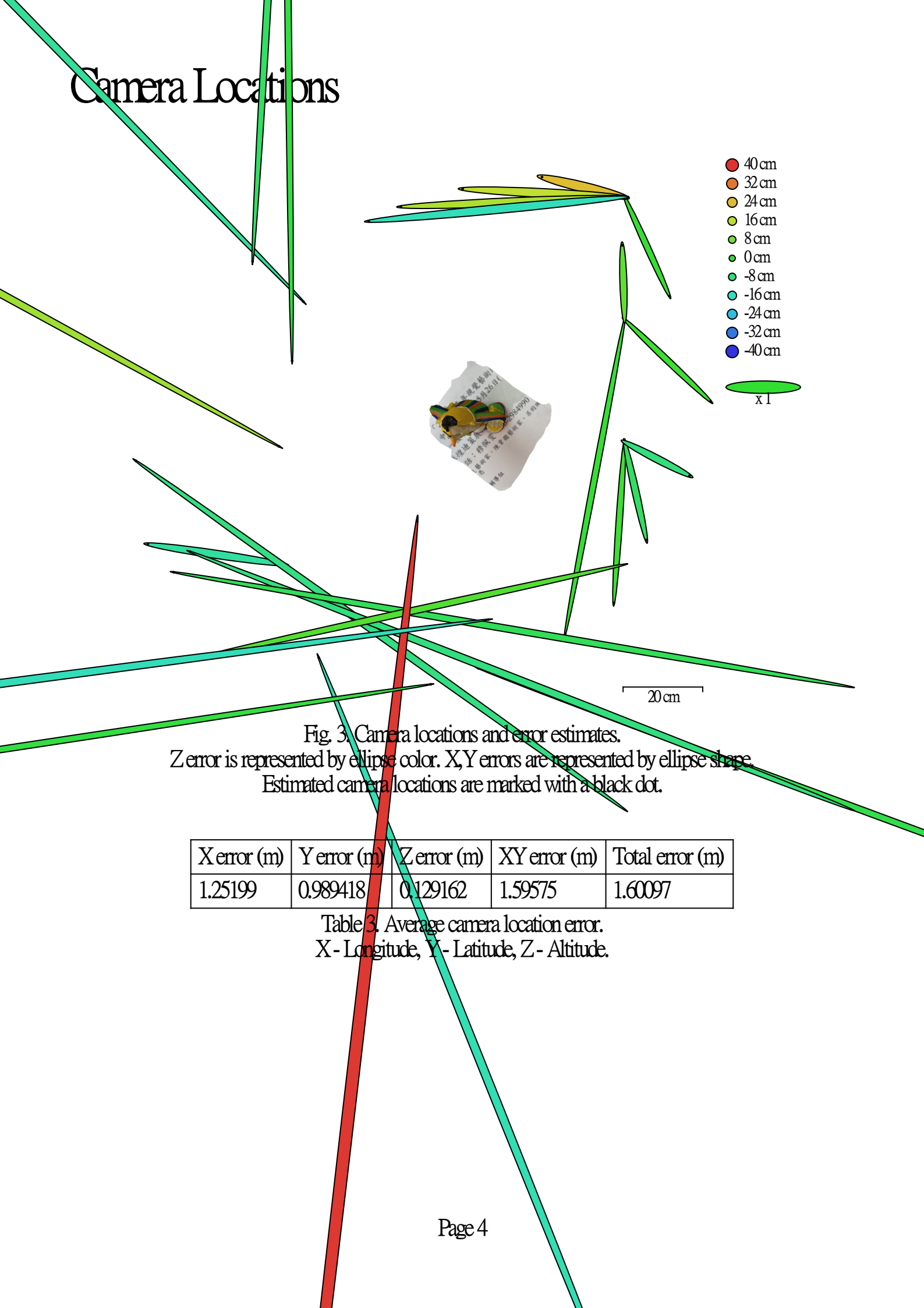


Fig. 3. Camera locations and error estimates.
Z error is represented by ellipse color. X,Y errors are represented by ellipse shape.
Estimated camera locations are marked with a black dot.

X error (m)	Y error (m)	Z error (m)	XY error (m)	Total error (m)
1.25199	0.989418	0.129162	1.59575	1.60097

Table 3. Average camera location error.
X - Longitude, Y - Latitude, Z - Altitude.

