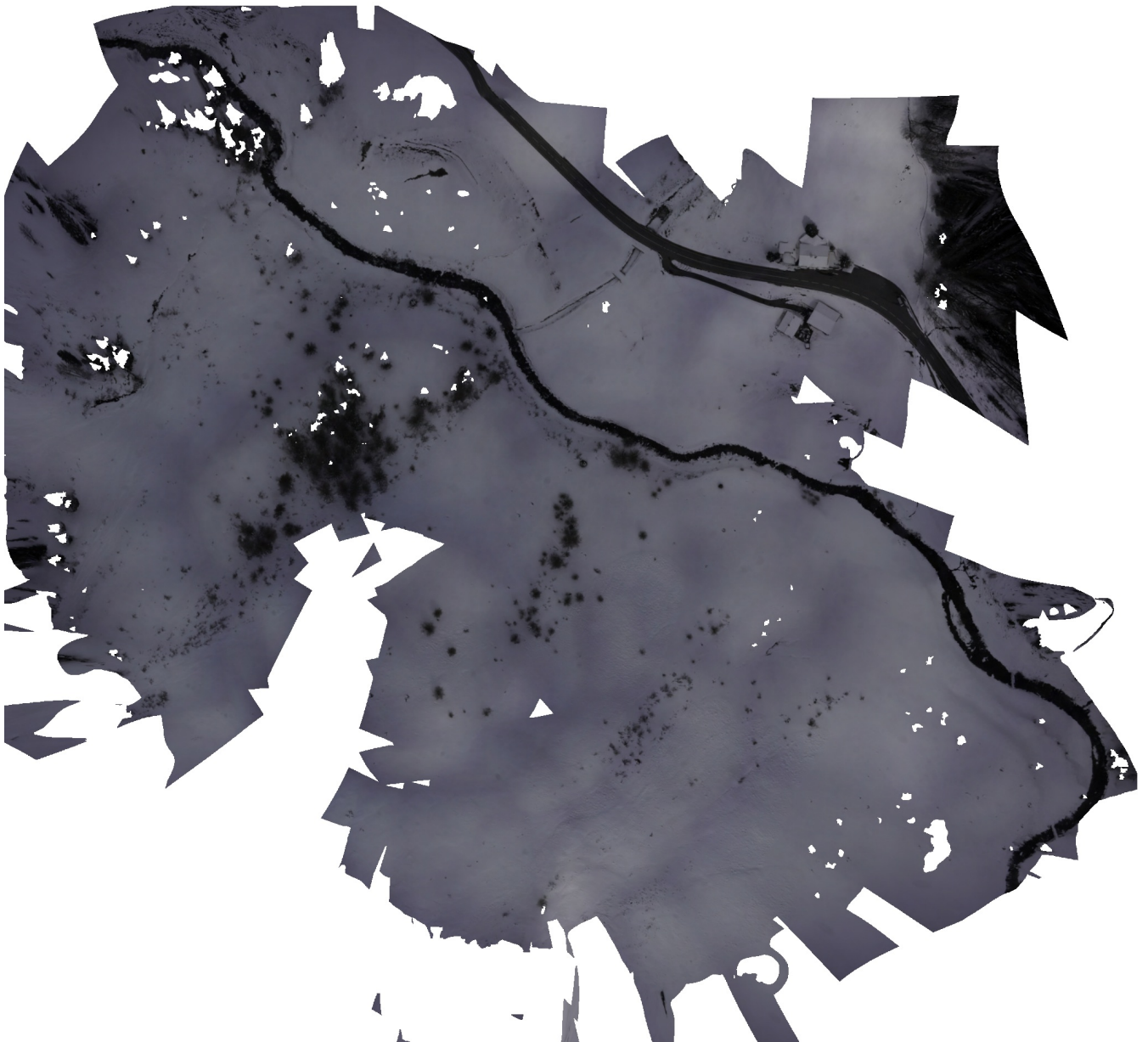


# Active Planning Full dataset

Processing Report  
29 August 2025



# Survey Data

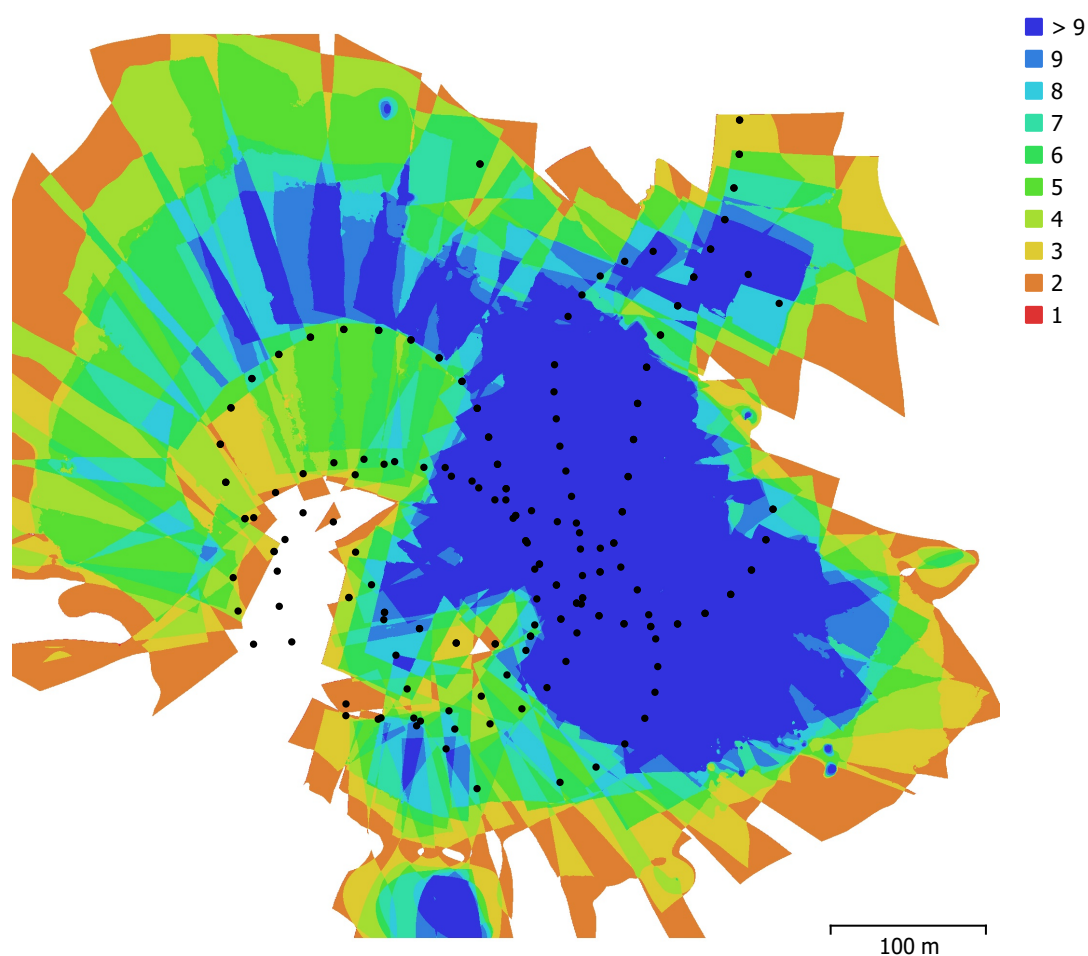


Fig. 1. Camera locations and image overlap.

|                    |                       |                     |          |
|--------------------|-----------------------|---------------------|----------|
| Number of images:  | 223                   | Camera stations:    | 194      |
| Flying altitude:   | 108 m                 | Tie points:         | 65,872   |
| Ground resolution: | 1.27 cm/pix           | Projections:        | 329,903  |
| Coverage area:     | 0.250 km <sup>2</sup> | Reprojection error: | 2.56 pix |

| Camera Model             | Resolution  | Focal Length | Pixel Size     | Precalibrated |
|--------------------------|-------------|--------------|----------------|---------------|
| ILCE-7RM4, FE 35mm F2... | 9504 x 6336 | 35 mm        | 3.79 x 3.79 µm | No            |

Table 1. Cameras.

