

PHOTOMOD 6.3

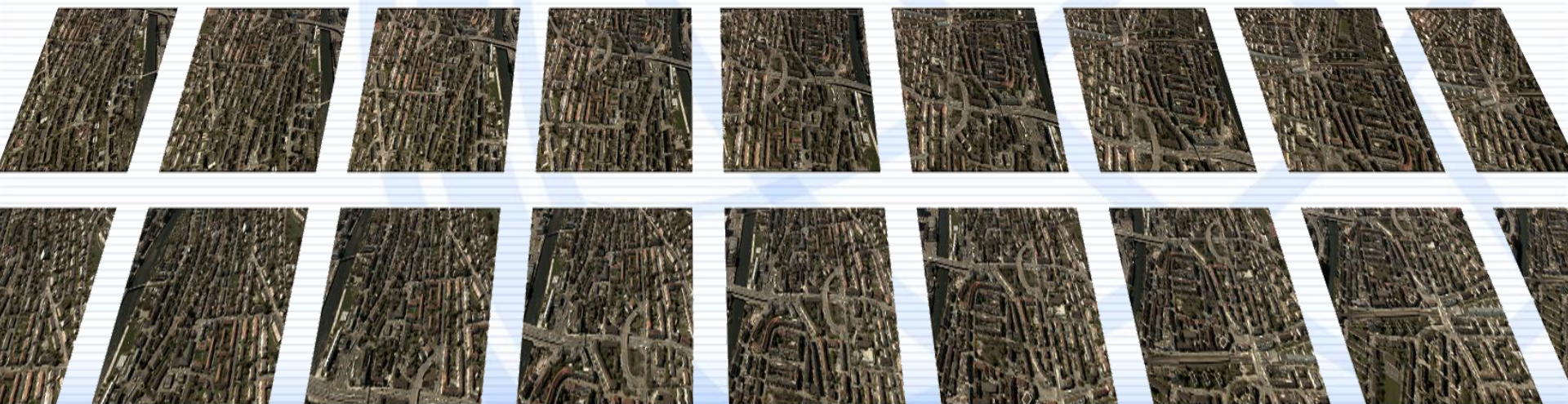
new features

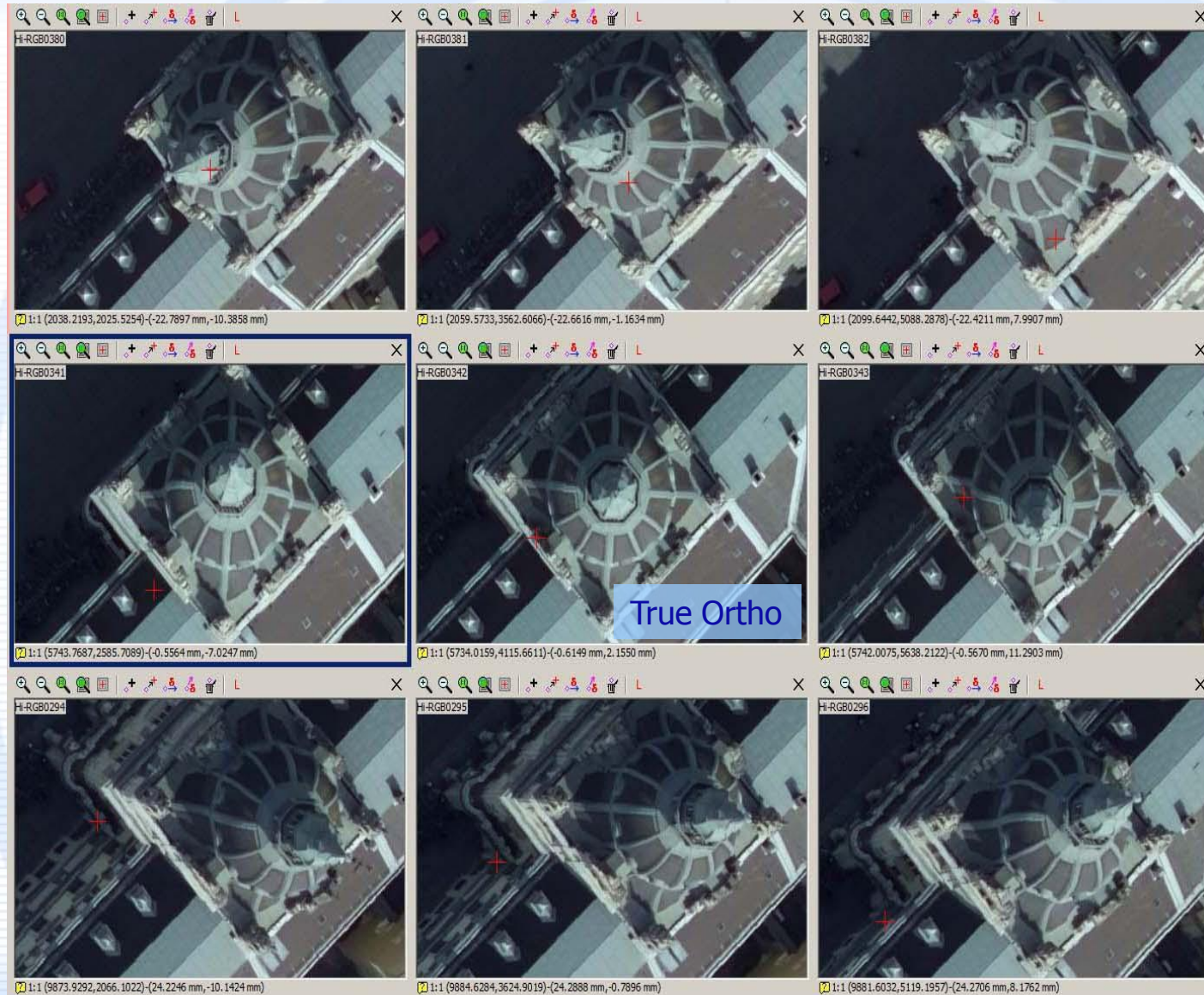
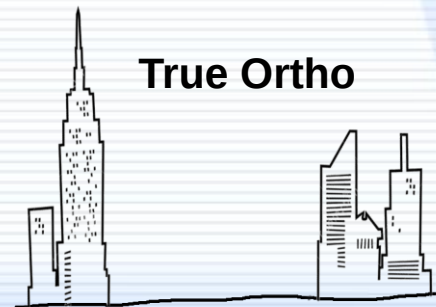
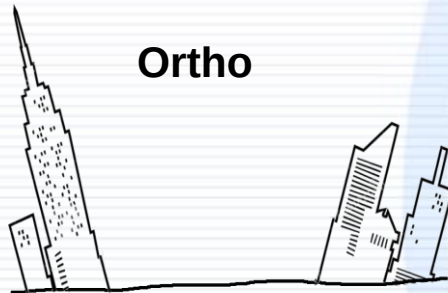
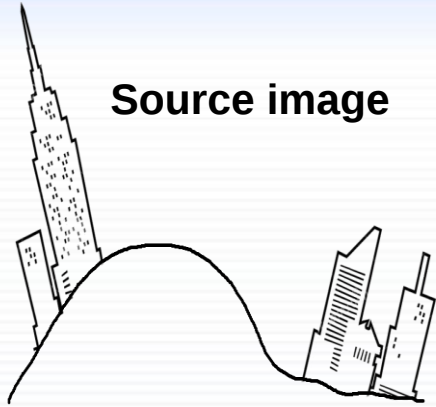
Dmitry Kochergin
Head of Technical support department
Racurs, Russia

Hadera. Israel. October 2017

PHOTOMOD 6.3 highlights

- ✓ Fully automatic generation of True-Ortho
- ✓ Improved dense DSM quality
- ✓ Point cloud filtering capabilities
- ✓ New pan-sharpening method (EPCA)
- ✓ Additional stereovectorization tools
- ✓ Increased reliability of UAS aerial triangulation
- ✓ Accelerated orthorectification for urban and mountain area
- ✓ New report of UAS-project processing
- ✓ Export of RPC
- ✓ PHOTOMOD UAS interface changes
- ✓ UltraCam metadata import improvements

