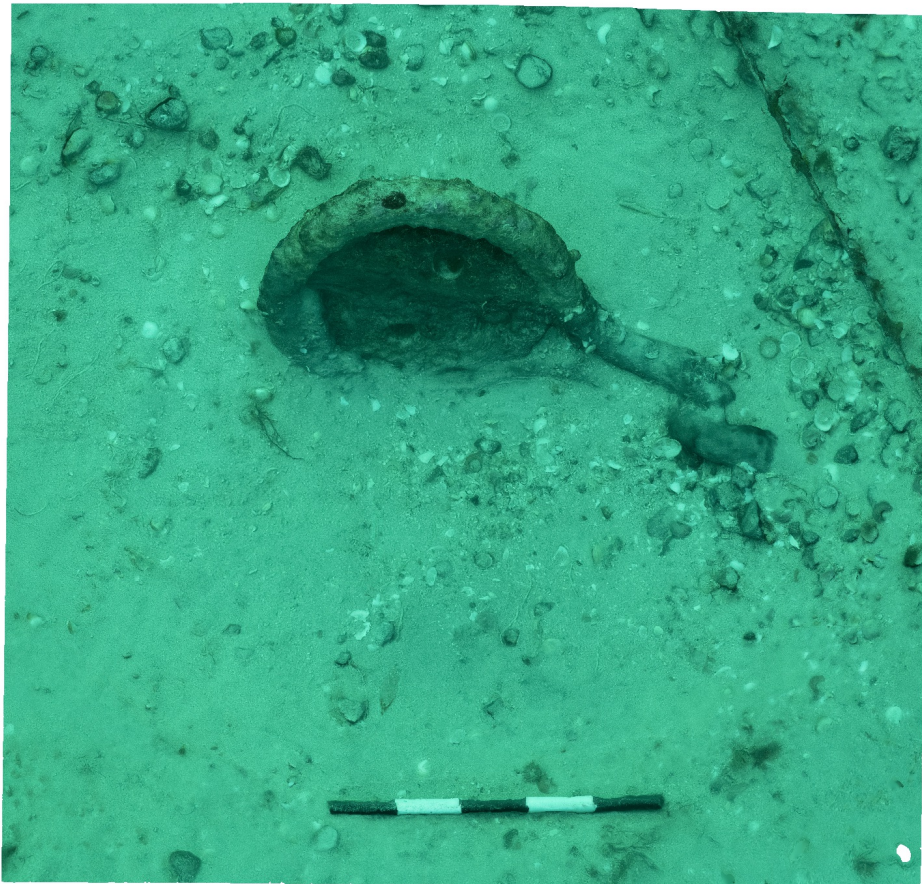


Agisoft Metashape C10-1

Processing Report

Colossus Deadeye C10.1

12 April 2020



Survey Data

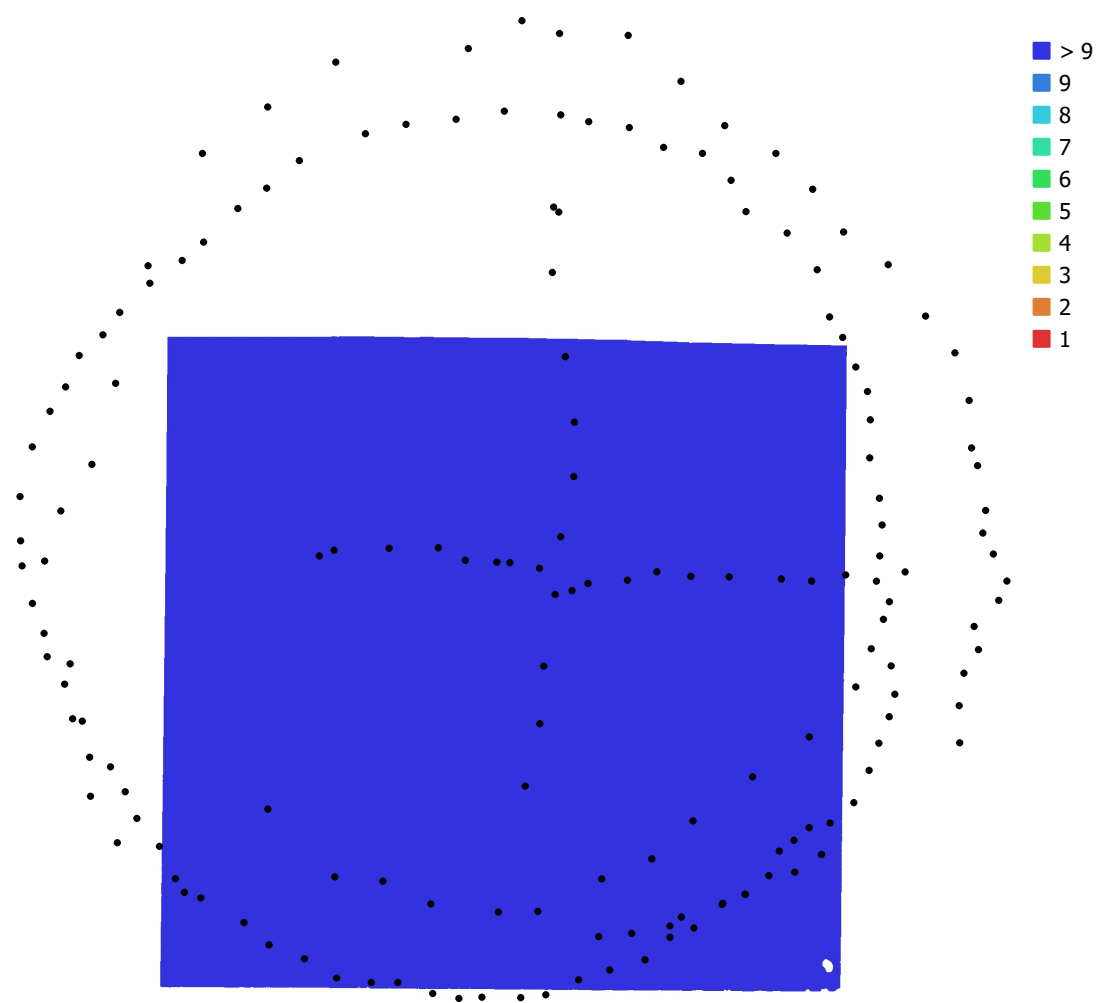


Fig. 1. Camera locations and image overlap.

Number of images:	169	Camera stations:	169
		Tie points:	154,652
