

Agisoft Metashape

Processing Report

14 July 2022



Survey Data



Fig. 1. Camera locations and image overlap.

Number of images: 3,987

Camera stations: 3,896

Tie points: 2,286,959

Projections: 7,326,701

Reprojection error: 1.01 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
Canon EOS 5D Mark IV, ...	6720 x 4480	15 mm	5.36 x 5.36 μm	No

Table 1. Cameras.

Camera Calibration

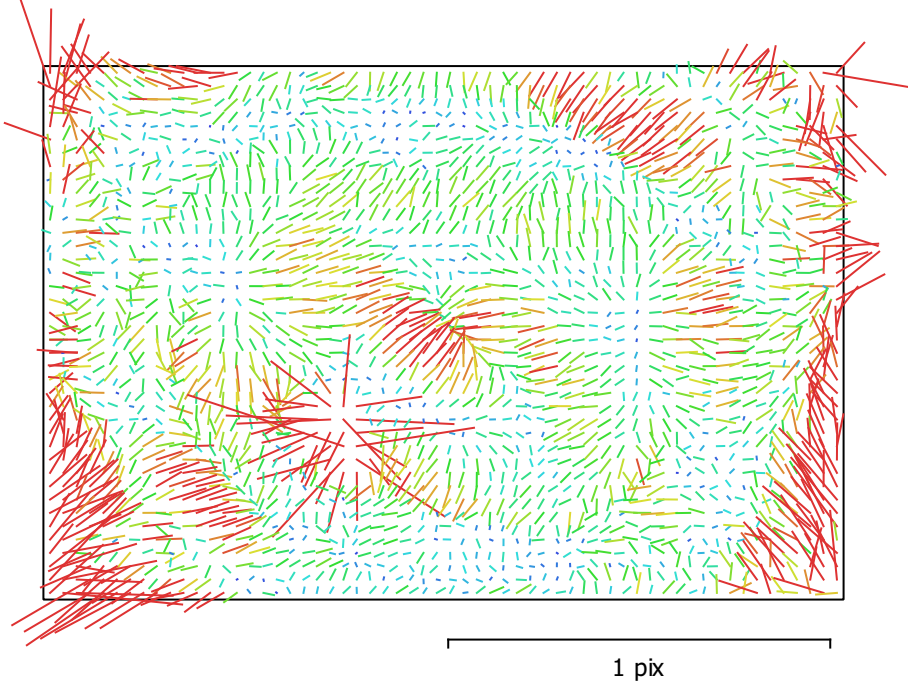


Fig. 2. Image residuals for Canon EOS 5D Mark IV, EF8-15mm f/4L FISHEYE USM (15mm).

Canon EOS 5D Mark IV, EF8-15mm f/4L FISHEYE USM (15mm)

3987 images

Type	Resolution	Focal Length	Pixel Size
Fisheye	6720 x 4480	15 mm	5.36 x 5.36 μm

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	3090.47	0.012	1.00	-0.17	-0.13	-0.55	0.33	-0.25	0.11	0.08
Cx	-6.40882	0.01		1.00	0.04	0.02	-0.00	0.00	-0.67	-0.03
Cy	-21.7255	0.01			1.00	0.03	-0.02	0.02	-0.02	-0.66
K1	-0.0472375	5.7e-06				1.00	-0.93	0.84	-0.04	-0.04
K2	0.00624799	7.5e-06					1.00	-0.97	0.02	0.01
K3	-0.00148948	3.1e-06						1.00	-0.02	-0.02
P1	-0.000332632	5.1e-07							1.00	0.02
P2	6.68484e-05	5.5e-07								1.00

Table 2. Calibration coefficients and correlation matrix.