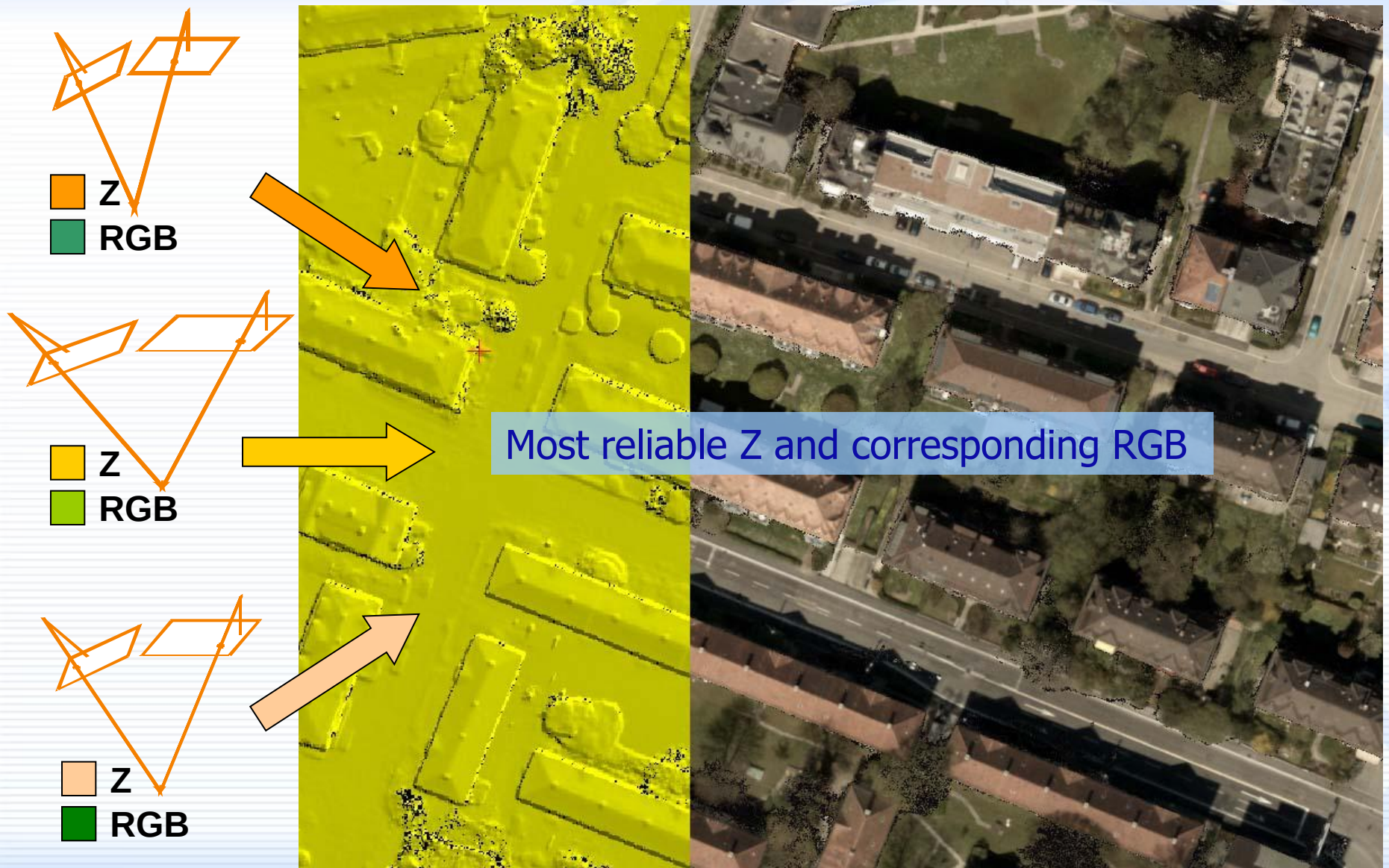




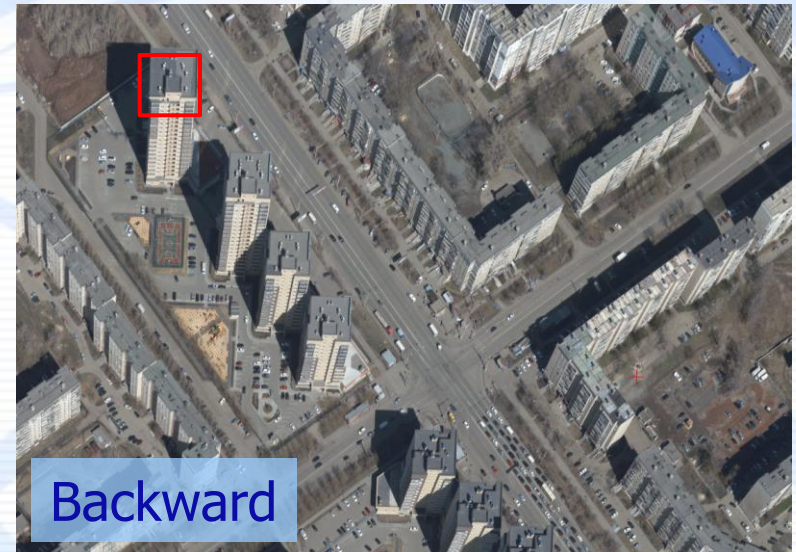
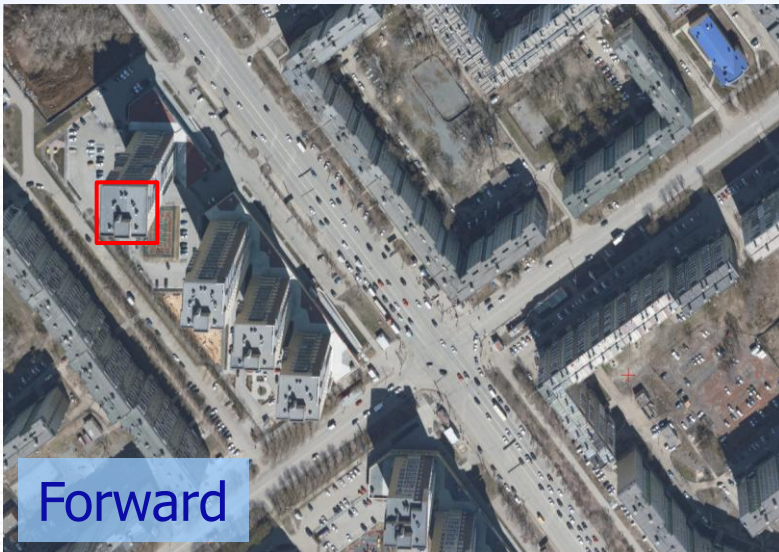
True-Ortho in PHOTOMOD



True Ortho pixel value (RGB)



True Ortho (Leica RCD-30 Oblique)



