

Jednoduché snímkování - hloubka ostrosti vypočtená

Protokol
27 May 2024



Survey Data

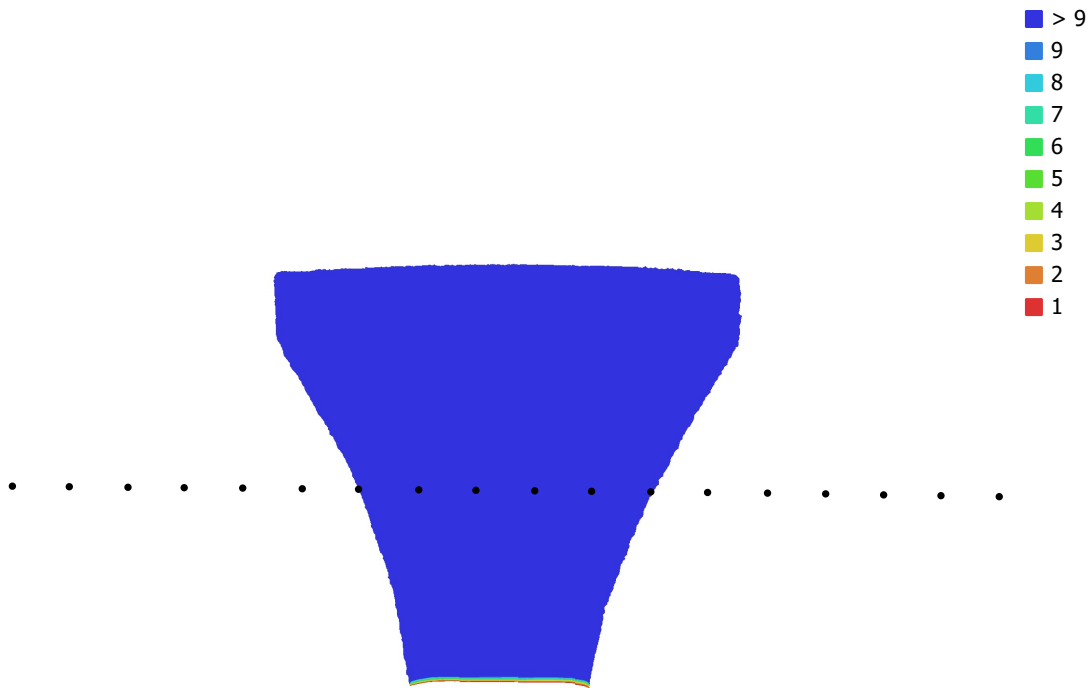


Fig. 1. Camera locations and image overlap.

Number of images: 18

Camera stations: 18

Tie points: 40,023

Projections: 226,882

Reprojection error: 0.48 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
NIKON Z 50 (40mm)	5568 x 3712	40 mm	4.31 x 4.31 μm	No

Table 1. Cameras.

Camera Calibration

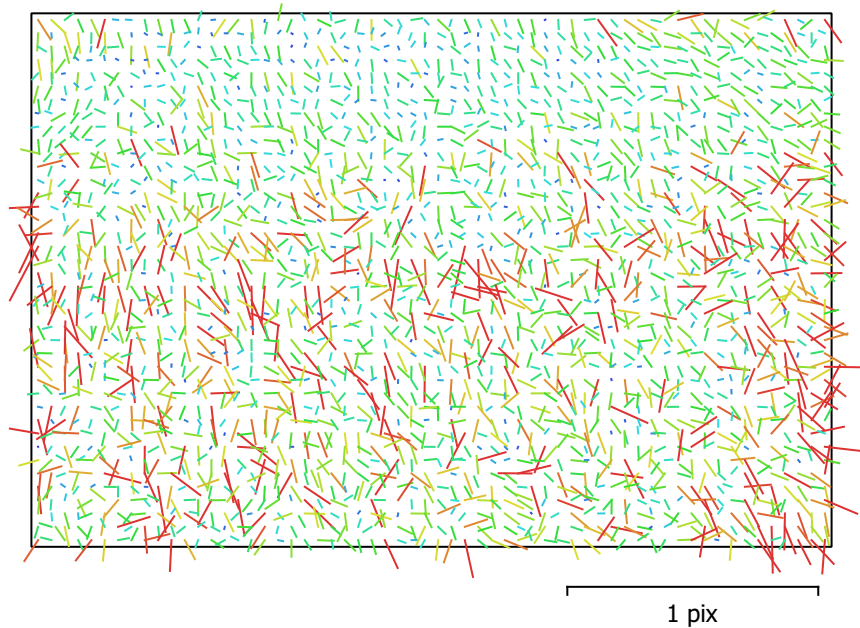


Fig. 2. Image residuals for NIKON Z 50 (40mm).

