

Agisoft Metashape

Processing Report
19 February 2026



Survey Data

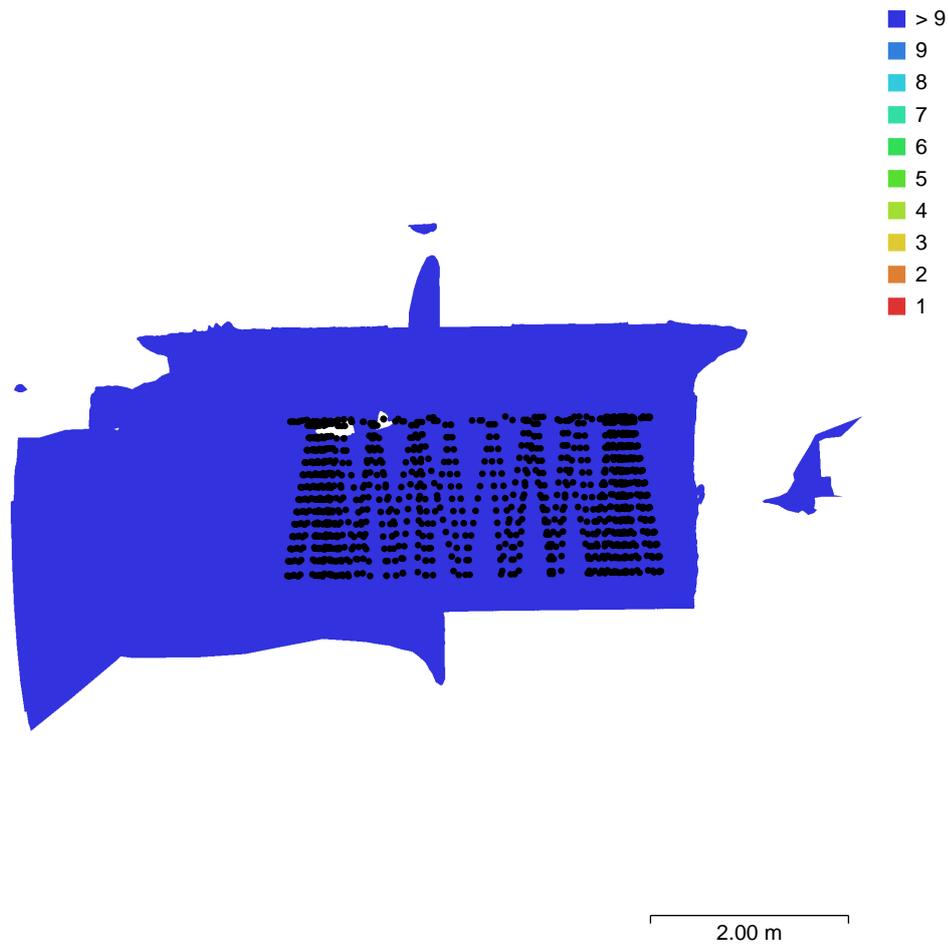


Fig. 1. Camera locations and image overlap.

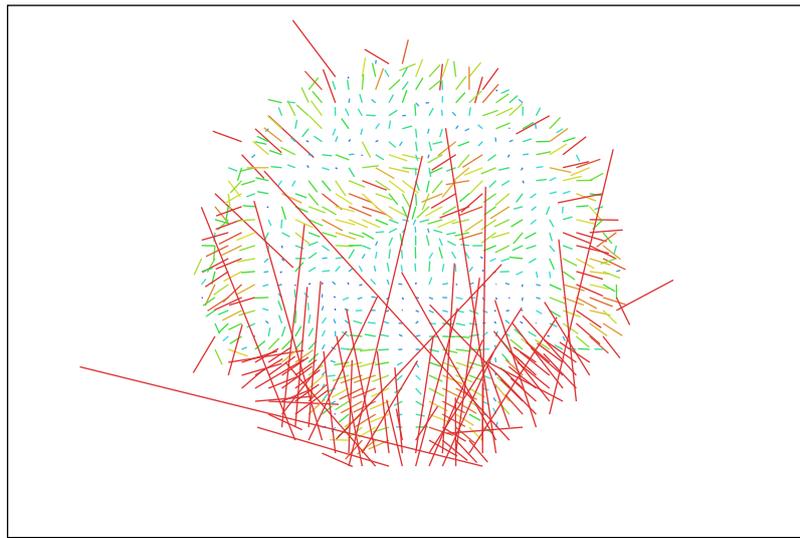
Number of images:	1,302	Camera stations:	1,302
Flying altitude:	45.2 cm	Tie points:	685,724
Ground resolution:	0.809 mm/pix	Projections:	2,328,784
Coverage area:	21.5 m ²	Reprojection error:	0.369 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
40	8660 x 5784	6 mm	4.17 x 4.17 um	No
41	8660 x 5784	6 mm	4.17 x 4.17 um	No
42	8660 x 5784	6 mm	4.17 x 4.17 um	No
43	8660 x 5784	6 mm	4.17 x 4.17 um	No
44	8660 x 5784	6 mm	4.17 x 4.17 um	No

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
45	8660 x 5784	6 mm	4.17 x 4.17 um	No
46	8660 x 5784	6 mm	4.17 x 4.17 um	No
47	8660 x 5784	6 mm	4.17 x 4.17 um	No
48	8660 x 5784	6 mm	4.17 x 4.17 um	No
49	8660 x 5784	6 mm	4.17 x 4.17 um	No
50	8660 x 5784	6 mm	4.17 x 4.17 um	No
51	8660 x 5784	6 mm	4.17 x 4.17 um	No
52	8660 x 5784	6 mm	4.17 x 4.17 um	No
53	8660 x 5784	6 mm	4.17 x 4.17 um	No

Table 1. Cameras.