UltraCam Osprey



Point cloud



3D model



True Ortho

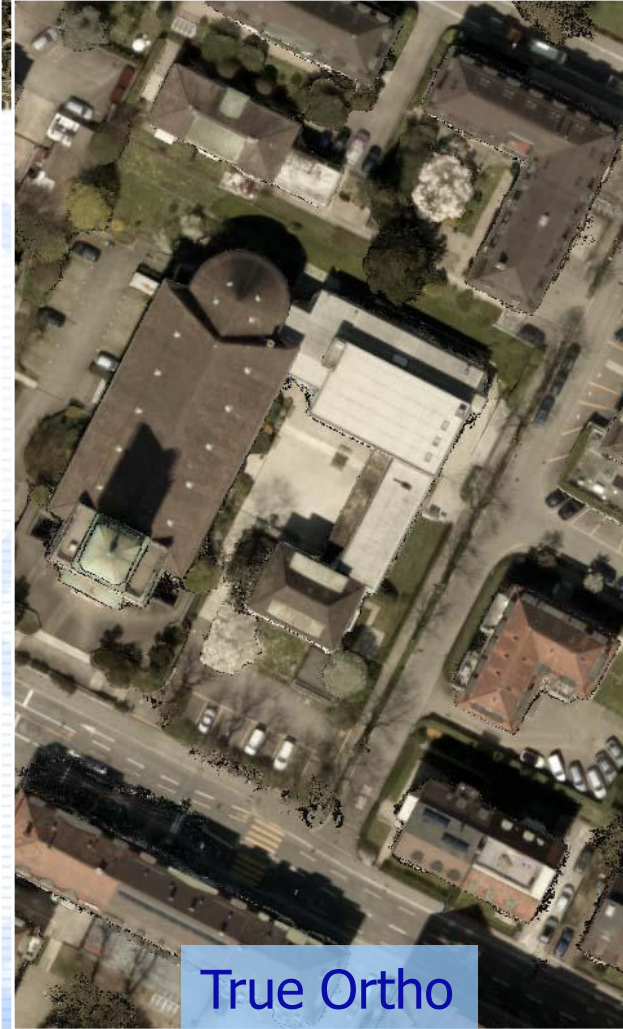
Leica RCD-30 Oblique



Point cloud

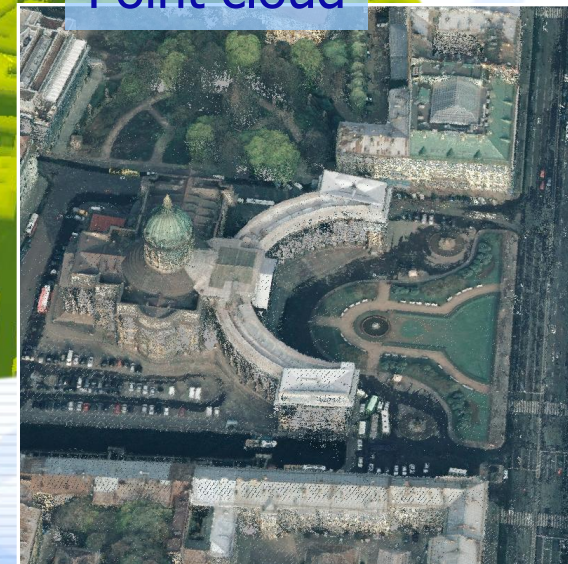
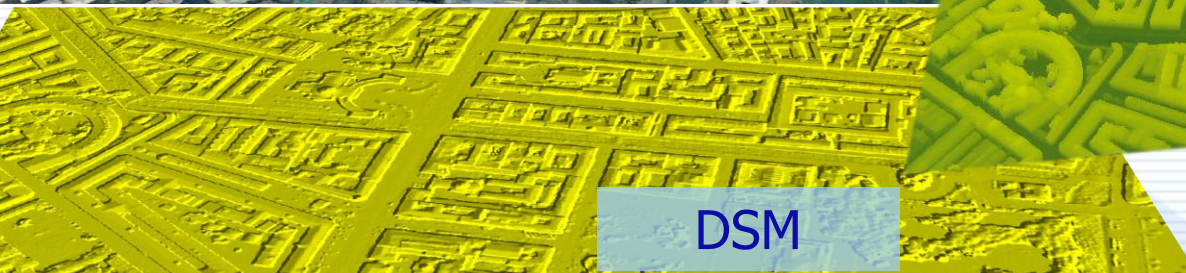
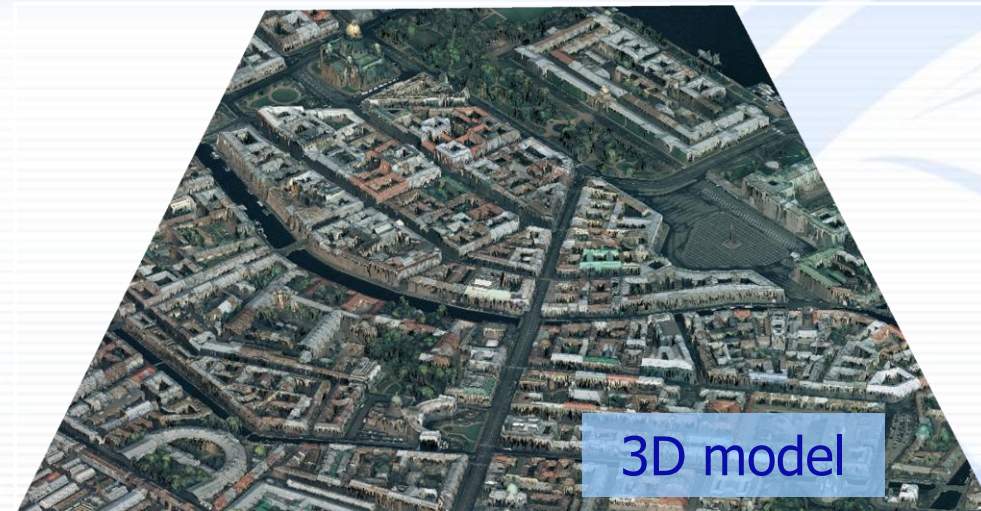


3D model

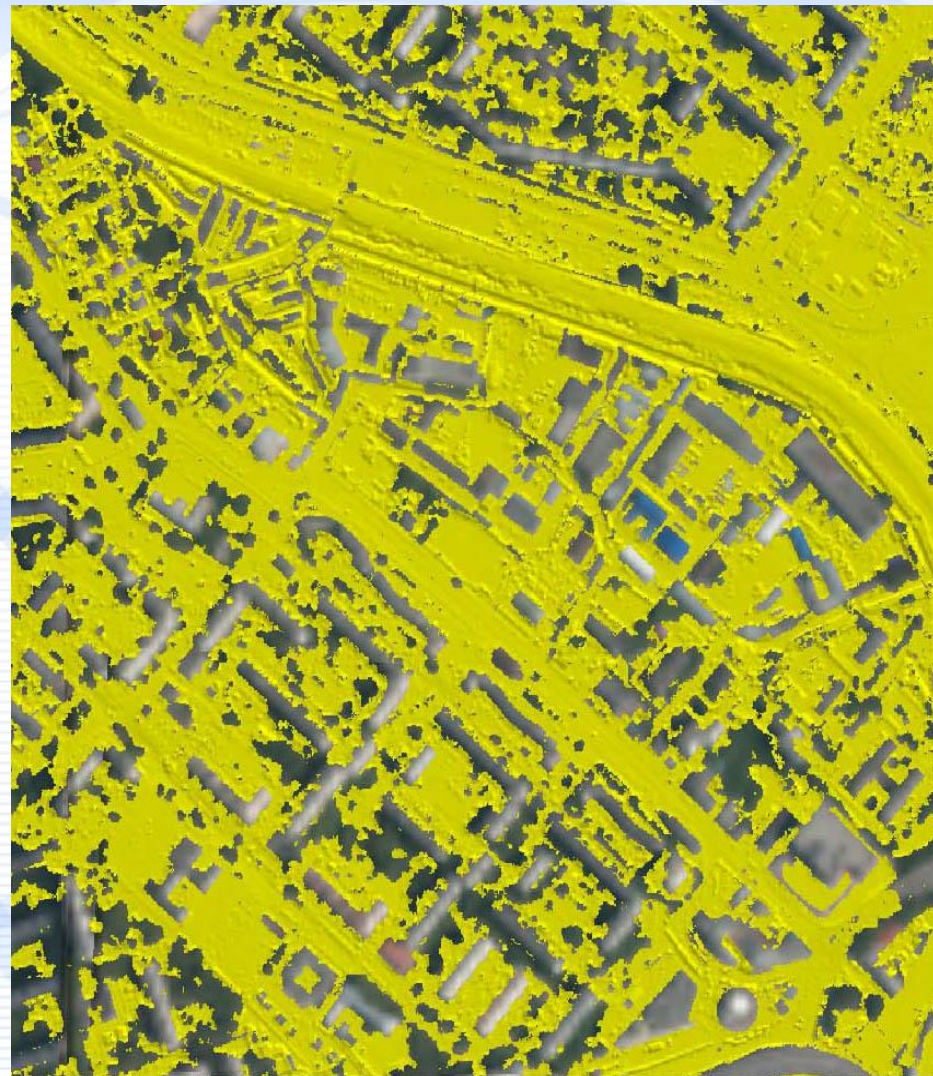
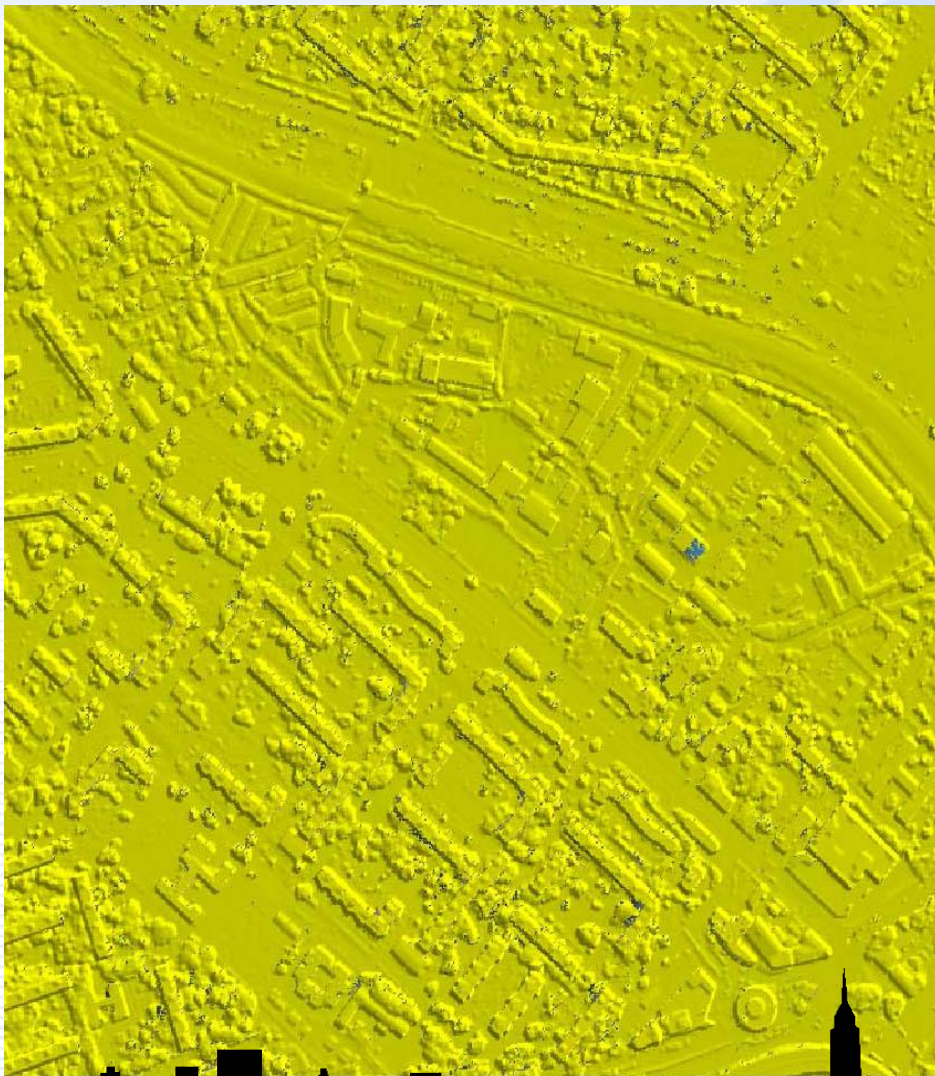


