

Agisoft Metashape

Processing Report
20 February 2026



Survey Data

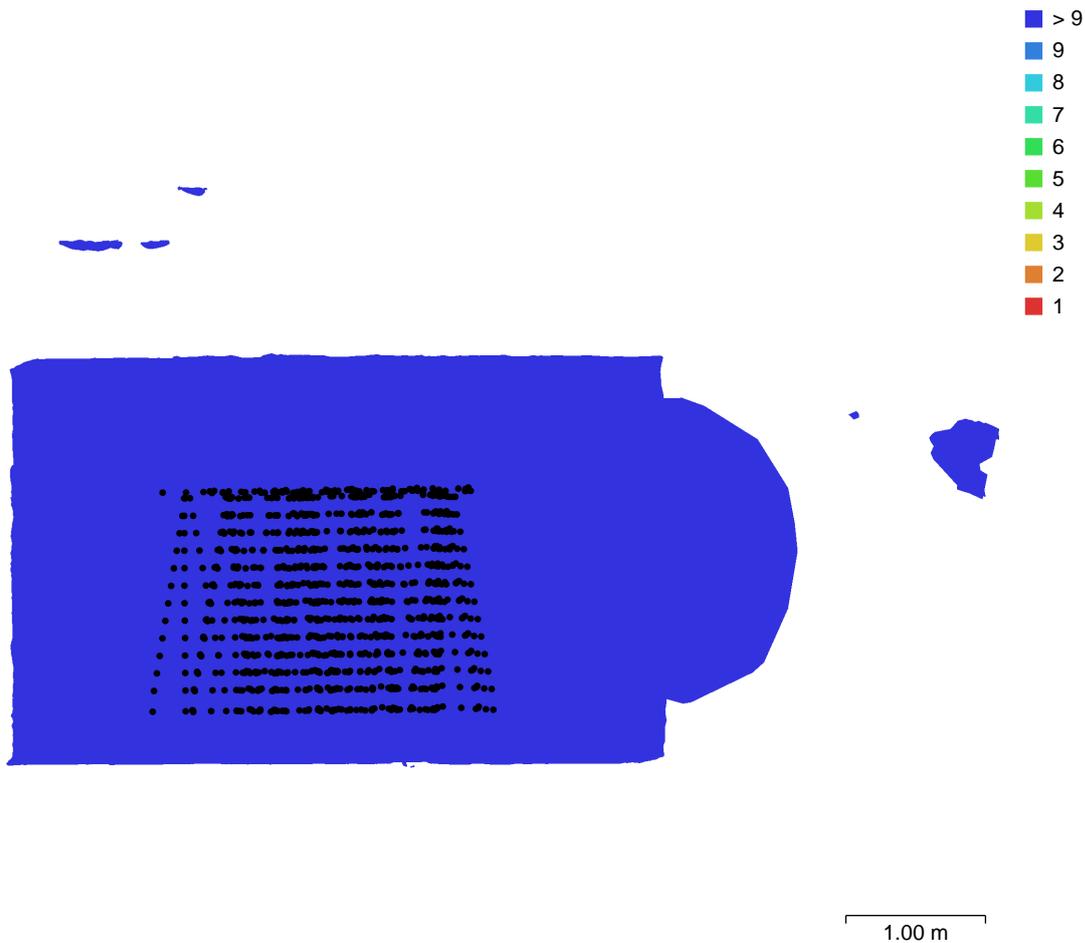


Fig. 1. Camera locations and image overlap.

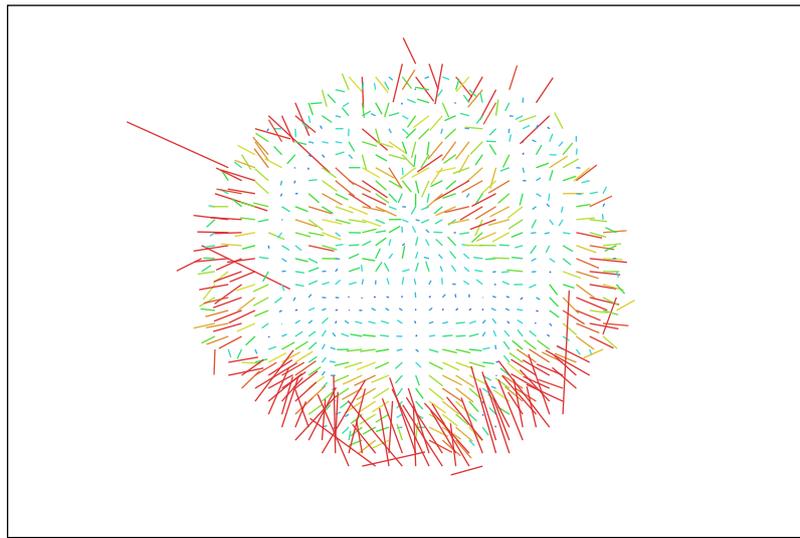
Number of images:	1,134	Camera stations:	1,134
Flying altitude:	45.8 cm	Tie points:	532,790
Ground resolution:	0.916 mm/pix	Projections:	1,728,933
Coverage area:	15.6 m ²	Reprojection error:	0.36 pix