Camera Calibration



1 pix

Fig. 2. Image residuals for 40.

40

93 images

Type

Resolution

Focal Length

Pixel Size

Fisheye

8660 x 5784

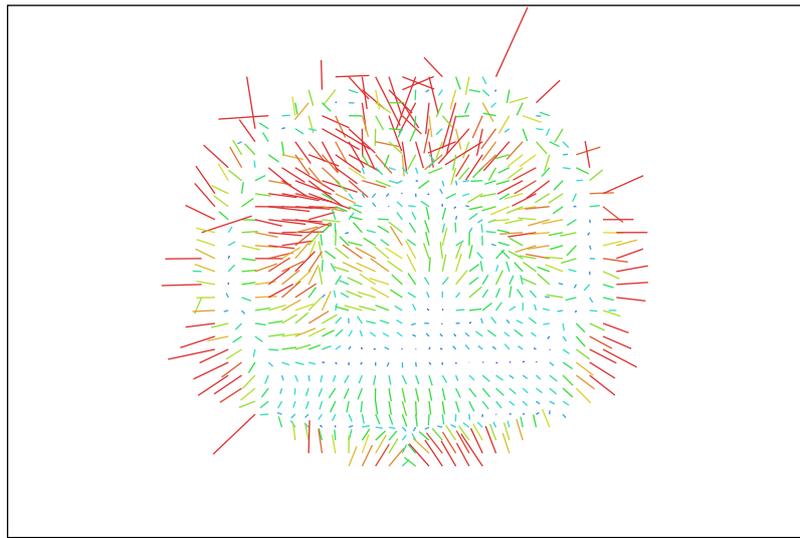
6 mm

4.17 x 4.17 um

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	1443.49	0.013	1.00	-0.00	-0.08	-0.80	0.70	-0.63	-0.00	0.17
Cx	13.7508	0.017		1.00	0.03	-0.00	0.00	-0.00	-0.57	-0.00
Cy	-22.2594	0.021			1.00	-0.03	0.02	-0.01	0.02	-0.72
K1	-0.008349	2.2e-05				1.00	-0.97	0.92	-0.03	0.07
K2	0.00382779	1.8e-05					1.00	-0.99	0.04	-0.10
K3	-0.00206986	4.7e-06						1.00	-0.04	0.12
P1	0.000224976	9.1e-07							1.00	-0.06
P2	0.000469202	1.7e-06								1.00

Table 2. Calibration coefficients and correlation matrix.

Camera Calibration



1 pix

Fig. 3. Image residuals for 41.

41

93 images

Type

Resolution

Focal Length

Pixel Size

Fisheye

8660 x 5784

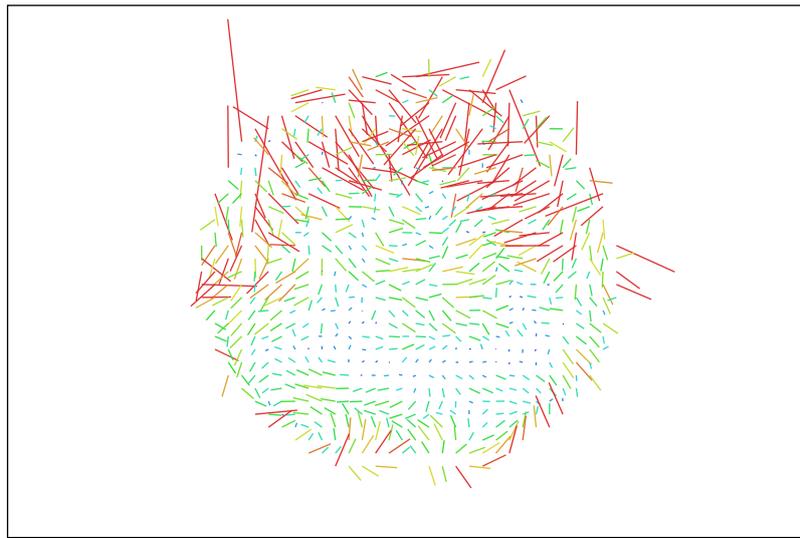
6 mm

4.17 x 4.17 um

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	1443.34	0.012	1.00	0.01	-0.02	-0.84	0.75	-0.69	-0.01	0.19
Cx	6.17282	0.015		1.00	0.03	-0.02	0.01	-0.01	-0.66	-0.04
Cy	-37.2996	0.02			1.00	0.03	-0.03	0.03	0.01	-0.76
K1	-0.0071866	1.7e-05				1.00	-0.97	0.93	-0.01	-0.06
K2	0.00245807	1.3e-05					1.00	-0.99	0.01	0.04
K3	-0.00163699	2.9e-06						1.00	-0.01	-0.04
P1	0.000178147	7.7e-07							1.00	-0.02
P2	0.0006208	1.4e-06								1.00

Table 3. Calibration coefficients and correlation matrix.

Camera Calibration



1 pix

Fig. 4. Image residuals for 42.

42

93 images

Type

Resolution

Focal Length

Pixel Size

Fisheye

8660 x 5784

6 mm

4.17 x 4.17 um

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	1437.49	0.012	1.00	-0.00	-0.01	-0.86	0.77	-0.71	-0.00	0.19
Cx	3.79389	0.014		1.00	0.02	-0.01	0.01	-0.00	-0.68	-0.04
Cy	-10.1423	0.019			1.00	0.03	-0.03	0.02	0.00	-0.79
K1	-0.00649017	1.7e-05				1.00	-0.97	0.93	-0.01	-0.07
K2	0.00184557	1.2e-05					1.00	-0.99	0.01	0.04
K3	-0.00154905	2.9e-06						1.00	-0.01	-0.04
P1	-0.000178644	7.5e-07							1.00	-0.00
P2	1.23756e-05	1.3e-06								1.00

Table 4. Calibration coefficients and correlation matrix.

