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Protokol
27 May 2024



Survey Data



Fig. 1. Camera locations and image overlap.

Number of images: 449

Camera stations: 449

Tie points: 1,307,342

Projections: 6,389,915

Reprojection error: 0.602 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

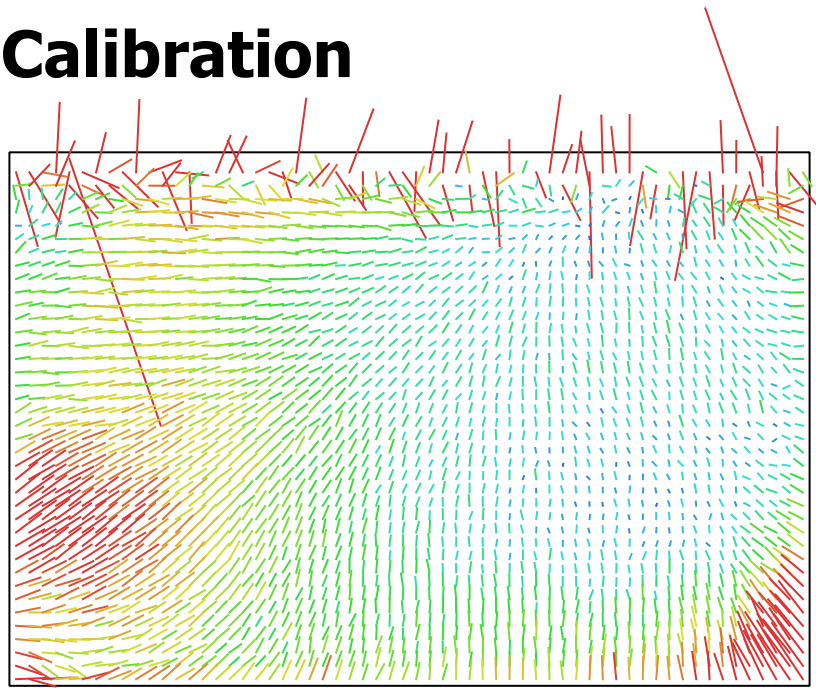


Fig. 2. Image residuals for NIKON Z 50 (40mm).

NIKON Z 50 (40mm)

449 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	9569.6	27	1.00	0.24	-0.51	0.75	0.21	0.03	0.58	0.04
Cx	-354.164	4.7		1.00	-0.18	0.02	0.01	0.14	0.37	-0.04
Cy	106.626	5.9			1.00	-0.22	-0.07	-0.01	-0.22	0.43
K1	0.0467217	0.00026				1.00	0.03	0.19	0.31	0.29
K2	0.0176121	0.00088					1.00	-0.94	0.11	0.07
K3	0.00955666	0.0045						1.00	0.10	-0.03
P1	0.0150361	7.9e-05							1.00	-0.21
P2	0.00217629	4.1e-05								1.00

Table 2. Calibration coefficients and correlation matrix.

Digital Elevation Model

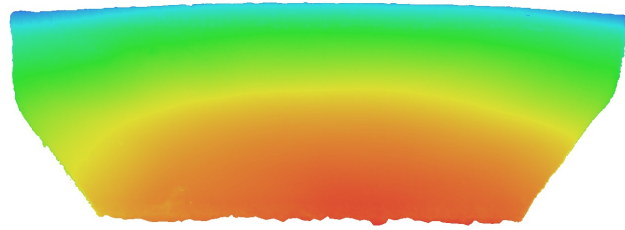


Fig. 3. Reconstructed digital elevation model.

Processing Parameters

General

Cameras	449
Aligned cameras	449
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll

Tie Points

Points	1,307,342 of 1,806,019
RMS reprojection error	0.158604 (0.601665 pix)
Max reprojection error	0.486504 (43.0627 pix)
Mean key point size	3.53366 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	5.33423

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	16 minutes 38 seconds
Matching memory usage	1.37 GB
Alignment time	42 minutes 18 seconds
Alignment memory usage	1.33 GB
Date created	2024:05:11 12:14:20
Software version	2.1.0.17532
File size	182.15 MB

Depth Maps

Count	446
Depth maps generation parameters	
Quality	High
Filtering mode	Mild
Max neighbors	16
Processing time	1 hours 11 minutes
Memory usage	7.22 GB
Date created	2024:05:11 19:24:29
Software version	2.1.0.17532
File size	1.64 GB

Model

Faces	832,011
Vertices	416,621
Vertex colors	3 bands, uint8
Depth maps generation parameters	
Quality	High
Filtering mode	Mild

Max neighbors	16
Processing time	1 hours 11 minutes
Memory usage	7.22 GB

Reconstruction parameters

Surface type	Arbitrary
Source data	Depth maps
Interpolation	Disabled
Strict volumetric masks	Yes
Processing time	7 minutes 54 seconds
Memory usage	2.50 GB
Date created	2024:05:11 19:32:23
Software version	2.1.0.17532
File size	17.86 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