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

81 images

Type

Resolution

Focal Length

Pixel Size

Fisheye

8660 x 5784

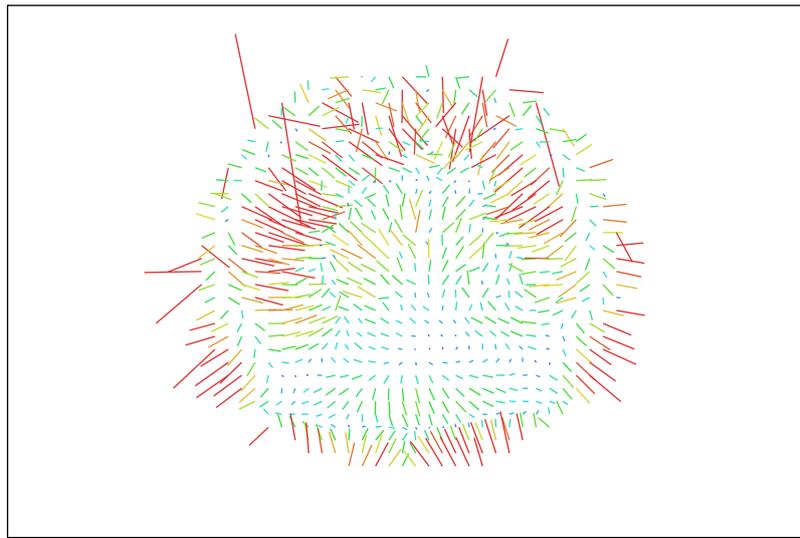
6 mm

4.17 x 4.17 um

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	1443.75	0.013	1.00	0.01	-0.12	-0.84	0.75	-0.69	-0.01	0.24
Cx	14.7592	0.015		1.00	-0.00	-0.00	-0.00	0.00	-0.52	0.02
Cy	-24.3586	0.026			1.00	0.01	-0.02	0.02	0.00	-0.78
K1	-0.0091099	2.2e-05				1.00	-0.97	0.93	0.01	-0.01
K2	0.00433592	1.9e-05					1.00	-0.99	-0.00	-0.03
K3	-0.00216628	4.7e-06						1.00	0.00	0.04
P1	0.000226958	7.7e-07							1.00	-0.01
P2	0.000733543	2e-06								1.00

Table 2. Calibration coefficients and correlation matrix.

Camera Calibration



1 pix

Fig. 3. Image residuals for 41.

41

81 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	1444.07	0.013	1.00	0.01	0.02	-0.88	0.81	-0.75	-0.01	0.12
Cx	4.86182	0.015		1.00	-0.00	-0.01	0.01	-0.00	-0.62	0.00
Cy	-39.4652	0.026			1.00	0.02	-0.03	0.03	0.00	-0.83
K1	-0.00870229	1.9e-05				1.00	-0.98	0.94	0.01	-0.03
K2	0.00331594	1.4e-05					1.00	-0.99	-0.00	0.00
K3	-0.00177896	3.2e-06						1.00	0.00	-0.01
P1	0.000184439	6.4e-07							1.00	0.00
P2	0.000710303	1.8e-06								1.00

Table 3. Calibration coefficients and correlation matrix.

Camera Calibration

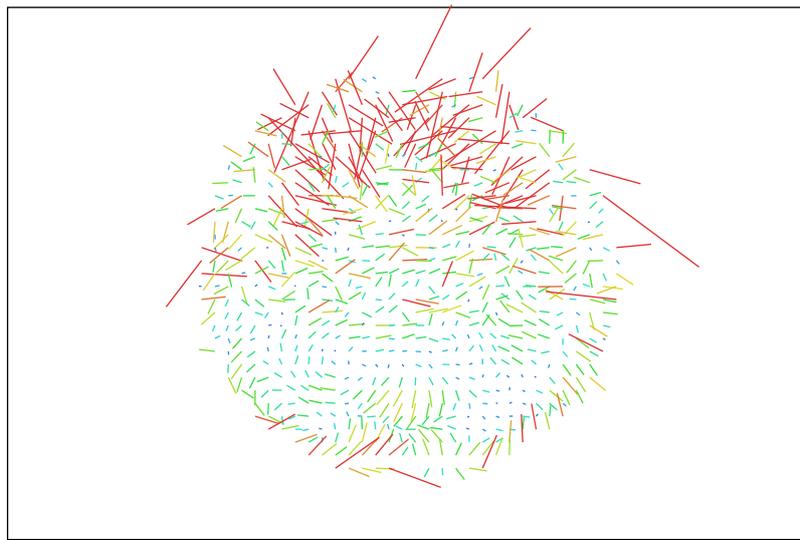


Fig. 4. Image residuals for 42.

42

81 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	1438.09	0.013	1.00	0.00	0.03	-0.89	0.82	-0.77	-0.01	0.11
Cx	3.06332	0.014		1.00	-0.00	-0.01	0.01	-0.00	-0.67	-0.01
Cy	-12.6617	0.026			1.00	0.02	-0.03	0.02	-0.00	-0.85
K1	-0.00794191	2e-05				1.00	-0.98	0.94	0.01	-0.03
K2	0.00264575	1.4e-05					1.00	-0.99	-0.01	0.00
K3	-0.00167392	3.1e-06						1.00	0.00	-0.00
P1	-0.000169232	6.4e-07							1.00	0.01
P2	0.000126404	1.7e-06								1.00

Table 4. Calibration coefficients and correlation matrix.