Camera Calibration

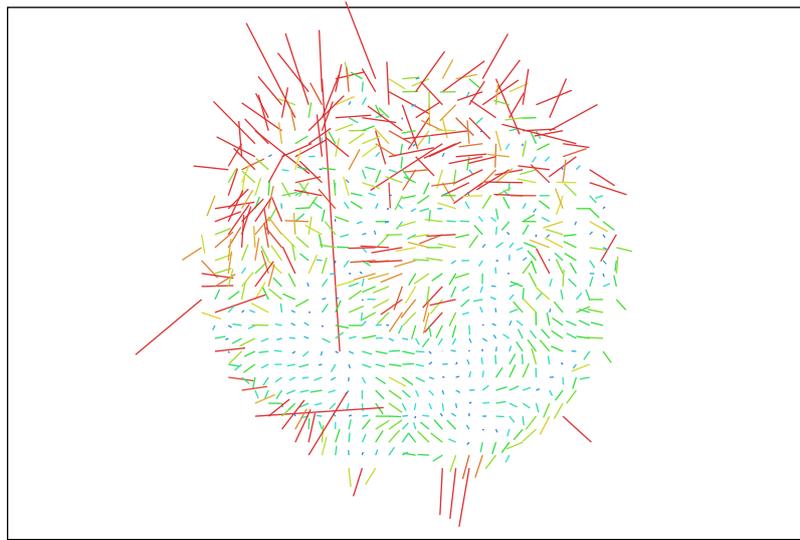


Fig. 5. Image residuals for 43.

43

93 images

Type	Resolution	Focal Length	Pixel Size
Fisheye	8660 x 5784	6 mm	4.17 x 4.17 um

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	1450.79	0.013	1.00	0.00	0.00	-0.86	0.78	-0.72	-0.01	0.18
Cx	-0.270488	0.013		1.00	0.02	-0.02	0.01	-0.01	-0.70	-0.03
Cy	-48.3765	0.02			1.00	0.03	-0.02	0.01	0.00	-0.81
K1	-0.00649922	1.7e-05				1.00	-0.97	0.93	0.00	-0.08
K2	0.00158446	1.2e-05					1.00	-0.99	0.00	0.04
K3	-0.00148813	2.8e-06						1.00	-0.00	-0.03
P1	0.000210062	7.5e-07							1.00	0.00
P2	-0.000197177	1.3e-06								1.00

Table 5. Calibration coefficients and correlation matrix.

Camera Calibration

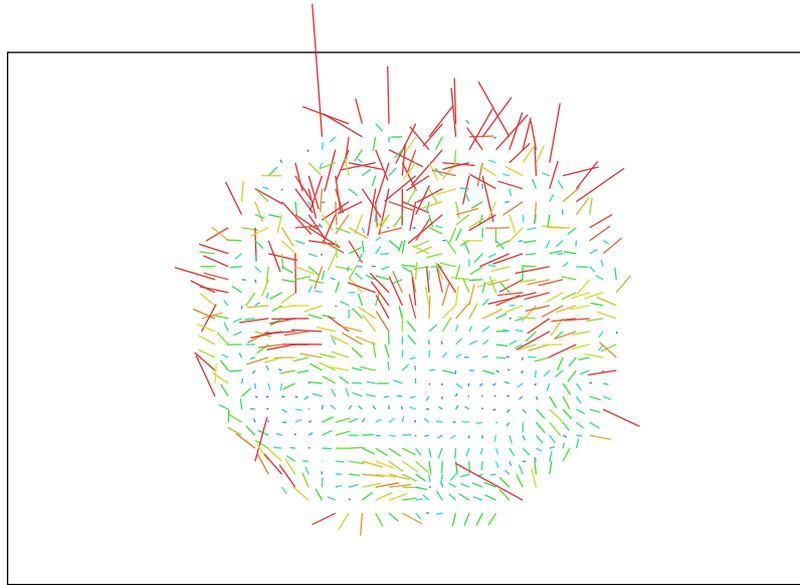


Fig. 6. Image residuals for 44.

44

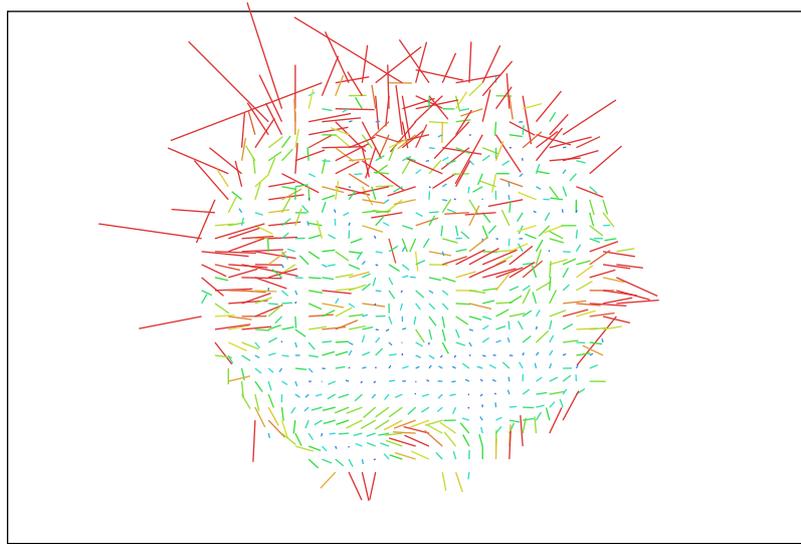
93 images

Type	Resolution	Focal Length	Pixel Size
Fisheye	8660 x 5784	6 mm	4.17 x 4.17 um

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	1444.98	0.013	1.00	0.01	0.01	-0.87	0.79	-0.73	-0.01	0.16
Cx	28.1034	0.013		1.00	0.01	-0.03	0.02	-0.02	-0.70	-0.03
Cy	8.38981	0.02			1.00	0.02	-0.01	0.01	0.01	-0.81
K1	-0.00614026	1.8e-05				1.00	-0.98	0.94	0.01	-0.08
K2	0.00143904	1.3e-05					1.00	-0.99	0.00	0.03
K3	-0.00143153	3e-06						1.00	-0.00	-0.02
P1	0.000212963	7.7e-07							1.00	0.01
P2	0.000528326	1.4e-06								1.00

Table 6. Calibration coefficients and correlation matrix.

