

Bildanalyse Projekt 1

UAV-Photogrammetrie

Gruppe 6

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Flight 1(low) + Flight 2 (high) combined



Figure: dji Phantom 4 RTK Drohne

Kameraparameter

- wichtige Parameter des Kamera

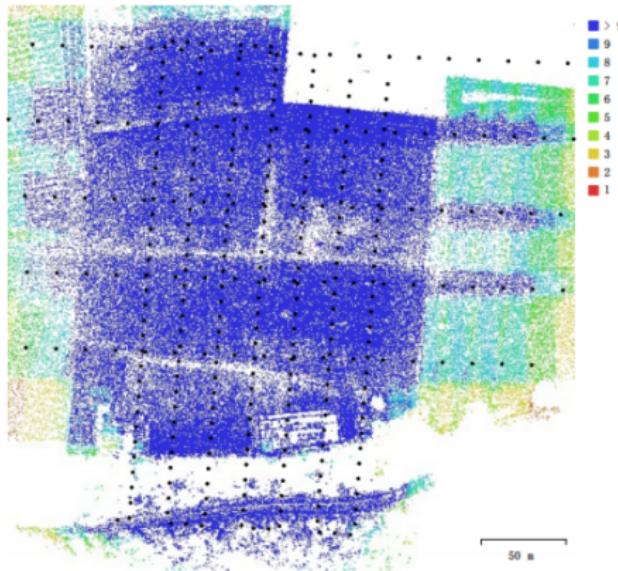
Kamera	Pixelgröße(μm)	Pixelzahl s	Brennweite(mm)
dji Phantom4 RTK	2,41	5472×3648	8,8

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Survey data



Number of images: 335
Flying altitude: 52.9 m
Ground resolution: 1.45 cm/pix
Coverage area: 0.0474 km²
Reprojection error: 0.289 pix

Camera calibration

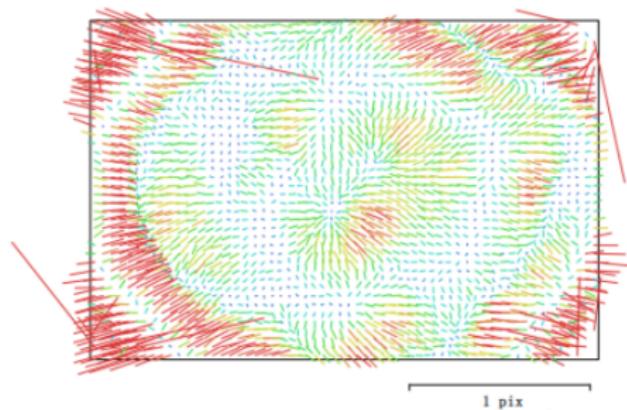
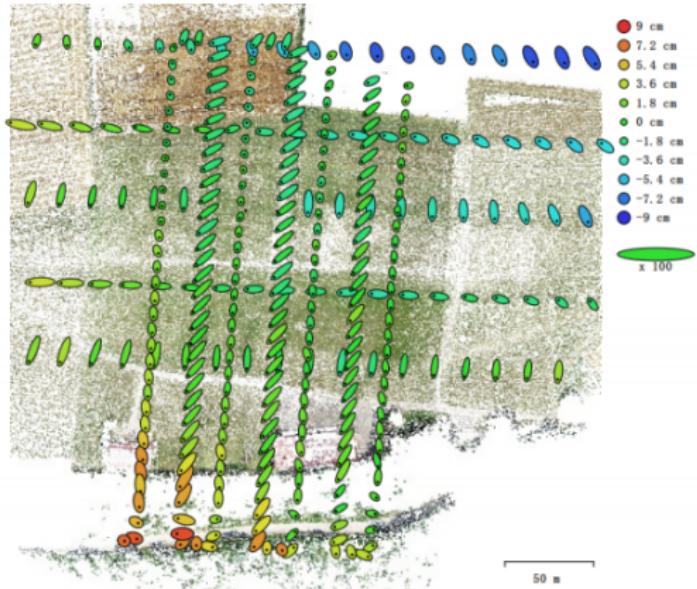


Figure: Image residuals

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	3645.9	0.054	1.00	0.04	0.03	-0.70	0.38	-0.28	-0.05	-0.02
Cx	6.0401	0.027		1.00	-0.01	-0.05	0.04	-0.03	-0.82	-0.02
Cy	8.77447	0.026			1.00	0.00	-0.02	0.02	0.00	-0.69
K1	-0.267434	1.1e-05				1.00	-0.89	0.80	0.07	-0.01
K2	0.108337	1.9e-05					1.00	-0.98	-0.07	0.03
K3	-0.0295986	1.2e-05						1.00	0.06	-0.04
P1	-0.00117473	1.1e-06							1.00	0.02
P2	-2.03656e-05	1.1e-06								1.00