Camera Calibration

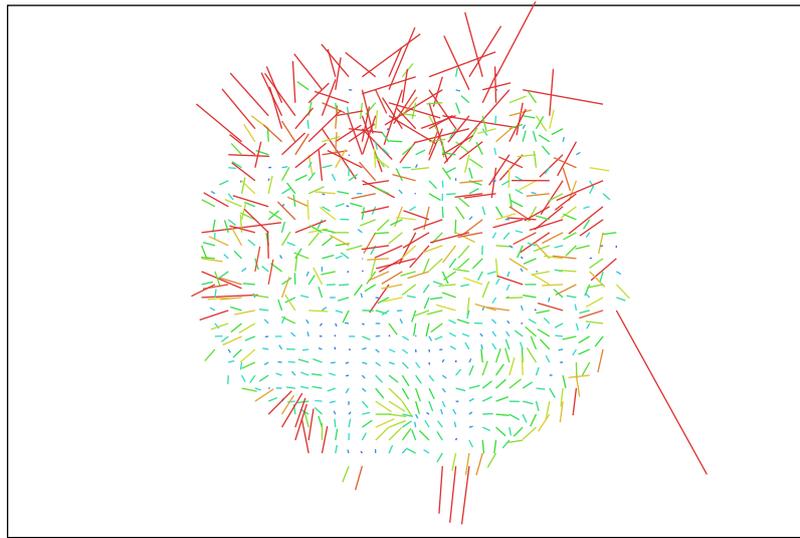


Fig. 5. Image residuals for 43.

43

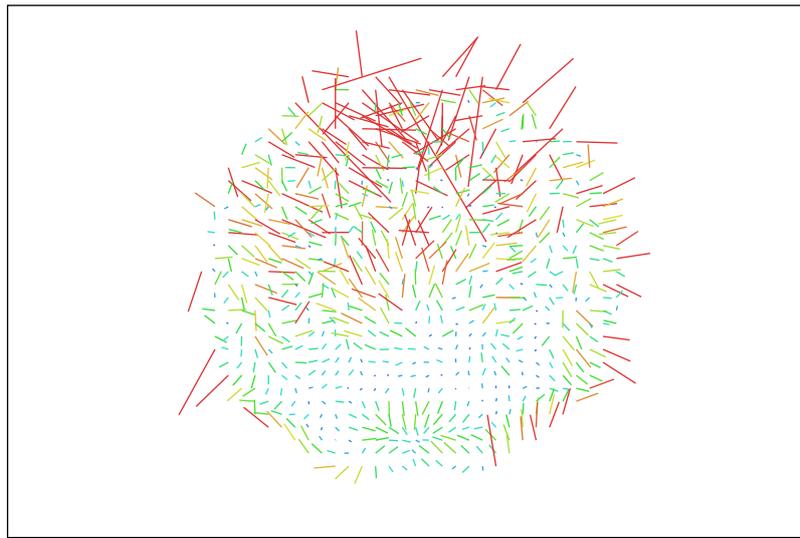
81 images

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	1451.3	0.014	1.00	0.00	0.04	-0.89	0.82	-0.77	-0.02	0.10
Cx	-5.05005	0.014		1.00	-0.00	-0.01	0.01	-0.00	-0.71	-0.00
Cy	-56.8651	0.027			1.00	0.02	-0.02	0.02	0.00	-0.86
K1	-0.00764023	2e-05				1.00	-0.98	0.94	0.02	-0.04
K2	0.00215411	1.4e-05					1.00	-0.99	-0.01	0.00
K3	-0.0015682	3.1e-06						1.00	0.01	-0.00
P1	0.000215744	6.5e-07							1.00	0.00
P2	-7.40682e-05	1.7e-06								1.00

Table 5. Calibration coefficients and correlation matrix.

Camera Calibration



1 pix

Fig. 6. Image residuals for 44.

44

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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	1445.57	0.014	1.00	-0.00	0.05	-0.89	0.82	-0.78	-0.01	0.08
Cx	27.848	0.015		1.00	-0.00	-0.01	0.01	-0.00	-0.73	-0.01
Cy	5.83193	0.028			1.00	0.02	-0.02	0.01	0.00	-0.87
K1	-0.00733555	2.1e-05				1.00	-0.98	0.95	0.01	-0.03
K2	0.00198743	1.5e-05					1.00	-0.99	-0.00	0.00
K3	-0.00150453	3.2e-06						1.00	-0.00	0.00
P1	0.000201768	6.8e-07							1.00	0.00
P2	0.000673886	1.8e-06								1.00

Table 6. Calibration coefficients and correlation matrix.

Camera Calibration

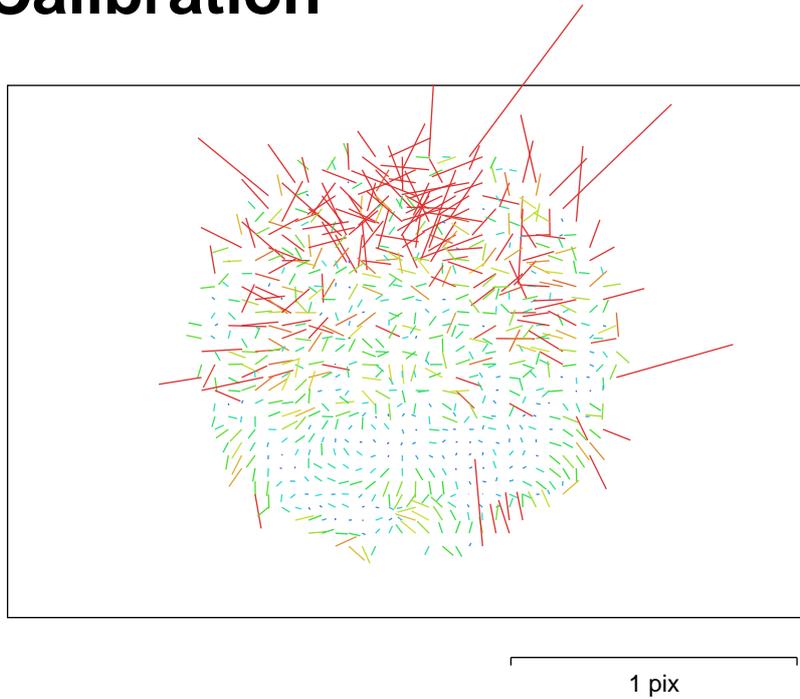


Fig. 7. Image residuals for 45.