Camera Calibration



1 pix

Fig. 7. Image residuals for 45.

45

93 images

Type

Resolution

Focal Length

Pixel Size

Fisheye

8660 x 5784

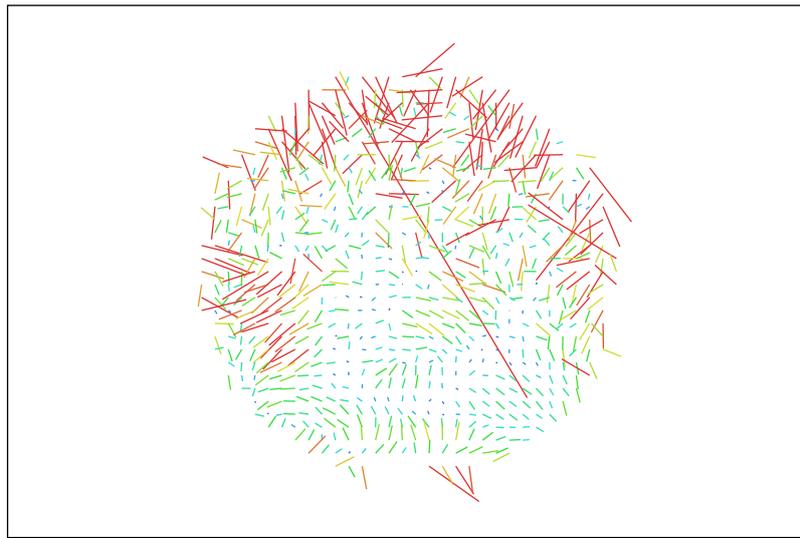
6 mm

4.17 x 4.17 um

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	1450.8	0.014	1.00	0.01	0.03	-0.88	0.80	-0.74	-0.02	0.15
Cx	4.09794	0.013		1.00	0.02	-0.03	0.03	-0.02	-0.71	-0.03
Cy	-35.7172	0.021			1.00	0.00	0.00	-0.01	-0.00	-0.82
K1	-0.00582664	1.9e-05				1.00	-0.98	0.94	0.02	-0.08
K2	0.00100202	1.3e-05					1.00	-0.99	-0.01	0.03
K3	-0.00135283	3e-06						1.00	0.01	-0.02
P1	-0.000166367	7.7e-07							1.00	0.01
P2	-9.70993e-05	1.4e-06								1.00

Table 7. Calibration coefficients and correlation matrix.

Camera Calibration



1 pix

Fig. 8. Image residuals for 46.

46

93 images

Type	Resolution	Focal Length	Pixel Size
Fisheye	8660 x 5784	6 mm	4.17 x 4.17 um

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	1438.76	0.015	1.00	0.01	0.05	-0.89	0.80	-0.75	-0.03	0.11
Cx	-9.79598	0.012		1.00	0.01	-0.03	0.03	-0.02	-0.71	-0.02
Cy	-14.0842	0.021			1.00	-0.01	0.02	-0.02	-0.00	-0.83
K1	-0.00593482	2e-05				1.00	-0.98	0.94	0.03	-0.06
K2	0.00091539	1.4e-05					1.00	-0.99	-0.03	0.01
K3	-0.00133041	3.1e-06						1.00	0.03	0.00
P1	-0.000180468	7.8e-07							1.00	-0.00
P2	4.2515e-05	1.4e-06								1.00

Table 8. Calibration coefficients and correlation matrix.

Camera Calibration

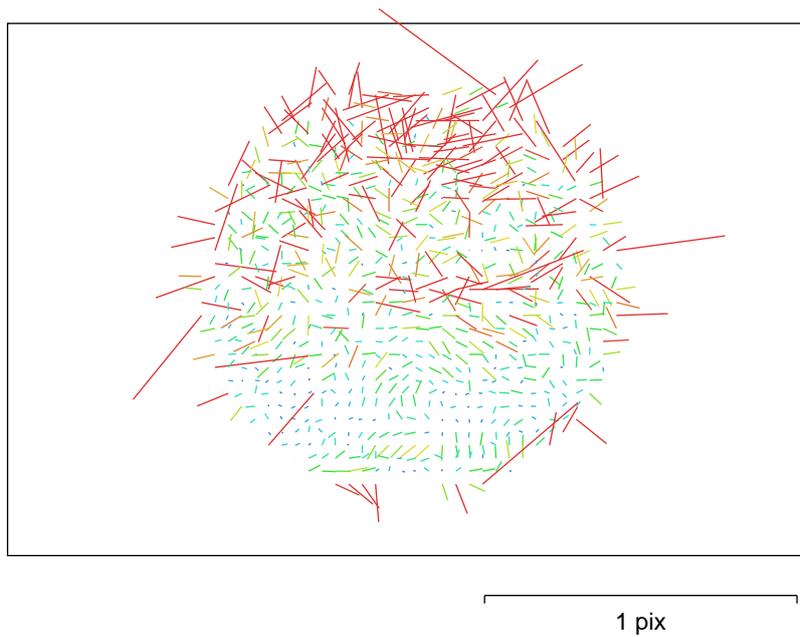


Fig. 9. Image residuals for 47.