True Ortho

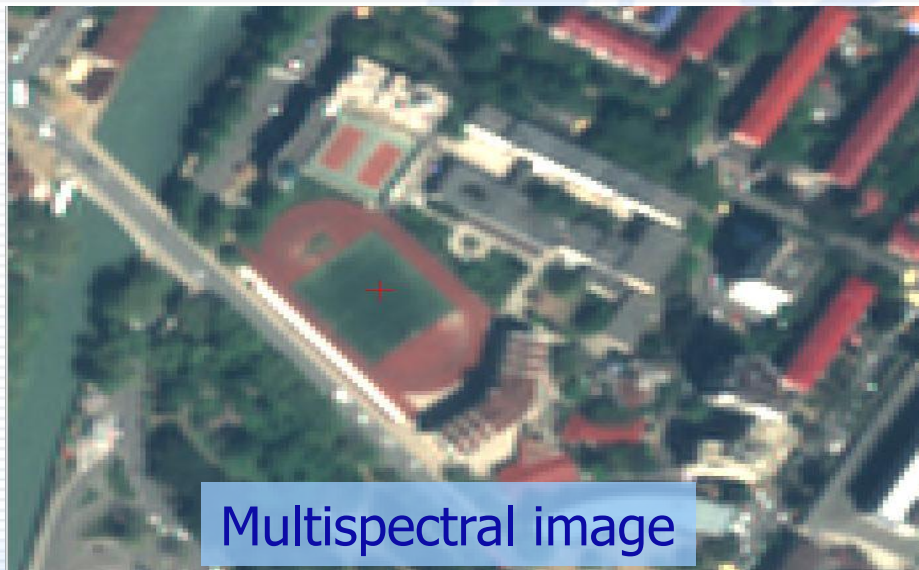
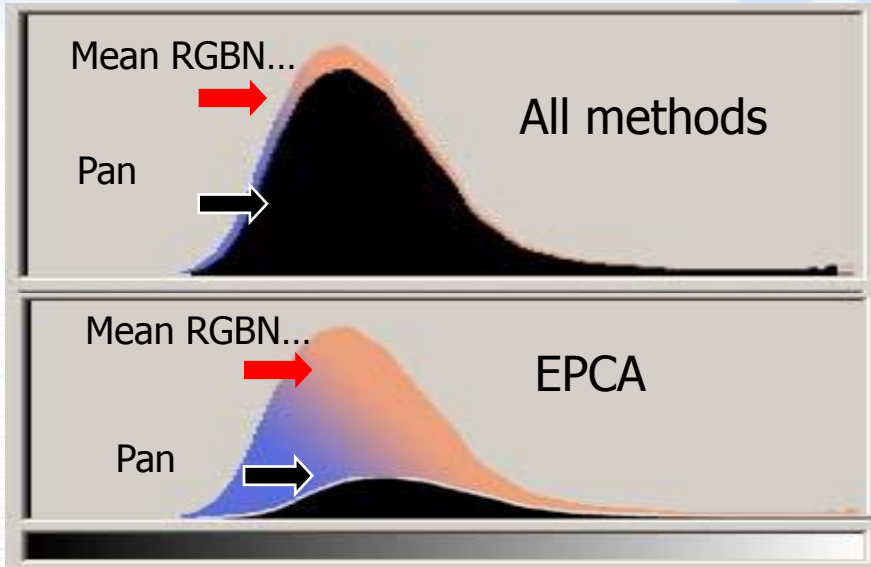
3D model vs Point cloud



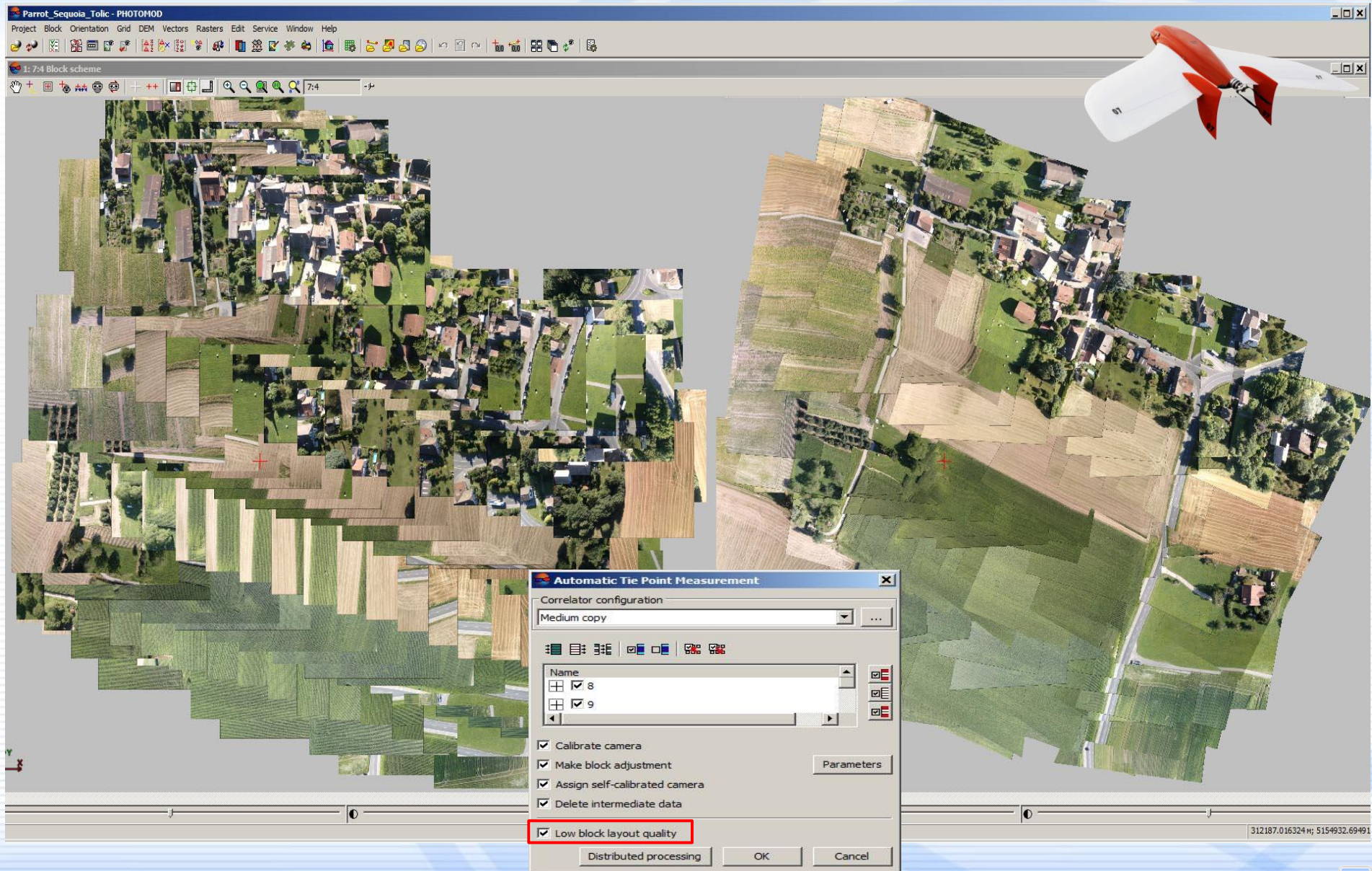
Filtering by slope angle (DSM - DTM)