# Camera Calibration

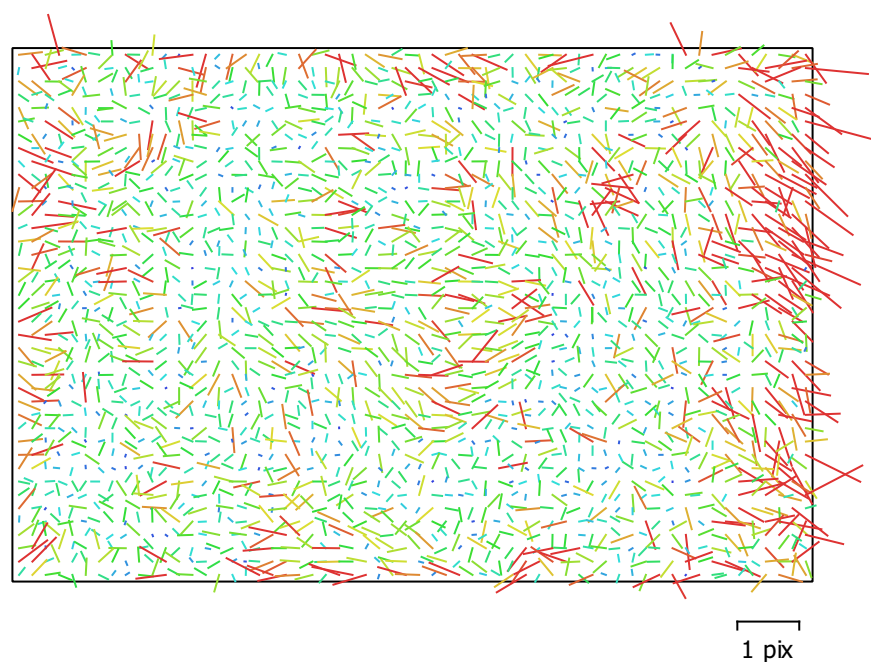


Fig. 2. Image residuals for ILCE-7RM4, FE 35mm F2.8 ZA (35mm).

## ILCE-7RM4, FE 35mm F2.8 ZA (35mm)

223 images

|       |             |              |                |
|-------|-------------|--------------|----------------|
| Type  | Resolution  | Focal Length | Pixel Size     |
| Frame | 9504 x 6336 | 35 mm        | 3.79 x 3.79 μm |

|    | Value        | Error   | F    | Cx    | Cy    | K1    | K2    | K3    | P1    | P2    |
|----|--------------|---------|------|-------|-------|-------|-------|-------|-------|-------|
| F  | 9635         | 0.55    | 1.00 | -0.24 | -0.00 | 0.06  | 0.06  | -0.11 | 0.05  | -0.02 |
| Cx | -28.479      | 0.33    |      | 1.00  | 0.05  | -0.07 | 0.02  | -0.00 | 0.70  | 0.07  |
| Cy | -39.7807     | 0.37    |      |       | 1.00  | -0.01 | 0.03  | -0.03 | -0.01 | 0.87  |
| K1 | 0.0561515    | 0.00016 |      |       |       | 1.00  | -0.95 | 0.89  | -0.08 | -0.01 |
| K2 | -0.253081    | 0.001   |      |       |       |       | 1.00  | -0.98 | 0.01  | 0.03  |
| K3 | 0.0290831    | 0.002   |      |       |       |       |       | 1.00  | -0.01 | -0.03 |
| P1 | -0.000434855 | 9.5e-06 |      |       |       |       |       |       | 1.00  | -0.03 |
| P2 | -0.000988367 | 1e-05   |      |       |       |       |       |       |       | 1.00  |

Table 2. Calibration coefficients and correlation matrix.