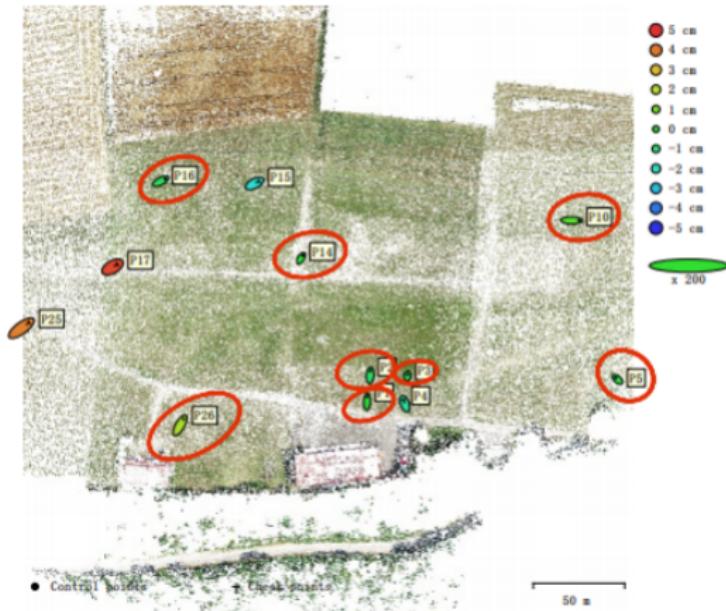
Figure: Calibration coefficients and correlation matrix

Camera locations



Error	Value (cm)
X	4.68229
Y	5.43778
Z	2.74389
XY	7.17588
Total	7.68259

Ground control points



- 8 Passpunkte
- 4 Kontrollpunkte

Residuals from control & check points

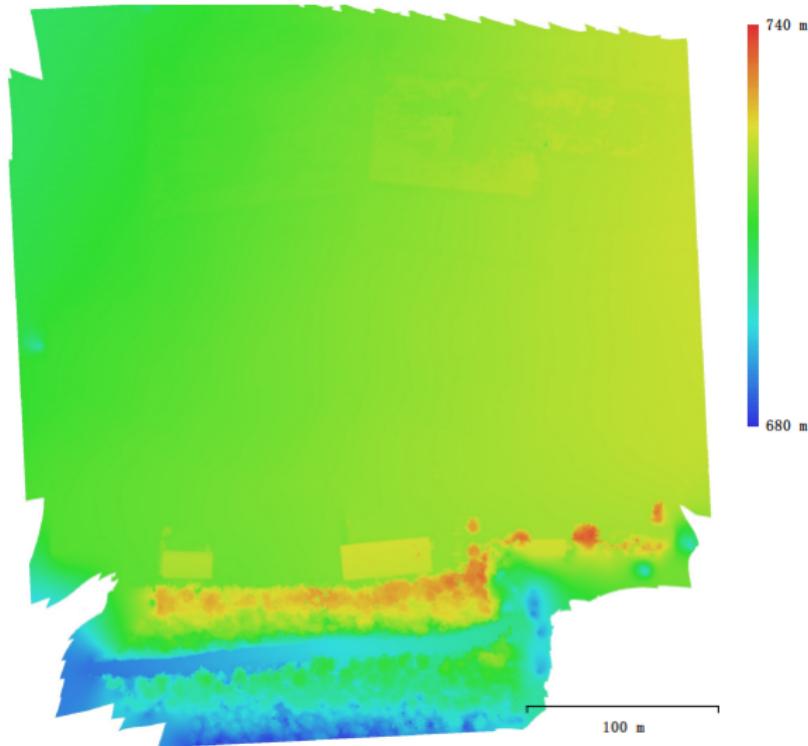
Count	X error (cm)	Y error (cm)	Z error (cm)	XY error (cm)	Total (cm)
8	1.89713	1.99572	0.777582	2.75354	2.86122

Table: Residuale der Passpunkte

Count	X error (cm)	Y error (cm)	Z error (cm)	XY error (cm)	Total (cm)
4	2.8097	2.16351	3.33	3.54616	4.86458

Table: Residuale der Kontrollpunkte

Digital Elevation Model



Vergleich von Höhenmodellen