EPCA. New Pan-sharpening method



PHOTOMOD UAS. Low quality of block layout

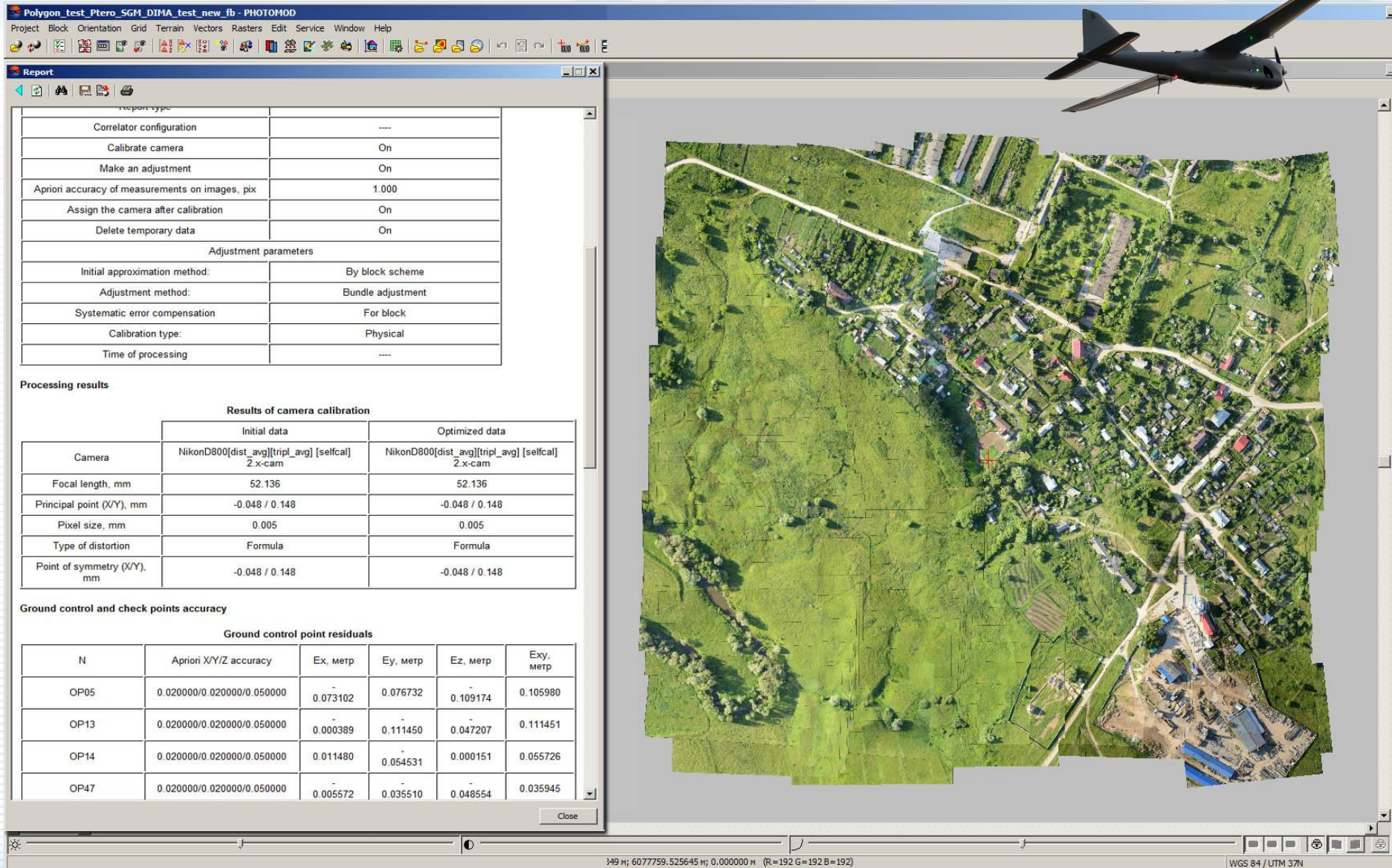


A screenshot from a flight simulator showing a biplane with a white fuselage and orange wings. The plane is positioned in the center of the frame, viewed from a slightly elevated rear-quarter angle. The background consists of a clear blue sky with a few wispy clouds. In the bottom right corner, there is a small window with a close button (an 'X' icon).

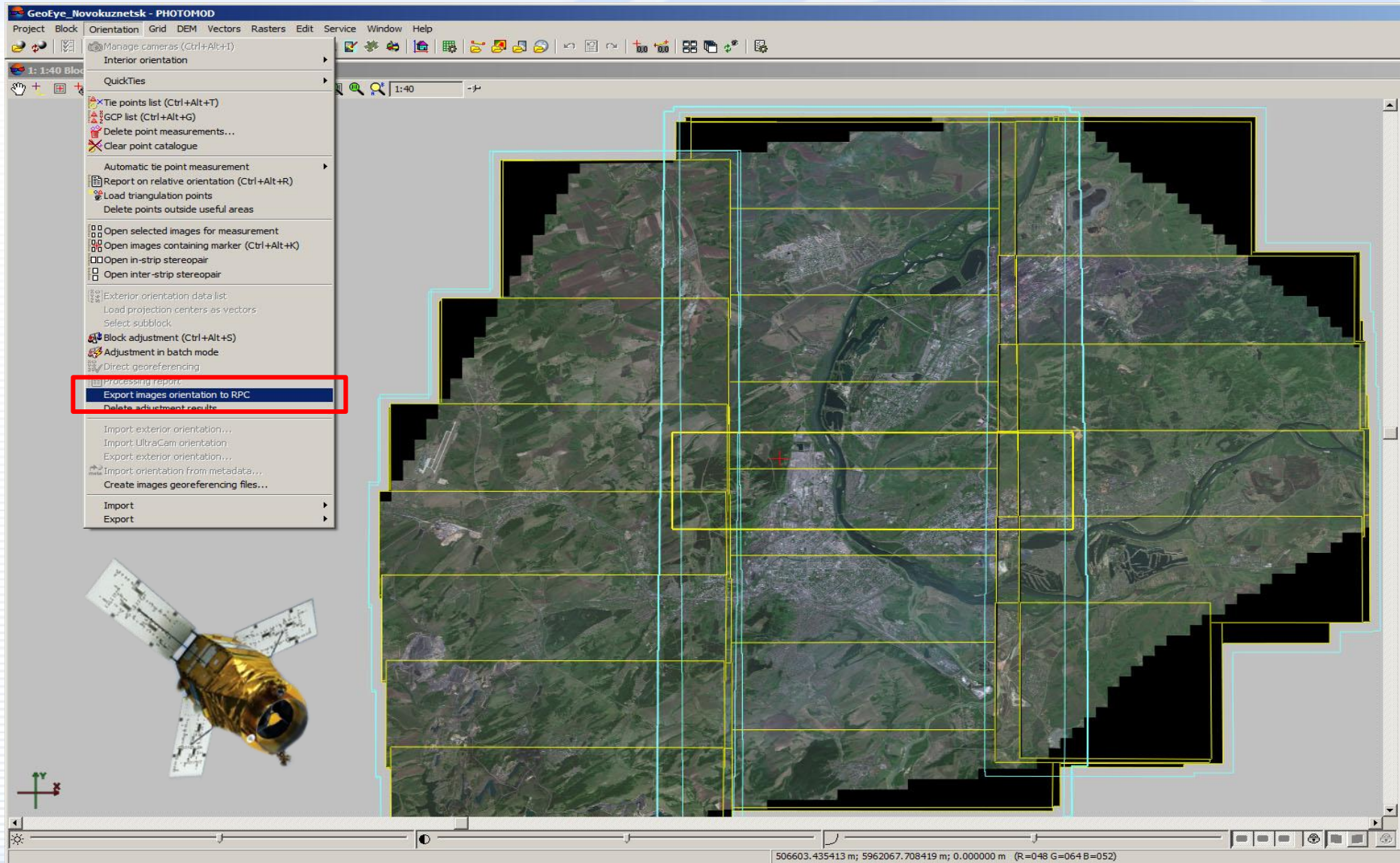


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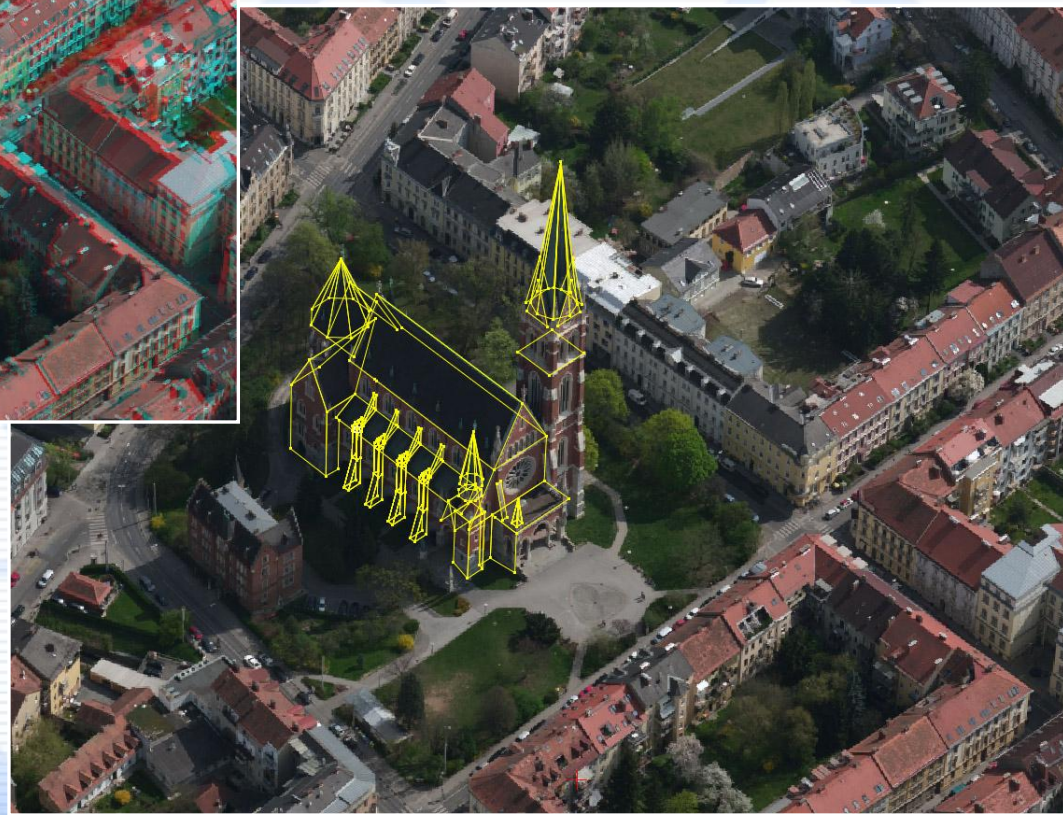
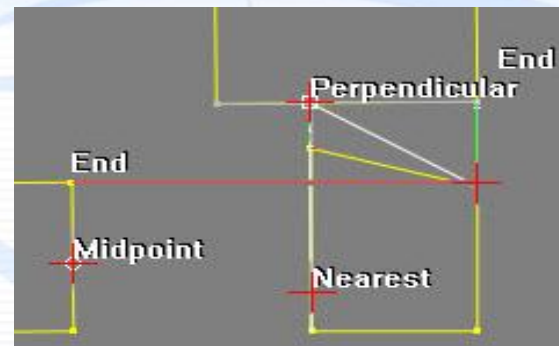
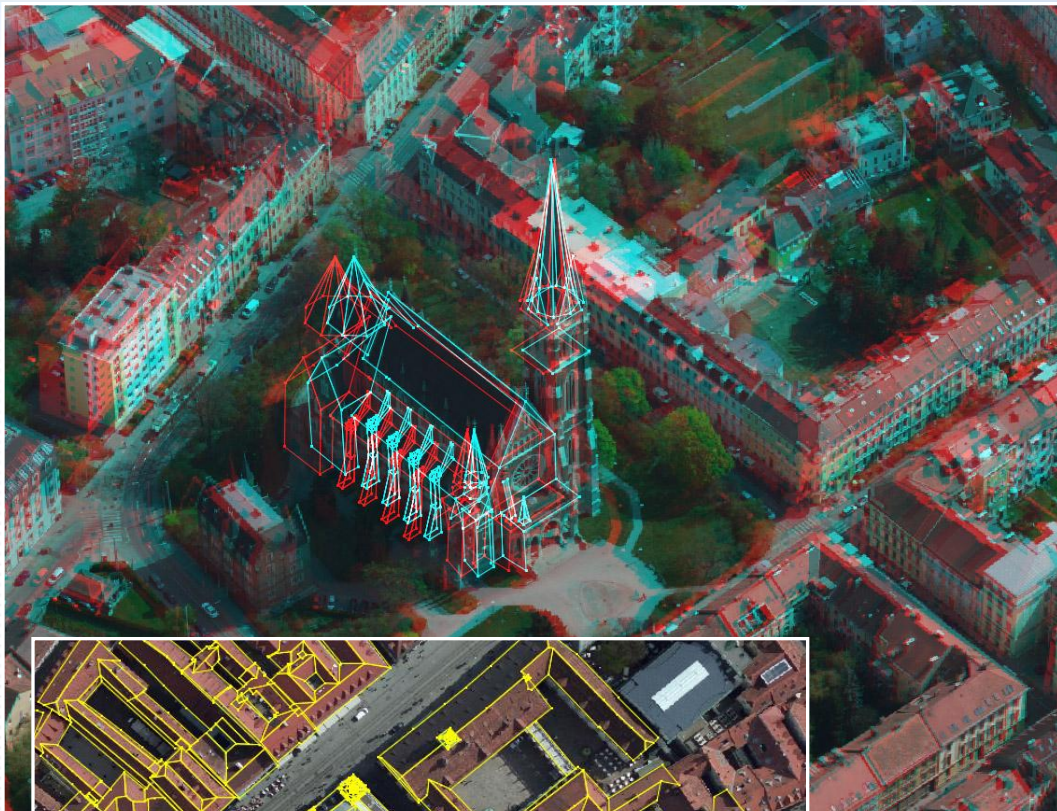
PHOTOMOD UAS. Processing report