		Projections:	550,047
		Reprojection error:	3.22 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
E-M1MarkII (8mm)	5184 x 3888	8 mm	3.32 x 3.32 μ m	No

Table 1. Cameras.

Camera Calibration

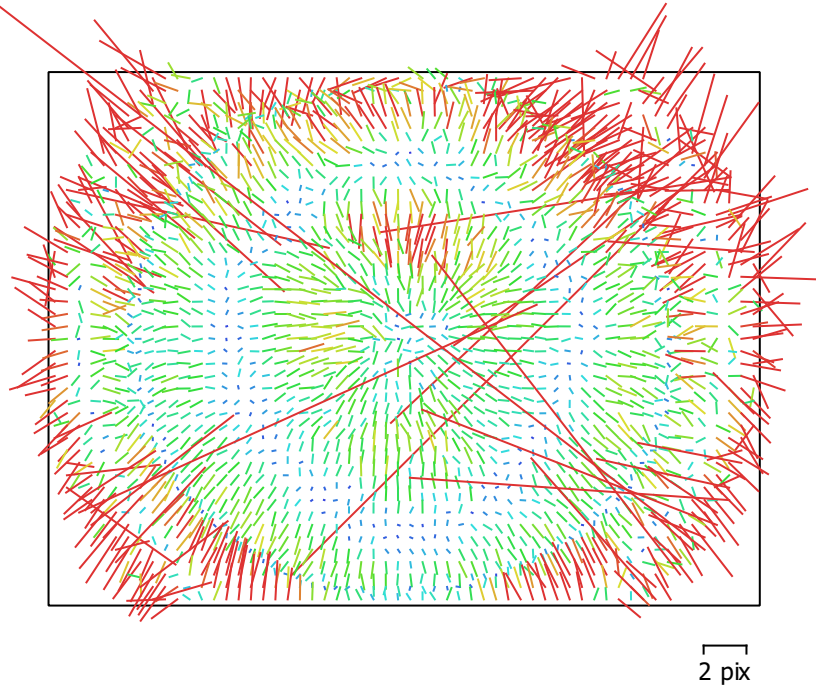


Fig. 2. Image residuals for E-M1MarkII (8mm).