45

81 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	1451.24	0.015	1.00	-0.02	0.05	-0.89	0.82	-0.78	-0.00	0.08
Cx	1.71202	0.015		1.00	0.00	-0.00	-0.00	0.00	-0.76	-0.02
Cy	-35.0641	0.03			1.00	0.02	-0.02	0.01	-0.01	-0.88
K1	-0.00691001	2.1e-05				1.00	-0.98	0.95	0.01	-0.04
K2	0.00151466	1.5e-05					1.00	-0.99	-0.01	0.00
K3	-0.00142533	3.3e-06						1.00	0.01	0.00
P1	-0.000141536	7.1e-07							1.00	0.01
P2	6.94445e-05	1.8e-06								1.00

Table 7. Calibration coefficients and correlation matrix.

Camera Calibration

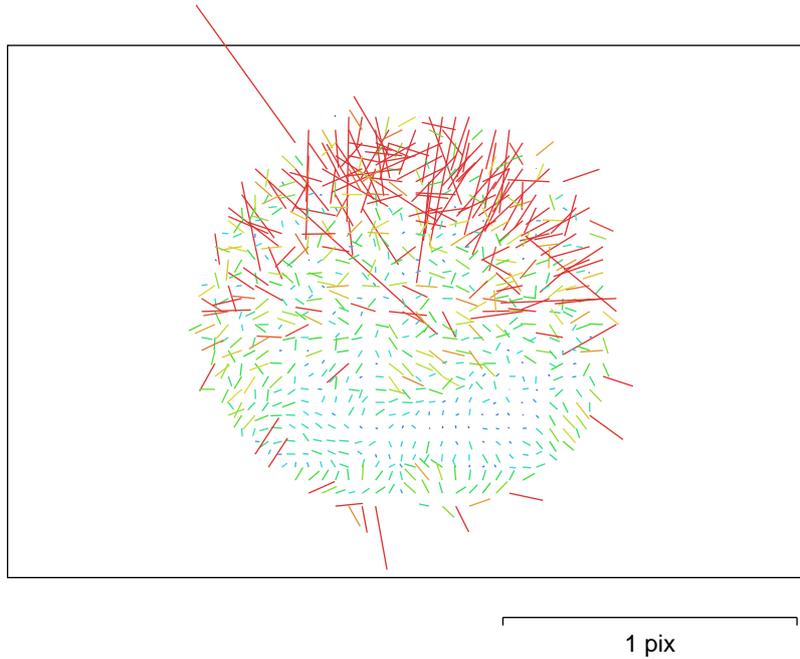


Fig. 8. Image residuals for 46.

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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	1439.15	0.016	1.00	-0.02	0.05	-0.89	0.82	-0.77	-0.00	0.06
Cx	-15.5529	0.016		1.00	-0.00	-0.00	-0.00	0.01	-0.77	-0.01
Cy	-14.8194	0.031			1.00	0.01	-0.02	0.01	0.00	-0.89
K1	-0.00702795	2.2e-05				1.00	-0.98	0.95	0.01	-0.03
K2	0.00144311	1.5e-05					1.00	-0.99	-0.01	-0.01
K3	-0.00140757	3.4e-06						1.00	0.00	0.01
P1	-0.000172898	7.5e-07							1.00	0.00
P2	0.000224472	1.9e-06								1.00

Table 8. Calibration coefficients and correlation matrix.

Camera Calibration

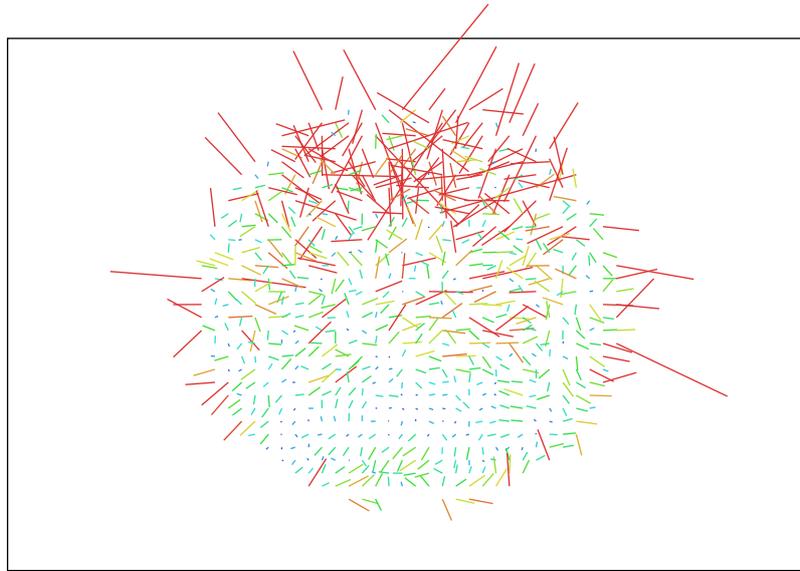


Fig. 9. Image residuals for 47.