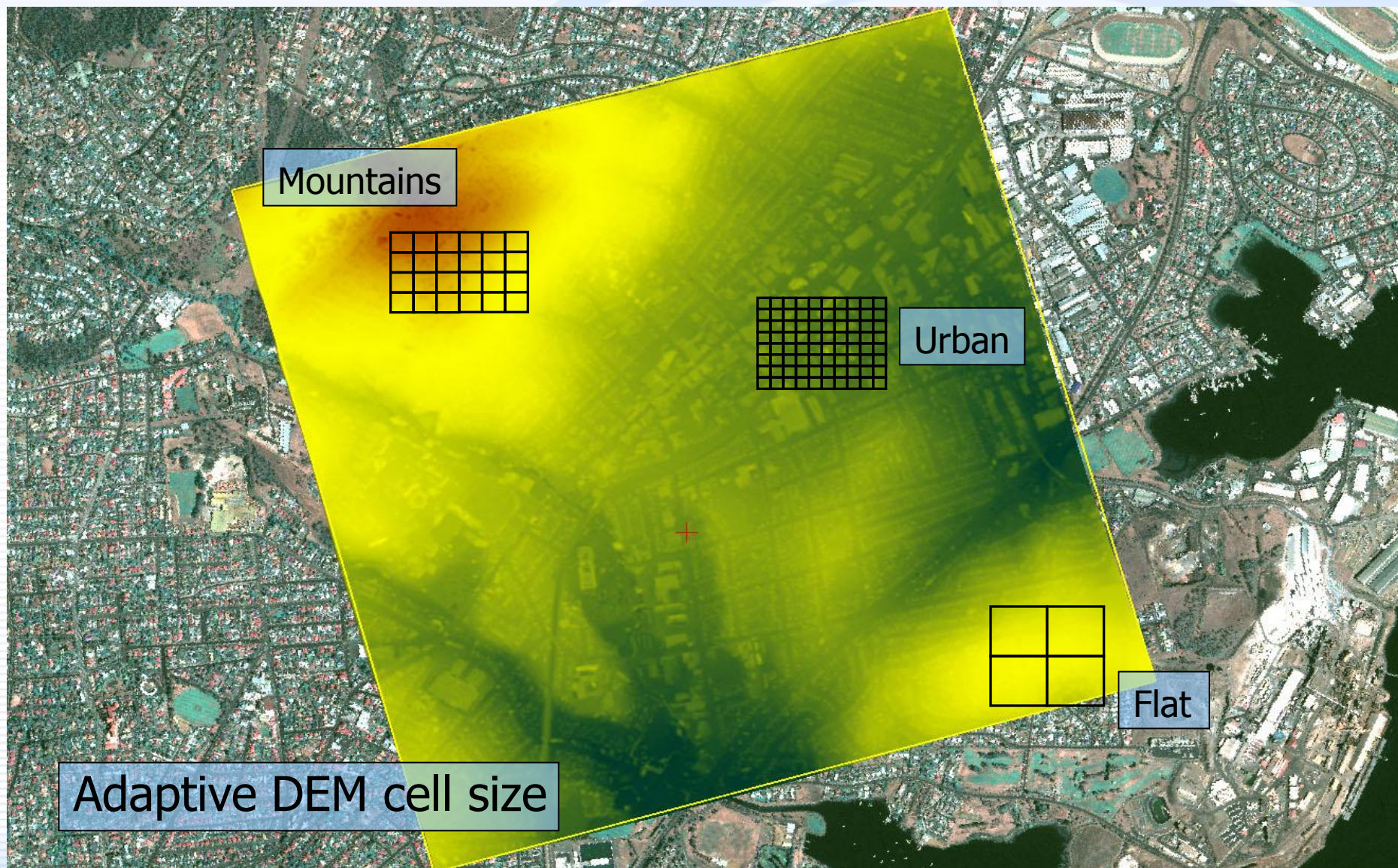
Export of RPC coefficients



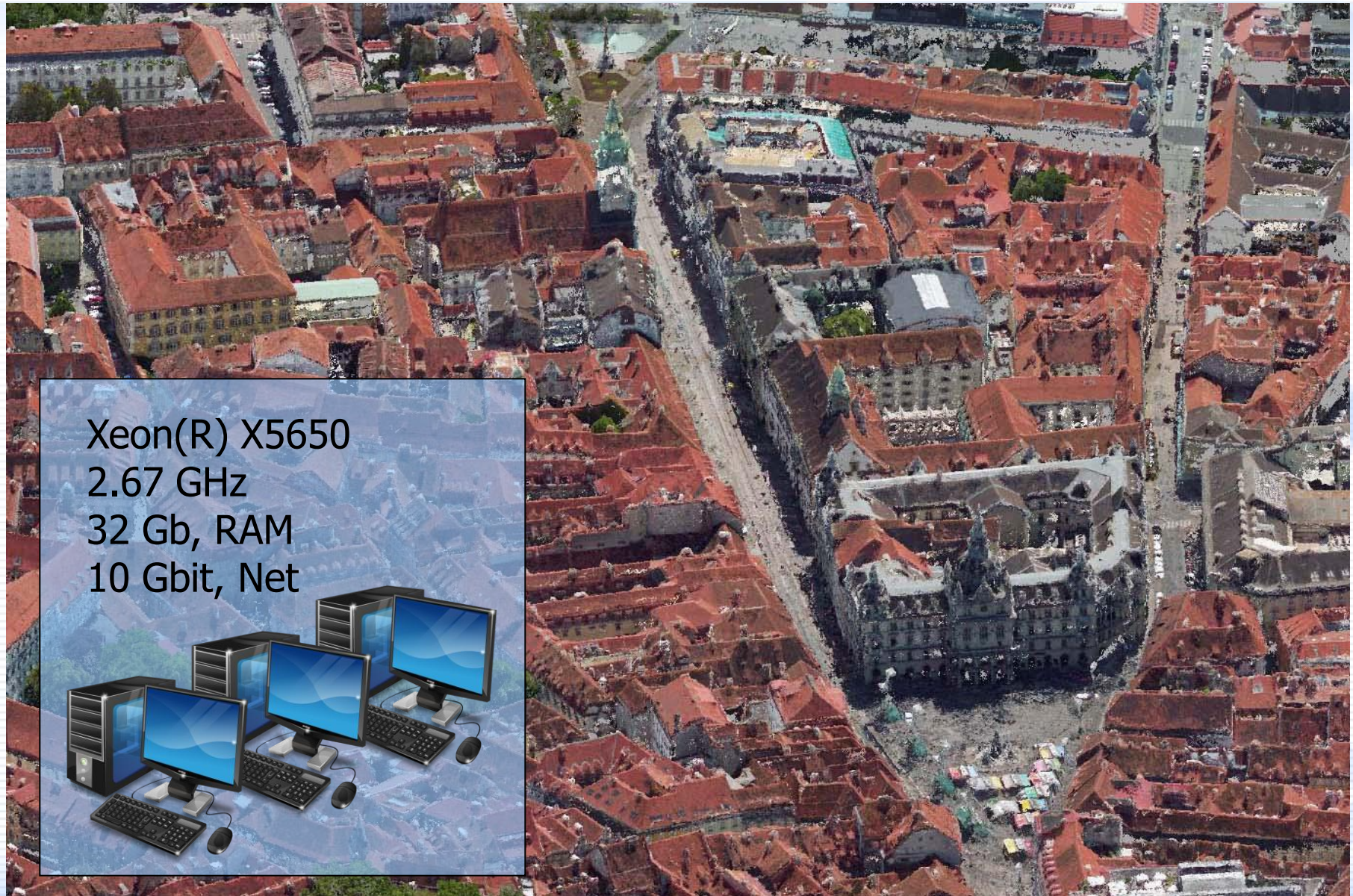
New snapping and 3D-vectorization tools



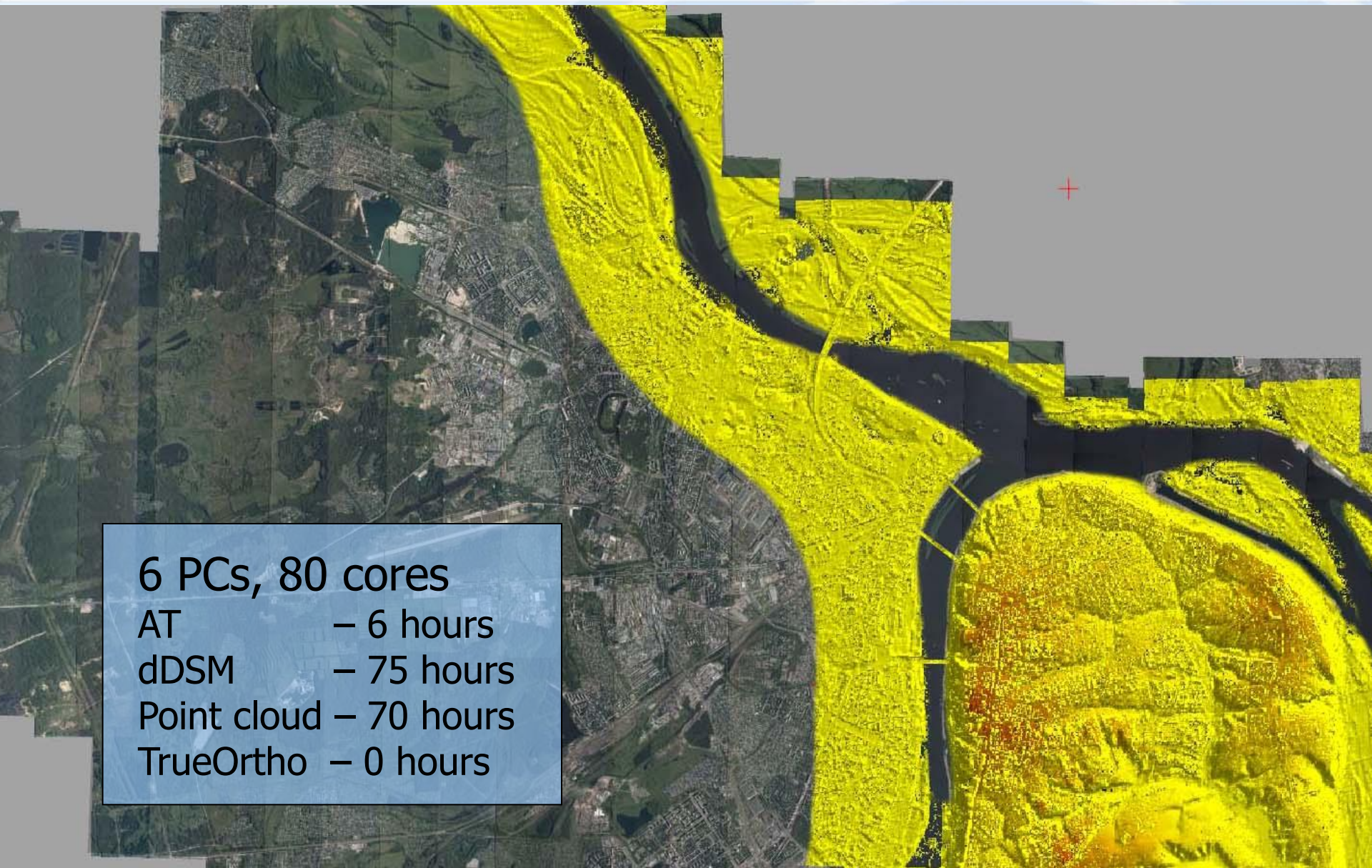