Digital Elevation Model

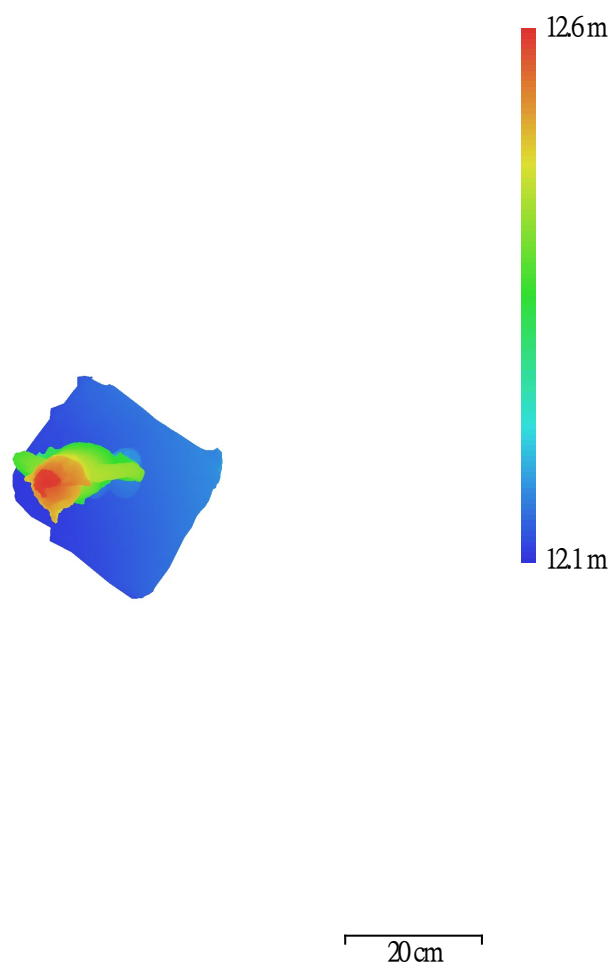


Fig. 4. Reconstructed digital elevation model.

Resolution: 1.34 mm/pix
Point density: 55.8 points/cm²

Processing Parameters

General

Cameras	25
Aligned cameras	25
Coordinate system	WGS 84 (EPSG:4326)
Rotation angles	Yaw, Pitch, Roll

Point Cloud

Points	16,964 of 23,439
RMS reprojection error	0.43821 (2.54994 pix)
Max reprojection error	1.34919 (45.164 pix)
Mean key point size	5.99808 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	3.74726

Alignment parameters

Accuracy	High
Generic preselection	No
Reference preselection	No
Key point limit	40,000
Key point limit per Mpx	1,000
Tie point limit	4,000
Exclude stationary tie points	Yes
Guided image matching	No
Adaptive camera model fitting	Yes
Matching time	36 seconds
Matching memory usage	663.53 MB
Alignment time	33 seconds
Alignment memory usage	18.61 MB
Date created	2022:05:22 03:46:08
Software version	1.8.3.14331
File size	1.80 MB

Depth Maps

Count	25
Depth maps generation parameters	
Quality	High
Filtering mode	Moderate
Max neighbors	16
Processing time	19 minutes 34 seconds
File size	22.79 MB

Dense Point Cloud

Points	732,142
Point colors	3 bands, uint8
Depth maps generation parameters	
Quality	High
Filtering mode	Moderate
Max neighbors	16
Processing time	19 minutes 34 seconds
Dense cloud generation parameters	
Processing time	1 minutes 32 seconds
Date created	2022:05:22 04:32:31
Software version	1.8.3.14331
File size	41.87 MB

Model	
Faces	76,928
Vertices	38,500
Vertex colors	3 bands, uint8
Texture	1,024 x 1,024 x 4, 4 bands, uint8
Depth maps generation parameters	
Quality	High
Filtering mode	Moderate
Max neighbors	16
Processing time	19 minutes 34 seconds
Reconstruction parameters	
Surface type	Arbitrary
Source data	Dense cloud
Interpolation	Enabled
Strict volumetric masks	No
Processing time	27 seconds
Memory usage	630.62 MB
Texturing parameters	
Mapping mode	Generic
Blending mode	Mosaic
Texture size	1,024
Enable hole filling	Yes
Enable ghosting filter	No
UV mapping time	42 seconds
UV mapping memory usage	80.46 MB
Blending time	5 seconds
Blending memory usage	905.95 MB
Blending GPU memory usage	352.17 MB
Date created	2022:05:22 05:14:22
Software version	1.8.3.14331
File size	7.90 MB
System	
Software name	Agisoft Metashape Professional
Software version	1.8.3 build 14331
OS	Windows 64 bit
RAM	15.92 GB
CPU	Intel(R) Core(TM) i7-8650U CPU @ 1.90GHz
GPU(s)	GeForce GTX 1060