47

93 images

Type	Resolution	Focal Length	Pixel Size
Fisheye	8660 x 5784	6 mm	4.17 x 4.17 um

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	1450.67	0.016	1.00	0.00	0.06	-0.89	0.81	-0.76	-0.01	0.10
Cx	19.6065	0.013		1.00	0.02	-0.02	0.02	-0.01	-0.71	-0.03
Cy	-38.2798	0.023			1.00	-0.01	0.01	-0.02	-0.01	-0.83
K1	-0.00476535	2.2e-05				1.00	-0.98	0.94	0.02	-0.05
K2	0.000285838	1.5e-05					1.00	-0.99	-0.02	0.01
K3	-0.00121332	3.3e-06						1.00	0.02	0.01
P1	-0.000182656	8e-07							1.00	0.01
P2	0.000116849	1.4e-06								1.00

Table 9. Calibration coefficients and correlation matrix.

Camera Calibration

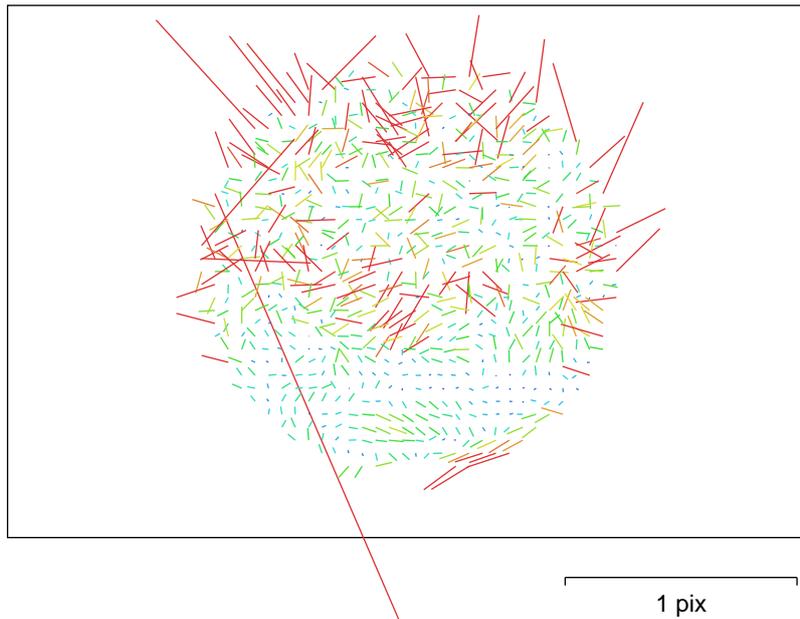


Fig. 10. Image residuals for 48.

48

93 images

Type

Resolution

Focal Length

Pixel Size

Fisheye

8660 x 5784

6 mm

4.17 x 4.17 um

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	1438.76	0.019	1.00	-0.01	0.04	-0.90	0.83	-0.77	-0.00	0.09
Cx	10.5404	0.014		1.00	0.02	-0.01	0.01	-0.00	-0.72	-0.03
Cy	-34.454	0.024			1.00	-0.01	0.01	-0.01	-0.01	-0.82
K1	-0.00529456	2.5e-05				1.00	-0.98	0.94	0.01	-0.04
K2	0.000740872	1.8e-05					1.00	-0.99	-0.01	-0.01
K3	-0.00128237	3.8e-06						1.00	0.01	0.02
P1	0.00035127	8.8e-07							1.00	0.02
P2	-0.000172011	1.5e-06								1.00

Table 10. Calibration coefficients and correlation matrix.

Camera Calibration

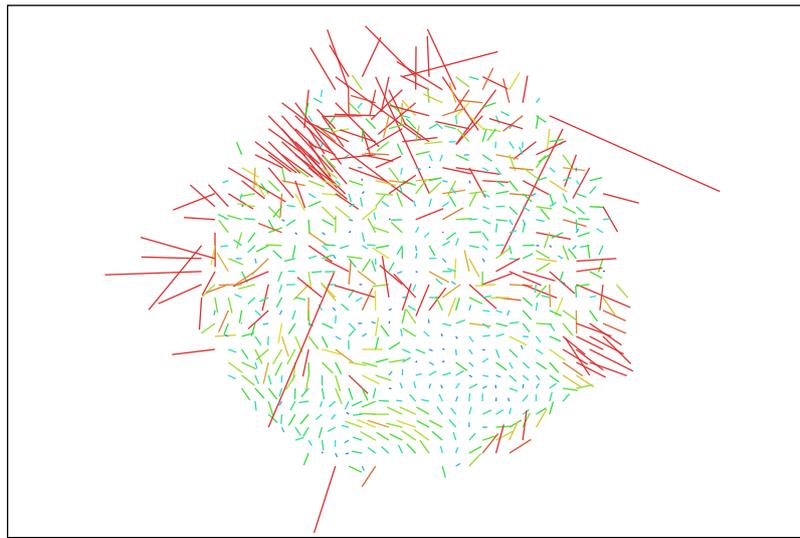


Fig. 11. Image residuals for 49.

49

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Type	Resolution	Focal Length	Pixel Size
Fisheye	8660 x 5784	6 mm	4.17 x 4.17 um

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	1437	0.018	1.00	-0.02	0.03	-0.90	0.82	-0.77	0.02	0.06
Cx	-9.98493	0.014		1.00	0.00	0.00	-0.01	0.01	-0.73	-0.02
Cy	-19.5199	0.025			1.00	0.02	-0.02	0.01	0.00	-0.83
K1	-0.00547279	2.5e-05				1.00	-0.98	0.94	-0.01	-0.04
K2	0.000690105	1.7e-05					1.00	-0.99	0.01	-0.01
K3	-0.00127259	3.7e-06						1.00	-0.02	0.02
P1	-0.000165156	8.8e-07							1.00	0.01
P2	4.87578e-05	1.6e-06								1.00

Table 11. Calibration coefficients and correlation matrix.