Digital Elevation Model

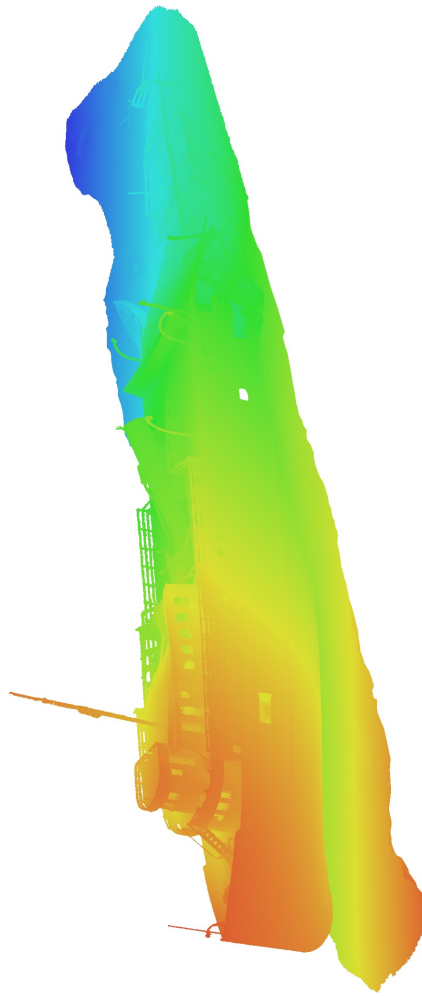


Fig. 3. Reconstructed digital elevation model.

Processing Parameters

General

Cameras	3987
Aligned cameras	3896
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll

Point Cloud

Points	2,286,959 of 2,602,742
RMS reprojection error	0.147133 (1.01429 pix)
Max reprojection error	0.449396 (47.3748 pix)
Mean key point size	5.01257 pix
Point colors	3 bands, uint8
Key points	9.76 GB
Average tie point multiplicity	3.61408

Alignment parameters

Accuracy	High
Generic preselection	Yes
Reference preselection	No
Key point limit	30,000
Key point limit per Mpx	1,000
Tie point limit	2,500
Exclude stationary tie points	Yes
Guided image matching	No
Adaptive camera model fitting	No
Matching time	20 seconds
Matching memory usage	128.75 MB
Alignment time	36 minutes 56 seconds
Alignment memory usage	1.58 GB
Date created	2022:07:12 07:12:05
Software version	1.8.0.13794
File size	239.84 MB

Depth Maps

Count	3887
Depth maps generation parameters	
Quality	Low
Filtering mode	Moderate
Max neighbors	16
Processing time	44 minutes 35 seconds
Memory usage	648.05 MB
Date created	2022:07:14 04:40:22
Software version	1.8.0.13794
File size	2.67 GB

Dense Point Cloud

Points	136,217,936
Point colors	3 bands, uint8
Depth maps generation parameters	
Quality	Low
Filtering mode	Moderate
Max neighbors	16
Processing time	44 minutes 35 seconds
Memory usage	648.05 MB

Dense cloud generation parameters

Processing time	3 hours 10 minutes
Memory usage	12.65 GB
Date created	2022:07:14 07:51:05
Software version	1.8.0.13794
File size	1.77 GB

Model

Faces	7,999,546
Vertices	4,000,882
Vertex colors	3 bands, uint8
Texture	8,192 x 8,192, 4 bands, uint8

Depth maps generation parameters

Quality	Medium
Filtering mode	Moderate
Max neighbors	16
Processing time	1 hours 39 minutes
Memory usage	2.51 GB

Reconstruction parameters

Surface type	Arbitrary
Source data	Depth maps
Interpolation	Enabled
Strict volumetric masks	No
Processing time	52 minutes 45 seconds
Memory usage	15.16 GB

Texturing parameters

Mapping mode	Generic
Blending mode	Mosaic
Texture size	8,192
Enable hole filling	Yes
Enable ghosting filter	No
UV mapping time	2 minutes 21 seconds
UV mapping memory usage	2.58 GB
Blending time	14 minutes 41 seconds
Blending memory usage	4.39 GB
Blending GPU memory usage	2.43 GB
Date created	2022:07:14 01:19:16
Software version	1.8.0.13794
File size	453.84 MB

System

Software name	Agisoft Metashape Professional
Software version	1.8.0 build 13794
OS	Windows 64 bit
RAM	63.92 GB
CPU	Intel(R) Core(TM) i9-9900K CPU @ 3.60GHz
GPU(s)	NVIDIA GeForce RTX 2060 SUPER