47

81 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	1451.03	0.017	1.00	-0.02	0.06	-0.89	0.82	-0.77	-0.00	0.05
Cx	16.8425	0.016		1.00	0.01	0.00	-0.01	0.01	-0.78	-0.02
Cy	-41.2317	0.033			1.00	0.01	-0.01	0.01	-0.01	-0.89
K1	-0.00559116	2.3e-05				1.00	-0.98	0.95	0.01	-0.03
K2	0.000624727	1.6e-05					1.00	-0.99	-0.01	-0.01
K3	-0.00125455	3.5e-06						1.00	0.00	0.01
P1	-0.000165415	8e-07							1.00	0.01
P2	0.000303217	2e-06								1.00

Table 9. Calibration coefficients and correlation matrix.

Camera Calibration

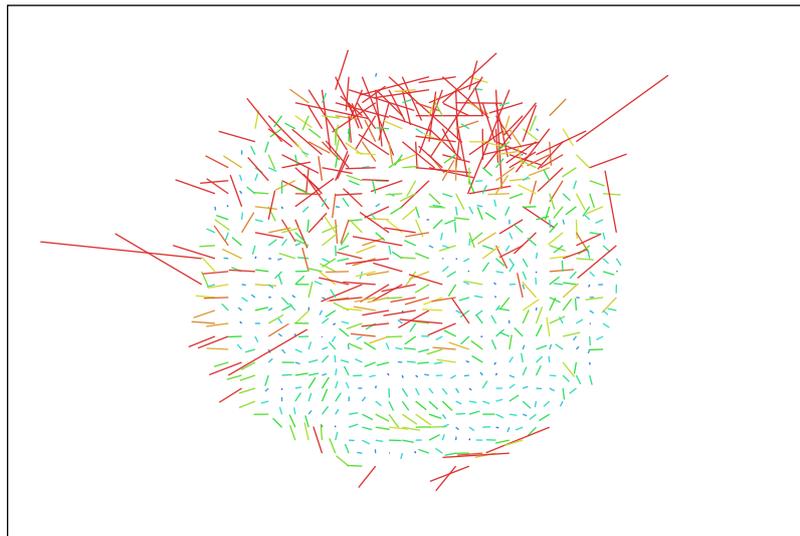


Fig. 10. Image residuals for 48.

48

81 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	1439.2	0.019	1.00	-0.02	0.04	-0.89	0.82	-0.78	0.01	0.06
Cx	10.9187	0.018		1.00	0.01	0.00	-0.01	0.01	-0.80	-0.01
Cy	-40.826	0.034			1.00	0.02	-0.01	0.01	-0.01	-0.89
K1	-0.0059462	2.7e-05				1.00	-0.98	0.95	0.00	-0.03
K2	0.000953506	1.8e-05					1.00	-0.99	0.00	-0.00
K3	-0.00130241	4e-06						1.00	-0.00	0.01
P1	0.000344647	9e-07							1.00	0.01
P2	4.71179e-05	2.1e-06								1.00

Table 10. Calibration coefficients and correlation matrix.

Camera Calibration

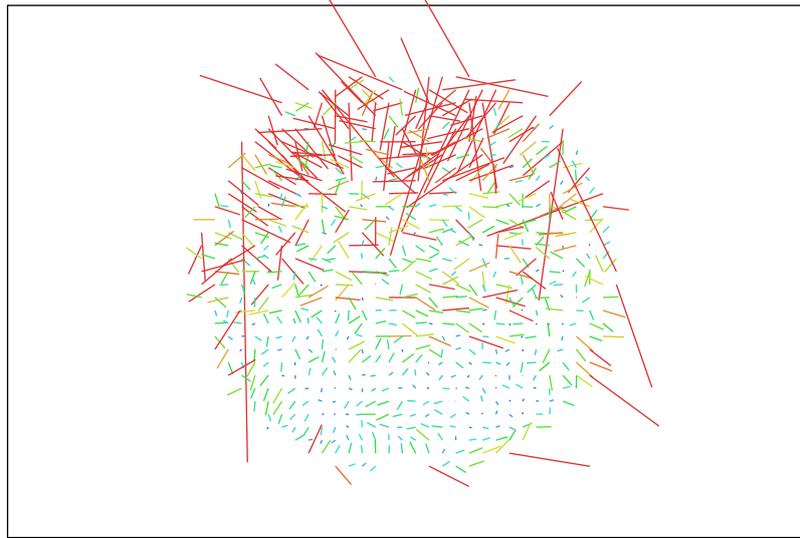


Fig. 11. Image residuals for 49.

49

81 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	1437.11	0.02	1.00	-0.02	0.05	-0.89	0.82	-0.77	0.00	0.04
Cx	-10.1017	0.019		1.00	0.01	0.01	-0.01	0.01	-0.81	-0.01
Cy	-20.9585	0.035			1.00	0.01	-0.01	0.01	-0.00	-0.89
K1	-0.00598708	2.6e-05				1.00	-0.98	0.95	-0.00	-0.03
K2	0.000820099	1.8e-05					1.00	-0.99	0.00	-0.01
K3	-0.00127379	3.9e-06						1.00	-0.00	0.02
P1	-0.000124021	9.3e-07							1.00	0.00
P2	0.000279477	2.1e-06								1.00

Table 11. Calibration coefficients and correlation matrix.