Accelerated orthorectification for urban and mountain area



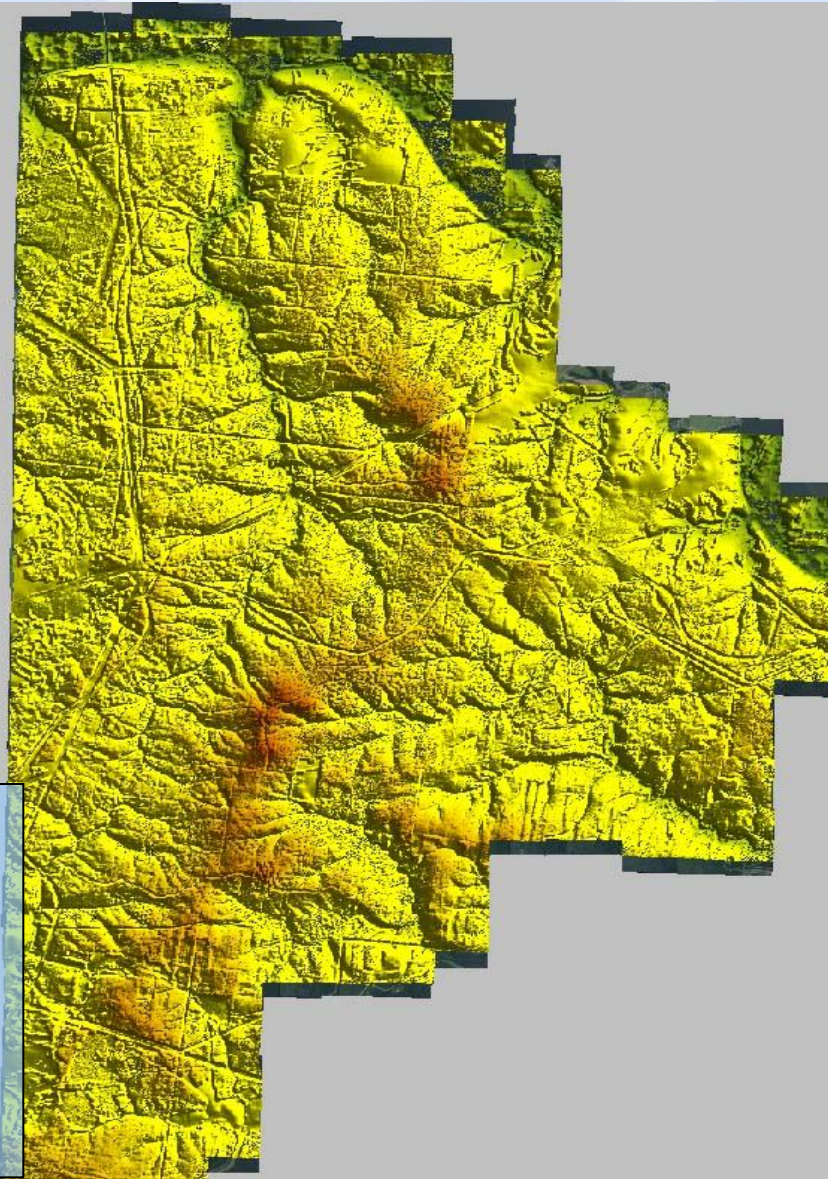
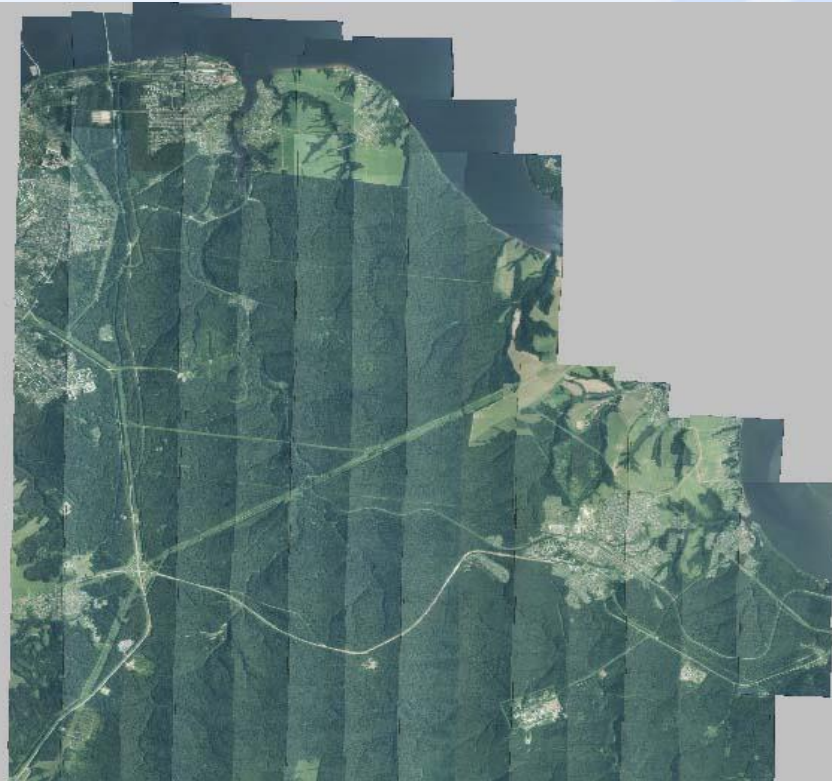
Productivity. AT + dDSM(SGM) + Point cloud + True Ortho