Camera Calibration

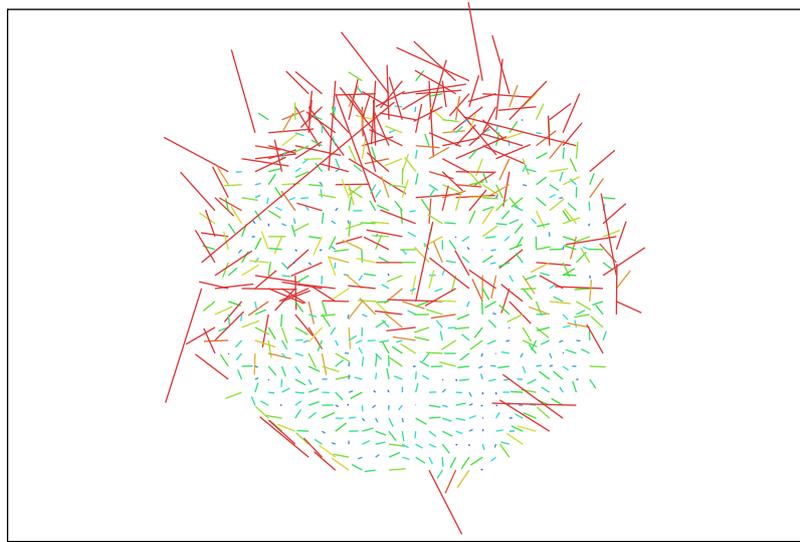


Fig. 12. Image residuals for 50.

50

93 images

Type

Resolution

Focal Length

Pixel Size

Fisheye

8660 x 5784

6 mm

4.17 x 4.17 um

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	1445.32	0.022	1.00	-0.03	-0.01	-0.90	0.83	-0.77	0.01	0.06
Cx	13.2646	0.017		1.00	0.01	0.01	-0.00	0.00	-0.74	-0.02
Cy	-22.93	0.026			1.00	0.05	-0.04	0.03	-0.01	-0.81
K1	-0.00636699	3e-05				1.00	-0.98	0.94	0.00	-0.03
K2	0.00101984	2.1e-05					1.00	-0.99	-0.00	-0.01
K3	-0.00133788	4.6e-06						1.00	0.01	0.03
P1	0.000230168	1e-06							1.00	0.02
P2	9.47423e-05	1.7e-06								1.00

Table 12. Calibration coefficients and correlation matrix.

Camera Calibration

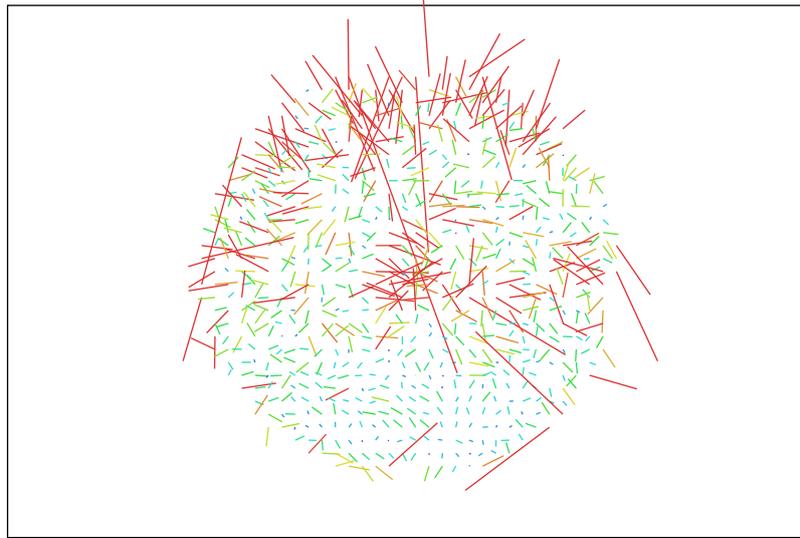


Fig. 13. Image residuals for 51.

51

93 images

Type	Resolution	Focal Length	Pixel Size
Fisheye	8660 x 5784	6 mm	4.17 x 4.17 um

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	1441.61	0.019	1.00	-0.01	0.00	-0.89	0.82	-0.76	0.01	0.02
Cx	0.203939	0.016		1.00	-0.00	-0.00	0.00	-0.00	-0.73	-0.01
Cy	-1.58173	0.026			1.00	0.06	-0.05	0.04	0.00	-0.84
K1	-0.00513882	2.7e-05				1.00	-0.98	0.94	-0.00	-0.02
K2	0.000568764	1.9e-05					1.00	-0.99	0.00	-0.03
K3	-0.00127654	4.2e-06						1.00	-0.00	0.04
P1	-0.000122929	9.8e-07							1.00	-0.00
P2	-0.000483128	1.7e-06								1.00

Table 13. Calibration coefficients and correlation matrix.