Camera Calibration

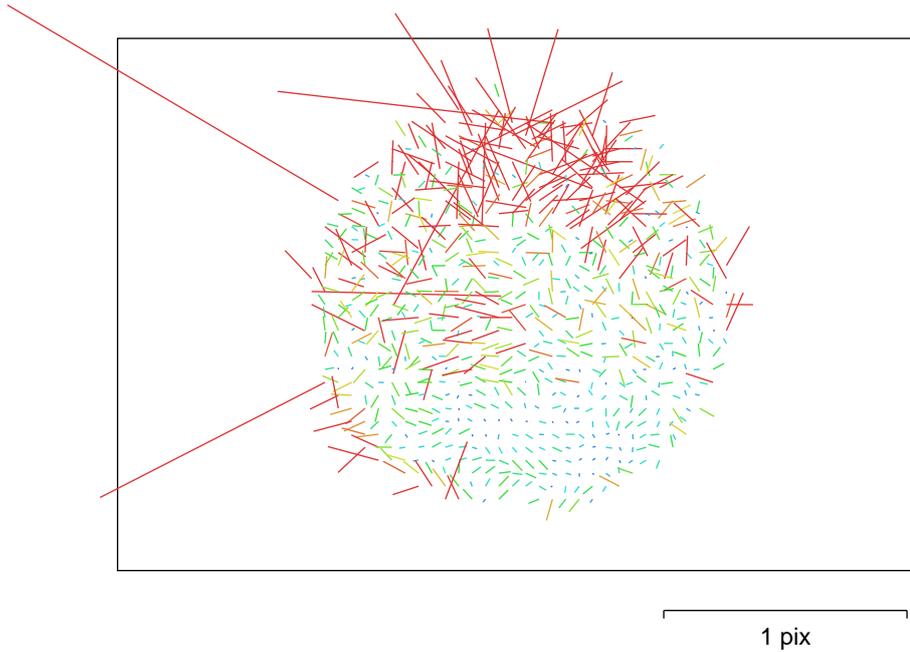


Fig. 12. Image residuals for 50.

50

81 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	1445.66	0.023	1.00	-0.01	0.04	-0.89	0.82	-0.77	0.00	0.04
Cx	10.7881	0.021		1.00	0.02	0.00	-0.01	0.01	-0.81	-0.01
Cy	-24.6175	0.037			1.00	0.01	-0.01	-0.00	-0.01	-0.88
K1	-0.00687383	3.1e-05				1.00	-0.98	0.95	-0.00	-0.03
K2	0.00111549	2.2e-05					1.00	-0.99	0.00	-0.01
K3	-0.0013363	4.7e-06						1.00	-0.00	0.03
P1	0.000249364	1.1e-06							1.00	0.01
P2	0.00033705	2.3e-06								1.00

Table 12. Calibration coefficients and correlation matrix.

Camera Calibration

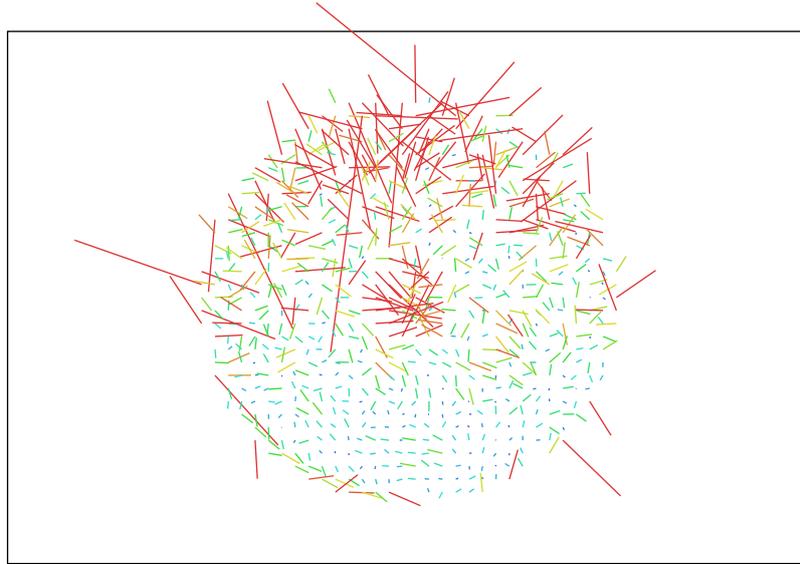


Fig. 13. Image residuals for 51.

51

81 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	1441.87	0.022	1.00	-0.00	0.06	-0.89	0.81	-0.76	-0.01	0.02
Cx	3.0273	0.021		1.00	0.01	-0.00	-0.00	0.00	-0.81	-0.00
Cy	-4.76906	0.038			1.00	0.01	-0.00	-0.00	-0.01	-0.89
K1	-0.00554647	3e-05				1.00	-0.98	0.94	0.01	-0.02
K2	0.000581102	2.1e-05					1.00	-0.99	-0.00	-0.02
K3	-0.00125614	4.6e-06						1.00	0.00	0.03
P1	-0.000110847	1.1e-06							1.00	0.00
P2	-0.000227549	2.3e-06								1.00

Table 13. Calibration coefficients and correlation matrix.