UltraCam Eagle, 922 images (13080 x 20010 pix), H=2000m, GSD=0.1m



UltraCam Eagle, 714 images (13080 x 20010 pix), H=2000m, GSD=0.1m



6 PCs, 80 cores

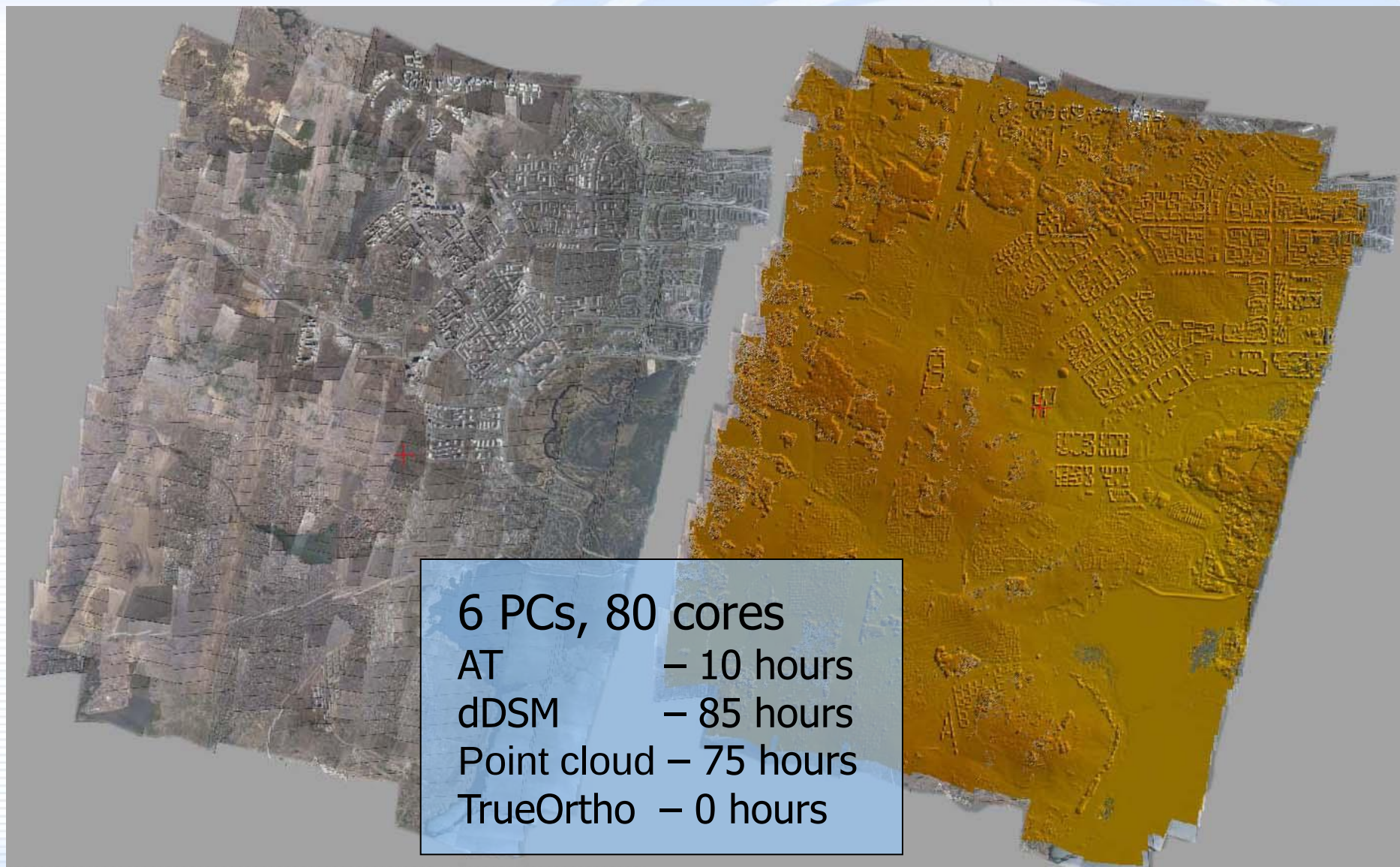
AT – 5 hours

dDSM – 60 hours

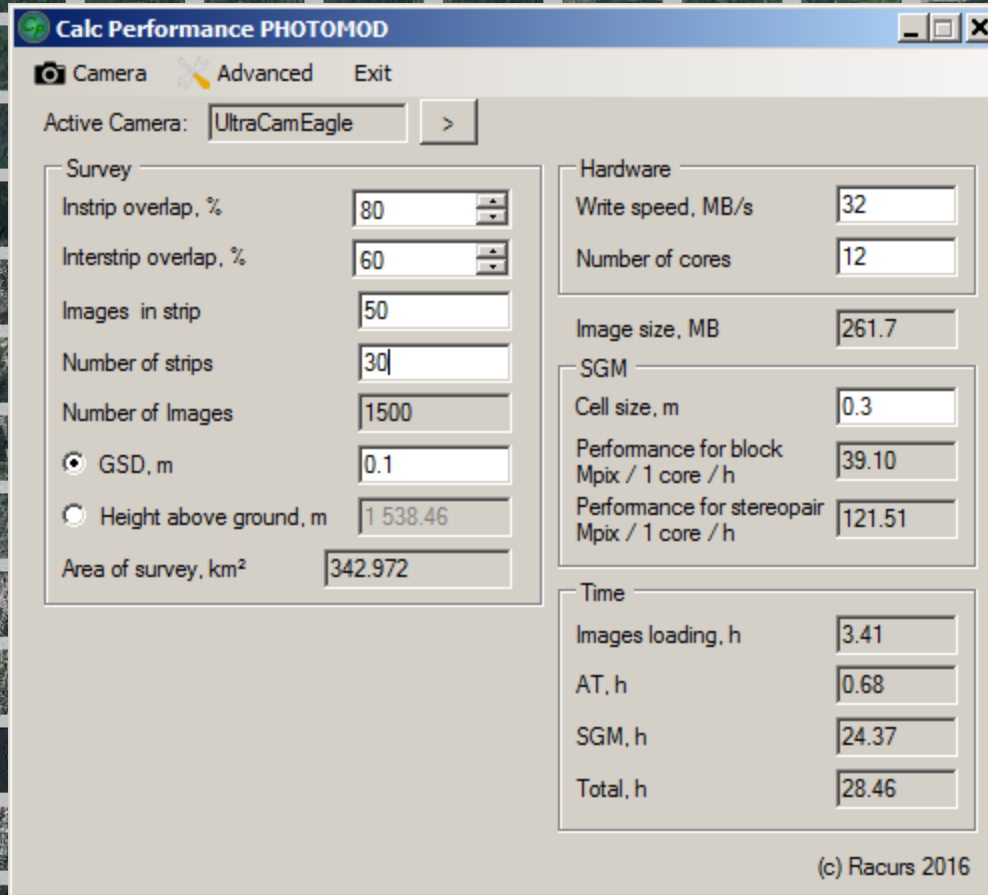
Point cloud – 55 hours

TrueOrtho – 0 hours

RCD 30 Oblique, 2630 images (10336 x 7788 pix), H=1200m, GSD=0.1m



Utility for productivity estimation



The screenshot shows the 'Calc Performance PHOTOMOD' window. It has a title bar with a green icon and the text 'Calc Performance PHOTOMOD'. Below the title bar are three buttons: 'Camera' (with a camera icon), 'Advanced' (with a yellow arrow icon), and 'Exit'. The 'Active Camera' is set to 'UltraCamEagle' with a right-pointing arrow button. The window is divided into several sections: 'Survey', 'Hardware', 'SGM', and 'Time'. Each section contains various parameters with input fields and some with calculated values.

Section	Parameter	Value
Survey	Instrip overlap, %	80
	Interstrip overlap, %	60
	Images in strip	50
	Number of strips	30
	Number of Images	1500
	☒ GSD, m	0.1
	☐ Height above ground, m	1 538.46
Area of survey, km ²		342.972
Hardware	Write speed, MB/s	32
	Number of cores	12
Image size, MB		261.7
	SGM	
Cell size, m		0.3
	Performance for block Mpix / 1 core / h	39.10
Performance for stereopair Mpix / 1 core / h		121.51
Time	Images loading, h	3.41
	AT, h	0.68
	SGM, h	24.37
	Total, h	28.46

(c) Racurs 2016

Welcome to the master-class (Wednesday)



Thank you for attention !