# Camera Locations

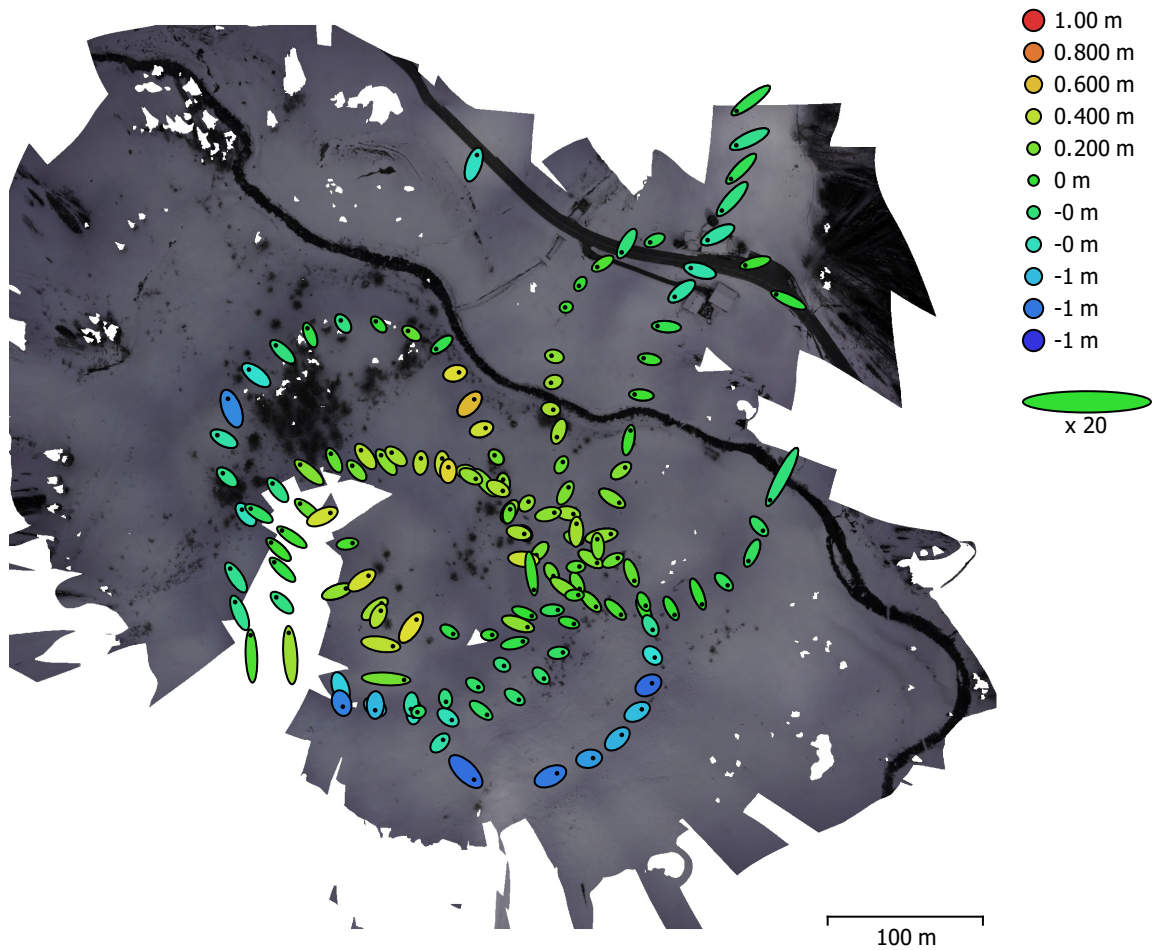


Fig. 3. Camera locations and error estimates.

Z error is represented by ellipse color. X,Y errors are represented by ellipse shape.

Estimated camera locations are marked with a black dot.

| X error (cm) | Y error (cm) | Z error (cm) | XY error (cm) | Total error (cm) |
|--------------|--------------|--------------|---------------|------------------|
| 38.3493      | 39.4326      | 30.1729      | 55.0054       | 62.7376          |

Table 3. Average camera location error.