Camera Calibration

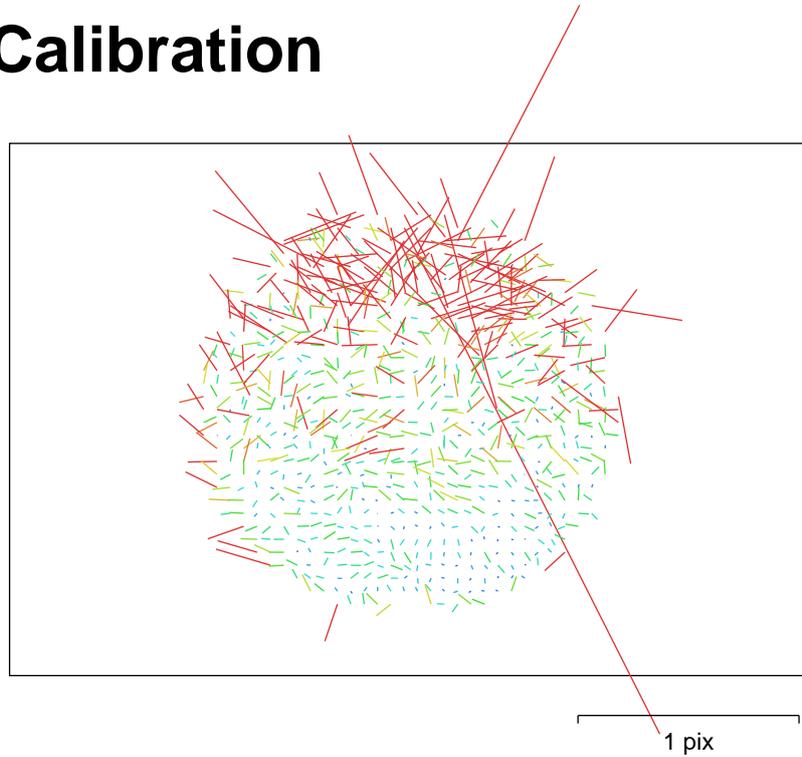


Fig. 14. Image residuals for 52.

52

81 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	1443.27	0.024	1.00	0.01	0.05	-0.89	0.82	-0.76	-0.02	0.02
Cx	-10.1985	0.023		1.00	-0.00	-0.00	-0.00	0.00	-0.82	0.00
Cy	-18.499	0.04			1.00	0.02	-0.01	0.00	0.01	-0.88
K1	-0.00586869	3.2e-05				1.00	-0.98	0.94	0.02	-0.03
K2	0.000654844	2.2e-05					1.00	-0.99	-0.01	-0.02
K3	-0.0012372	4.8e-06						1.00	0.01	0.03
P1	0.000239866	1.2e-06							1.00	-0.01
P2	0.000181478	2.5e-06								1.00

Table 14. Calibration coefficients and correlation matrix.

Camera Calibration

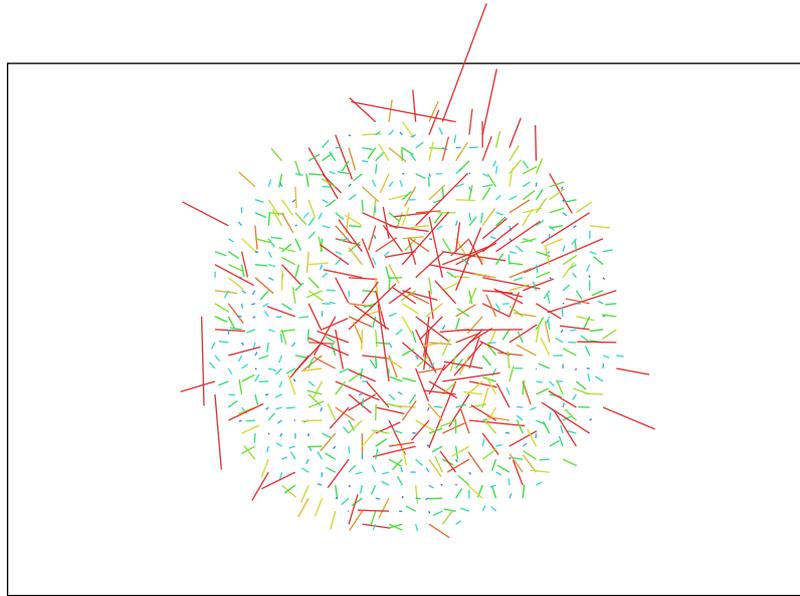


Fig. 15. Image residuals for 53.

53

81 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	1435.05	0.11	1.00	-0.04	-0.03	-0.89	0.79	-0.71	0.04	0.07
Cx	27.0766	0.023		1.00	-0.05	0.02	-0.01	0.01	-0.82	0.04
Cy	-53.6868	0.024			1.00	0.07	-0.10	0.12	0.05	-0.82
K1	-0.000118341	0.00014				1.00	-0.97	0.93	-0.02	-0.13
K2	-0.00143956	9.7e-05					1.00	-0.99	0.01	0.18
K3	-0.00107189	2.1e-05						1.00	-0.00	-0.21
P1	-0.000197907	2.4e-06							1.00	-0.04
P2	-0.00025001	2.6e-06								1.00

Table 15. Calibration coefficients and correlation matrix.

Scale Bars

Label	Distance (m)	Error (m)
002a. 4-5	0.46646	0.21646
002b. 5-6	0.36502	0.11512
005a. 12-13	0.250001	2.14573e-05
005b. 13-14	0.249855	-3.48779e-05
008a. 20-21	0.248843	-0.00118657
008b. 21-22	0.250566	0.000685613
Total		0.100091

Table 16. Control scale bars.