Camera Calibration

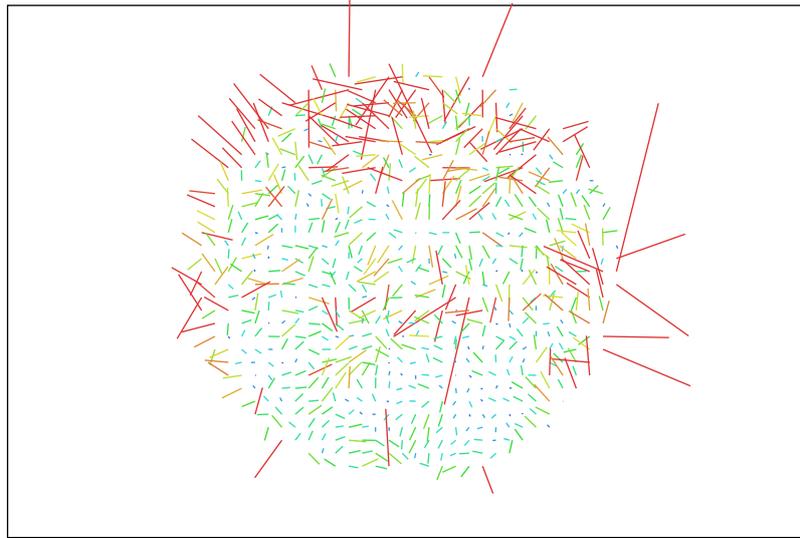


Fig. 14. Image residuals for 52.

52

93 images

Type

Resolution

Focal Length

Pixel Size

Fisheye

8660 x 5784

6 mm

4.17 x 4.17 um

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	1442.71	0.02	1.00	0.00	-0.00	-0.89	0.81	-0.75	0.00	0.01
Cx	-13.3681	0.018		1.00	-0.01	-0.02	0.02	-0.01	-0.74	0.00
Cy	-7.87211	0.027			1.00	0.07	-0.05	0.04	0.01	-0.83
K1	-0.00523745	2.9e-05				1.00	-0.98	0.94	0.01	-0.01
K2	0.000462855	2e-05					1.00	-0.99	-0.01	-0.04
K3	-0.00120814	4.5e-06						1.00	0.01	0.05
P1	-4.60578e-06	1.1e-06							1.00	-0.01
P2	-0.000354405	1.8e-06								1.00

Table 14. Calibration coefficients and correlation matrix.

Camera Calibration

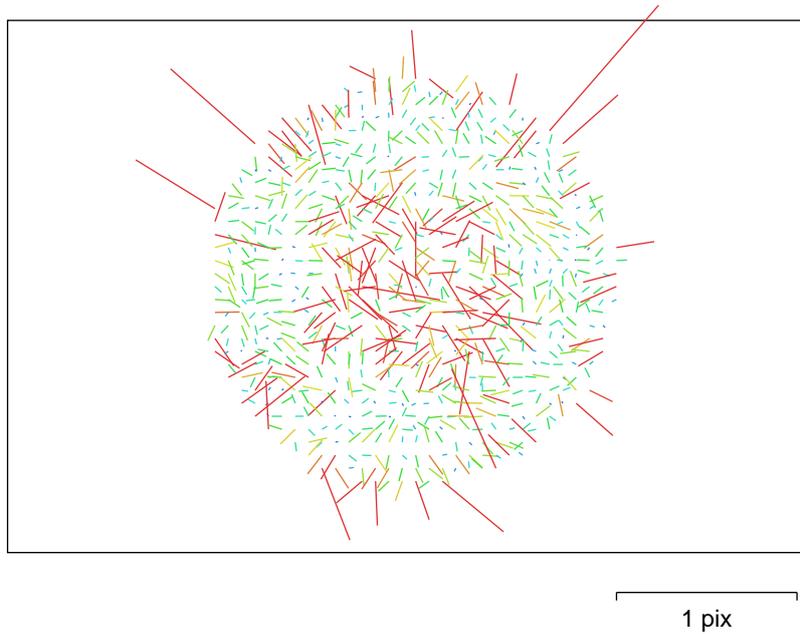


Fig. 15. Image residuals for 53.

53

93 images

Type	Resolution	Focal Length	Pixel Size
Fisheye	8660 x 5784	6 mm	4.17 x 4.17 um

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	1438.15	0.066	1.00	-0.01	-0.01	-0.86	0.75	-0.69	0.05	-0.00
Cx	26.7684	0.017		1.00	-0.02	0.00	-0.00	0.00	-0.75	0.01
Cy	-51.8915	0.017			1.00	0.03	-0.04	0.05	0.02	-0.74
K1	-0.00339757	8.8e-05				1.00	-0.98	0.94	-0.04	-0.02
K2	0.000750891	6.3e-05					1.00	-0.99	0.04	0.05
K3	-0.00157152	1.5e-05						1.00	-0.04	-0.07
P1	-0.000210637	1.9e-06							1.00	-0.02
P2	-0.000239926	1.9e-06								1.00

Table 15. Calibration coefficients and correlation matrix.

Scale Bars

Label	Distance (m)	Error (m)
002a. 4-5	0.233734	-0.016266
002b. 5-6	0.272661	0.0227611
005a. 12-13	0.246861	-0.00311948
005b. 13-14	0.249714	-0.000175723
008a. 20-21	0.248705	-0.00132538
008b. 21-22	0.248024	-0.00185638
Total		0.0115298

Table 16. Control scale bars.