X - Longitude, Y - Latitude, Z - Altitude.

# Digital Elevation Model

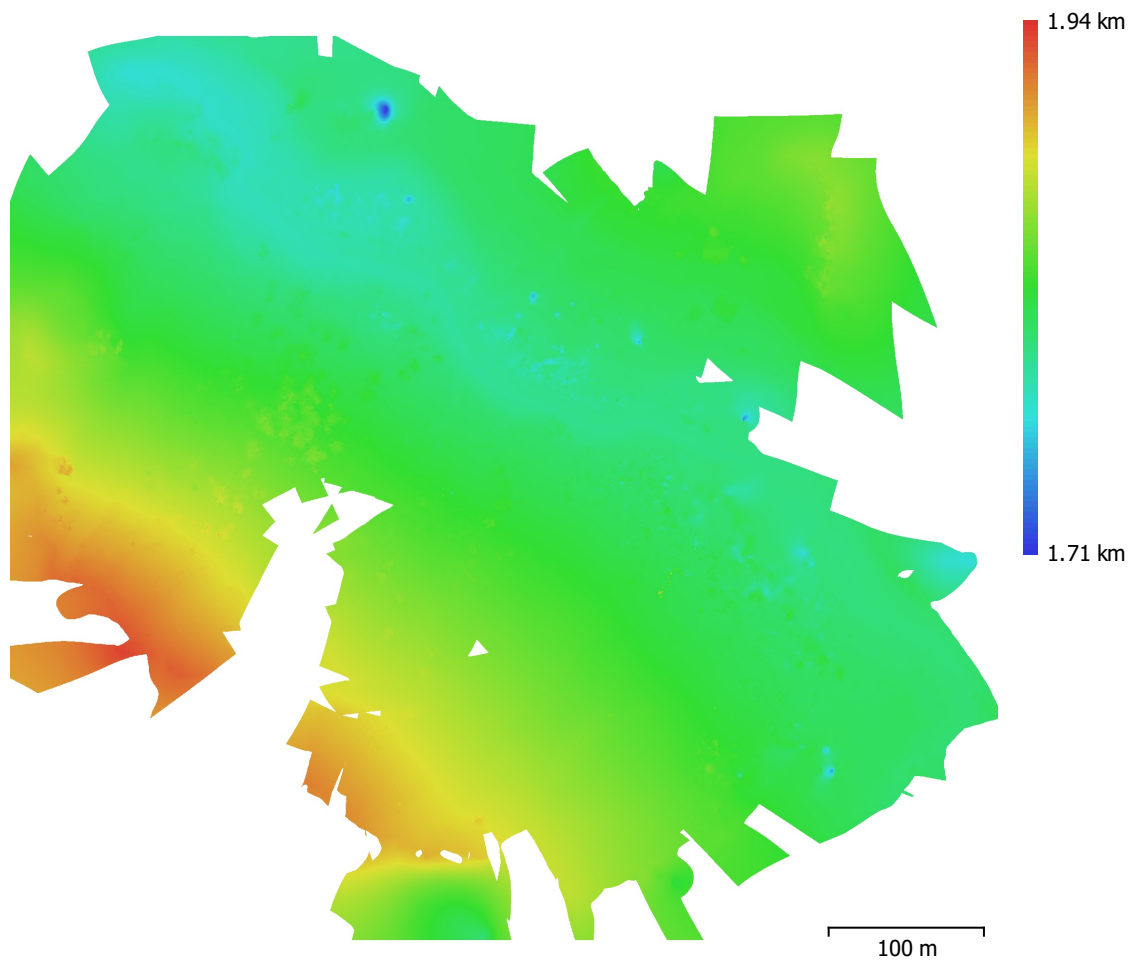


Fig. 4. Reconstructed digital elevation model.

Resolution: 1.27 cm/pix  
Point density: 0.619 points/cm<sup>2</sup>

# Processing Parameters