Digital Elevation Model

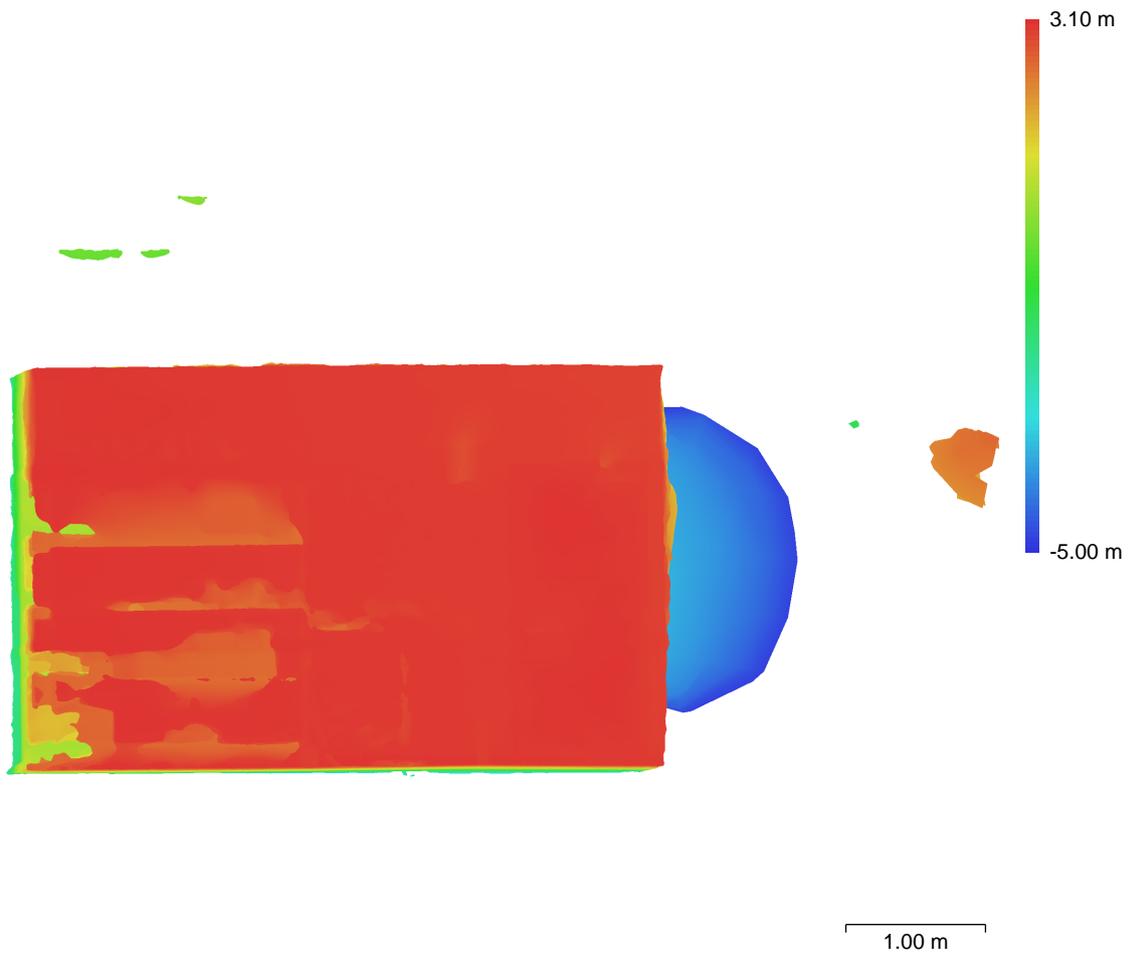


Fig. 16. Reconstructed digital elevation model.

Resolution: 5.58 mm/pix
Point density: 3.21 points/cm²

Processing Parameters

General

Images	1134
Aligned images	1134
Markers	11
Scale bars	6
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll

Tie Points

Points	532,790 of 1,675,571
RMS reprojection error	0.189458 (0.360194 pix)
Max reprojection error	0.829992 (6.20655 pix)
Mean key point size	1.72645 pix
Point colors	3 bands, uint8
Key points	5.37 GB
Average tie point multiplicity	3.90612

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	8 minutes 22 seconds
Matching memory usage	14.38 GB
Alignment time	1 minutes 32 seconds
Alignment memory usage	12.05 GB

Optimization parameters

Parameters	f, cx, cy, k1-k3, p1, p2
Adaptive camera model fitting	No
Exclude corners	No
Optimization time	2 seconds
Date created	2026:02:03 02:35:28
Software version	2.2.2.21287
File size	5.51 GB

Depth Maps

Count	1133
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Depth maps generation parameters

Quality	Medium
Filtering mode	Mild
Max neighbors	16
Processing time	11 minutes 33 seconds
Memory usage	4.55 GB
Date created	2026:02:20 17:35:04
Software version	2.2.2.21287
File size	1.50 GB

Point Cloud

Points	23,431,388
Coordinate precision	0.916 mm

Point attributes	
Color	3 bands, uint8
Normal	
Point classes	
Created (never classified)	23,431,388
Depth maps generation parameters	
Quality	Medium
Filtering mode	Mild
Max neighbors	16
Processing time	11 minutes 33 seconds
Memory usage	4.55 GB
Point cloud generation parameters	
Source data	Depth maps
Processing time	1 hours 14 minutes
Memory usage	37.84 GB
Date created	2026:02:20 18:49:21
Software version	2.2.2.21287
File size	314.20 MB
Model	
Faces	2,019,684
Vertices	1,010,093
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	11 minutes 33 seconds
Memory usage	4.55 GB
Reconstruction parameters	
Surface type	Arbitrary
Source data	Depth maps
Interpolation	Enabled
Strict volumetric masks	No
Processing time	2 minutes 42 seconds
Memory usage	7.06 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	3 minutes 6 seconds
UV mapping memory usage	1.03 GB
Blending time	3 minutes 46 seconds
Blending memory usage	9.69 GB
Blending GPU memory usage	7.60 GB
Date created	2026:02:20 18:52:02
Software version	2.2.2.21287
File size	326.11 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