NIKON Z 50 (40mm)

18 images

Type	Resolution	Focal Length	Pixel Size
Frame	5568 x 3712	40 mm	4.31 x 4.31 μm

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	9464.17	6.1e+02	1.00	0.04	-0.15	-0.14	-0.21	0.28	-0.42	-0.04
Cx	-22.5925	1.8e+02		1.00	-0.03	0.10	-0.04	0.04	-0.04	0.36
Cy	152.094	1.5e+02			1.00	0.09	0.11	-0.14	-0.17	0.00
K1	-0.00499304	0.0027				1.00	-0.07	0.12	-0.05	0.33
K2	-0.00279376	0.0037					1.00	-0.98	0.05	-0.08
K3	0.0122413	0.019						1.00	-0.09	0.07
P1	-0.000373233	0.00079							1.00	0.05
P2	0.000204818	0.00053								1.00

Table 2. Calibration coefficients and correlation matrix.

Digital Elevation Model

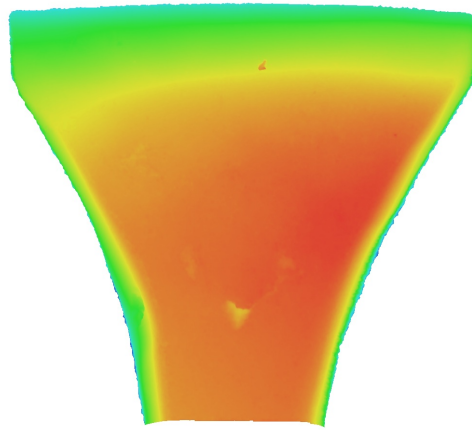


Fig. 3. Reconstructed digital elevation model.

Processing Parameters

General

Cameras	18
Aligned cameras	18
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll

Tie Points

Points	40,023 of 76,896
RMS reprojection error	0.112924 (0.479567 pix)
Max reprojection error	0.299961 (3.3011 pix)
Mean key point size	4.41254 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	4.98231

Alignment parameters

Accuracy	High
Generic preselection	Yes
Reference preselection	No
Key point limit	100,000
Key point limit per Mpx	1,000
Tie point limit	0
Filter points by mask	Yes
Mask tie points	No
Exclude stationary tie points	Yes
Guided image matching	No
Adaptive camera model fitting	No
Matching time	12 seconds
Matching memory usage	223.80 MB
Alignment time	43 seconds
Alignment memory usage	356.42 MB
Date created	2024:05:19 18:20:21
Software version	2.1.0.17532
File size	6.98 MB

Depth Maps

Count	18
Depth maps generation parameters	
Quality	High
Filtering mode	Mild
Max neighbors	16
Processing time	1 minutes 53 seconds
Memory usage	1.54 GB
Date created	2024:05:19 18:26:28
Software version	2.1.0.17532
File size	40.53 MB

Point Cloud

Points	3,359,438
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Point attributes

Color	3 bands, uint8
Normal	

Point classes

Created (never classified)	3,359,438
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Depth maps generation parameters

Quality	High
Filtering mode	Mild
Max neighbors	16
Processing time	1 minutes 53 seconds
Memory usage	1.54 GB

Point cloud generation parameters

Processing time	21 seconds
Memory usage	1.66 GB
Date created	2024:05:19 18:26:50
Software version	2.1.0.17532
File size	44.16 MB

Model

Faces	417,162
Vertices	209,007
Vertex colors	3 bands, uint8

Depth maps generation parameters

Quality	High
Filtering mode	Mild
Max neighbors	16
Processing time	1 minutes 53 seconds
Memory usage	1.54 GB

Reconstruction parameters

Surface type	Arbitrary
Source data	Depth maps
Interpolation	Disabled
Strict volumetric masks	Yes
Processing time	36 seconds
Memory usage	1.50 GB
Date created	2024:05:19 18:37:45
Software version	2.1.0.17532
File size	8.96 MB

System

Software name	Agisoft Metashape Professional
Software version	2.1.0 build 17532
OS	Windows 64 bit
RAM	31.94 GB
CPU	Intel(R) Core(TM) i7-9700K CPU @ 3.60GHz
GPU(s)	Quadro P2000