E-M1MarkII (8mm)

169 images

Type
Frame

Resolution
5184 x 3888

Focal Length
8 mm

Pixel Size
3.32 x 3.32 μm

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	2527.69	0.16	1.00	0.07	-0.33	-0.67	0.58	-0.53	-0.11	0.22
Cx	-17.7565	0.19		1.00	-0.06	0.00	-0.04	0.05	-0.53	-0.01
Cy	-27.0298	0.22			1.00	-0.07	0.08	-0.06	0.05	-0.64
K1	-0.292103	5.6e-05				1.00	-0.96	0.90	0.05	0.00
K2	0.0818351	4e-05					1.00	-0.98	-0.00	-0.05
K3	-0.0100068	8.2e-06						1.00	-0.01	0.04
P1	0.000110565	4.6e-06							1.00	-0.04
P2	0.000600899	8.6e-06								1.00

Table 2. Calibration coefficients and correlation matrix.

Digital Elevation Model

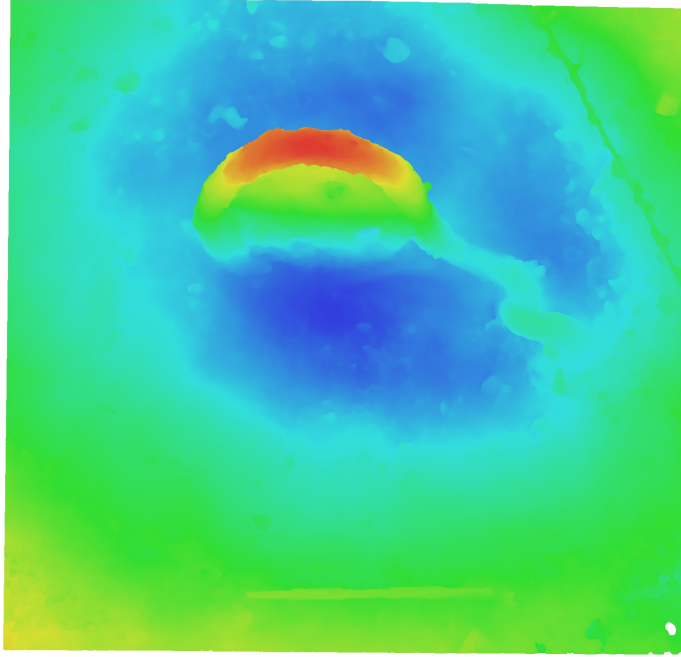


Fig. 3. Reconstructed digital elevation model.

Processing Parameters

General

Cameras	169
Aligned cameras	169
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll

Point Cloud

Points	154,652 of 190,026
RMS reprojection error	0.760214 (3.22489 pix)
Max reprojection error	11.2642 (82.2415 pix)
Mean key point size	4.66955 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	3.75719

Alignment parameters

Accuracy	High
Generic preselection	Yes
Key point limit	100,000
Tie point limit	4,000
Adaptive camera model fitting	No
Matching time	2 minutes 52 seconds
Alignment time	2 minutes 46 seconds
Software version	1.5.5.9097

Depth Maps

Count	169
Depth maps generation parameters	
Quality	High
Filtering mode	Mild
Processing time	42 minutes 12 seconds
Software version	1.6.2.10247

Dense Point Cloud

Points	19,628,829
Point colors	3 bands, uint8
Depth maps generation parameters	
Quality	High
Filtering mode	Mild
Processing time	38 minutes 33 seconds
Dense cloud generation parameters	
Processing time	2 hours 10 minutes
Software version	1.5.5.9097

Model

Faces	5,973,451
Vertices	2,992,523
Vertex colors	3 bands, uint8
Texture	12,000 x 12,000, 4 bands, uint8
Depth maps generation parameters	
Quality	High
Filtering mode	Mild
Processing time	42 minutes 12 seconds
Reconstruction parameters	
Surface type	Arbitrary

Source data	Depth maps
Interpolation	Enabled
Strict volumetric masks	No
Processing time	20 minutes 31 seconds
Texturing parameters	
Mapping mode	Generic
Blending mode	Mosaic
Texture size	12,000
Enable hole filling	Yes
Enable ghosting filter	Yes
UV mapping time	3 minutes 26 seconds
Blending time	3 minutes 37 seconds
Software version	1.6.2.10247
Orthomosaic	
Size	8,000 x 4,182
Coordinate system	Local Coordinates (m)
Colors	3 bands, uint8
Reconstruction parameters	
Blending mode	Mosaic
Surface	Mesh
Enable hole filling	Yes
Processing time	3 minutes 35 seconds
Software version	1.5.5.9097
System	
Software name	Agisoft Metashape Professional
Software version	1.6.2 build 10247
OS	Windows 64 bit
RAM	255.95 GB
CPU	Intel(R) Xeon(R) CPU E5-2690 v2 @ 3.00GHz
GPU(s)	Quadro M5000
	Tesla K20c
	Tesla K20c