Digital Elevation Model

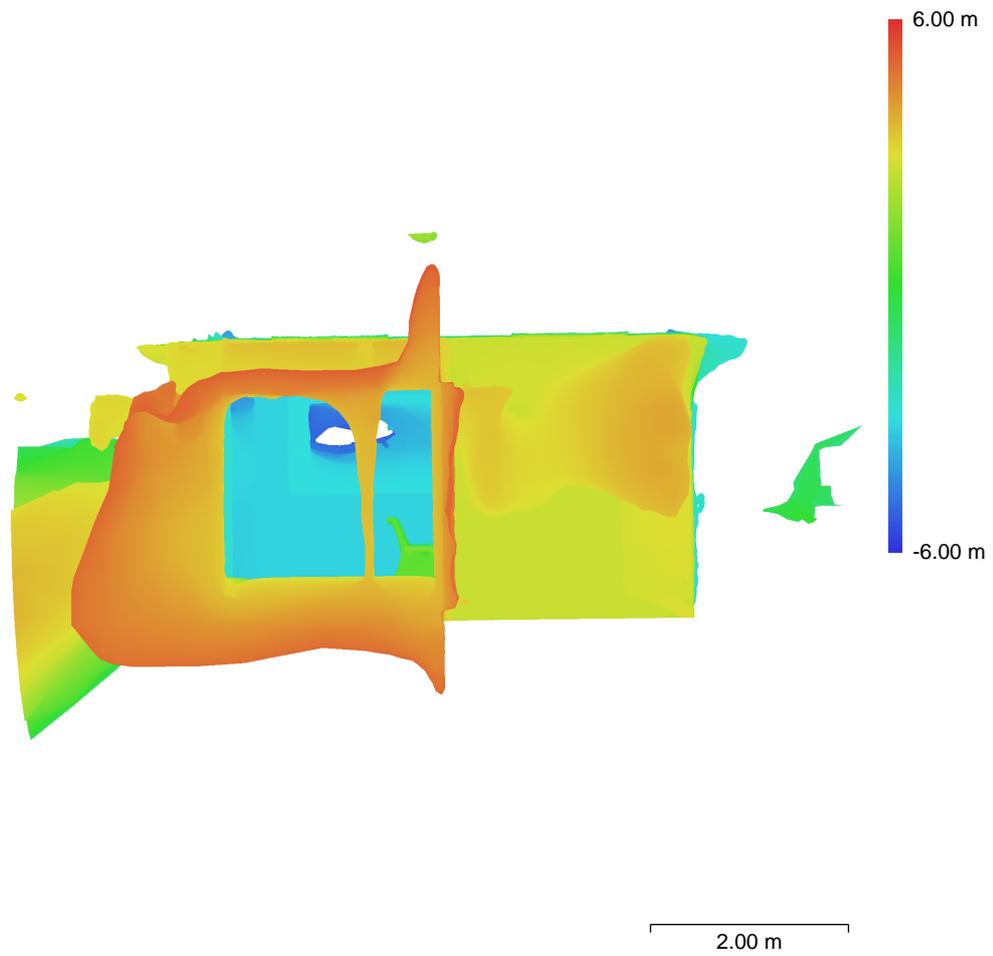


Fig. 16. Reconstructed digital elevation model.

Resolution: 4.40 mm/pix
Point density: 5.17 points/cm²

Processing Parameters

General

Images	1302
Aligned images	1302
Markers	10
Scale bars	6
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll

Tie Points

Points	685,724 of 2,123,504
RMS reprojection error	0.218593 (0.368608 pix)
Max reprojection error	0.869457 (5.95106 pix)
Mean key point size	1.61894 pix
Point colors	3 bands, uint8
Key points	6.17 GB
Average tie point multiplicity	3.55757

Alignment parameters

Accuracy	Highest
Generic preselection	Yes
Reference preselection	Estimated
Key point limit	60,000
Key point limit per Mpx	1,000
Tie point limit	0
Exclude stationary tie points	Yes
Guided image matching	No
Adaptive camera model fitting	No
Matching time	9 minutes 50 seconds
Matching memory usage	16.60 GB
Alignment time	2 minutes 46 seconds
Alignment memory usage	14.42 GB

Optimization parameters

Parameters	f, cx, cy, k1-k3, p1, p2
Adaptive camera model fitting	No
Exclude corners	No
Optimization time	3 seconds
Date created	2026:02:17 10:36:51
Software version	2.2.2.21287
File size	6.33 GB

Depth Maps

Count	1302
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Depth maps generation parameters

Quality	Medium
Filtering mode	Mild
Max neighbors	16
Processing time	14 minutes 8 seconds
Memory usage	4.91 GB
Date created	2026:02:19 15:48:43
Software version	2.2.2.21287
File size	1.52 GB

Point Cloud

Points	26,237,411
Coordinate precision	0.809 mm

Point attributes	
Color	3 bands, uint8
Normal	
Point classes	
Created (never classified)	26,237,411
Depth maps generation parameters	
Quality	Medium
Filtering mode	Mild
Max neighbors	16
Processing time	14 minutes 8 seconds
Memory usage	4.91 GB
Point cloud generation parameters	
Source data	Depth maps
Processing time	1 hours 33 minutes
Memory usage	42.30 GB
Date created	2026:02:19 17:21:47
Software version	2.2.2.21287
File size	352.60 MB
Model	
Faces	2,007,773
Vertices	1,004,076
Vertex colors	3 bands, uint8
Texture	16,384 x 16,384, 3 bands, uint8
Depth maps generation parameters	
Quality	Medium
Filtering mode	Mild
Max neighbors	16
Processing time	14 minutes 8 seconds
Memory usage	4.91 GB
Reconstruction parameters	
Surface type	Arbitrary
Source data	Depth maps
Interpolation	Enabled
Strict volumetric masks	No
Processing time	3 minutes 19 seconds
Memory usage	6.94 GB
Texturing parameters	
Mapping mode	Generic
Blending mode	Mosaic
Texture size	16,384
Page count	1
Enable hole filling	Yes
Enable ghosting filter	Yes
UV mapping time	2 minutes 58 seconds
UV mapping memory usage	1.30 GB
Blending time	4 minutes 19 seconds
Blending memory usage	11.58 GB
Blending GPU memory usage	7.59 GB
Date created	2026:02:19 17:25:04
Software version	2.2.2.21287
File size	311.71 MB
System	
Software name	Agisoft Metashape Professional
Software version	2.2.2 build 21287
OS	Windows 64 bit
RAM	255.52 GB

CPU
GPU(s)

AMD Ryzen Threadripper PRO 7975WX 32-Cores
NVIDIA GeForce RTX 5090
NVIDIA GeForce RTX 5090