

Supplementary Information for

Preparation of samples for large-scale automated electron microscopy of tissue and cell ultrastructure

Carsten Dittmayer^{1*}, Hans-Hilmar Goebel^{1,2}, Frank L Heppner^{1,3,4}, Werner Stenzel¹, Sebastian Bachmann^{5*}

1 Charité – Universitätsmedizin Berlin, corporate member of Freie Universität Berlin and Humboldt-Universität zu Berlin, Department of Neuropathology, Charitéplatz 1, 10117 Berlin, Germany

2 Johannes-Gutenberg University, Department of Neuropathology, Langenbeckstraße 1, 55122 Mainz, Germany

3 Charité – Universitätsmedizin Berlin, corporate member of Freie Universität Berlin and Humboldt-Universität zu Berlin, Neurocare Cluster of Excellence, Charitéplatz 1, 10117 Berlin, Germany

4 German Center for Neurodegenerative Diseases (DZNE) Berlin, Berlin, Germany

5 Charité – Universitätsmedizin Berlin, corporate member of Freie Universität Berlin and Humboldt-Universität zu Berlin, Institute of Functional Anatomy, Charitéplatz 1, 10117 Berlin, Germany

*Corresponding authors: Sebastian.Bachmann@charite.de or Carsten.Dittmayer@charite.de

Supplementary Figures 1-5 with legends and Supplementary Tables 1-4

Separate files (merged)

02-07 pdf files of step-by-step protocols: Separate pdf files demonstrating data processing steps for 1) Stitching and lens correction of overlapping TEM image tiles to a coherent dataset with TrakEM2, including export to non-overlapping tif tiles as a basis for bigtif file generation; 2A) Semiautomated generation of a text file containing coordinates (X,Y and Z) of overlapping STEM image tiles from two large datasets for import into TrakEM2¹ using Excel; 2B) import and stitching of these tiles to coherent datasets with TrakEM2; 2C) export to non-overlapping tiles; 2D) bigtif generation using nip2; 2E) import in QuPath as a basis for in-depth analysis using measurements and annotations

08_Supplementary_Information_ExcelTemplate: Excel file for calculation of image tile coordinates, filled with exemplary data and a brief documentation how to use the file

09_Supplementary_Information_STEM_shower_protocol: Screenshot of the protocol for automated pre-irradiation (electron beam shower) for 12 grids using SmartSEM Software

10_Supplementary_Information_zoominvideo_hippocampus: A zoom-in video to the large-scale dataset of the dentate gyrus, prepared with SEM-STEM

Online repository datasets: Selected large-scale datasets, as indicated in Supplementary Table 2, are accessible for online pan-and-zoom analysis via www.nanotomy.org

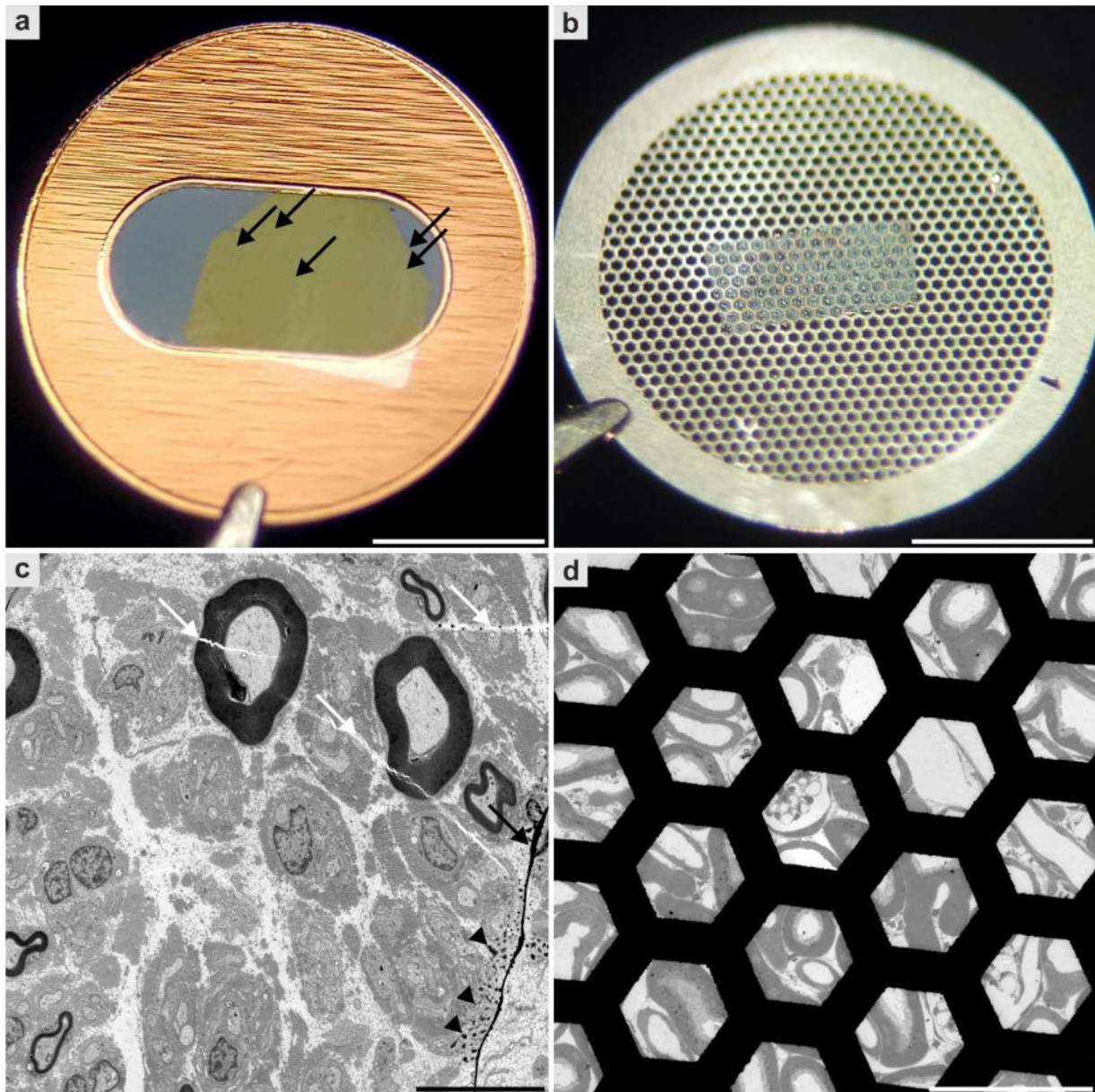


Fig. S1. Common limitations of slot and mesh grids. **a,c**, Slot grid provide a large observable area, allowing entire ultrathin sections to be viewed without limiting mesh bars. However, the delicate film is vulnerable to film imperfections, wrinkles (black arrows), stain precipitates (arrowheads in **c**), other contamination and section cracks (white arrows in **c**). **b,d**, The use of mesh grids on the other hand, allows preparation without additional film artifacts. **d**, This often results in cleaner samples, but viewing is impaired by mesh bars as well as decreased section stability. **c**, Biopsy of a peripheral nerve; hereditary neuropathy. **d**, Perfusion-fixed mouse kidney. Scale bars, 1 mm (**a,b**), 10 μm (**c**), 100 μm (**d**).

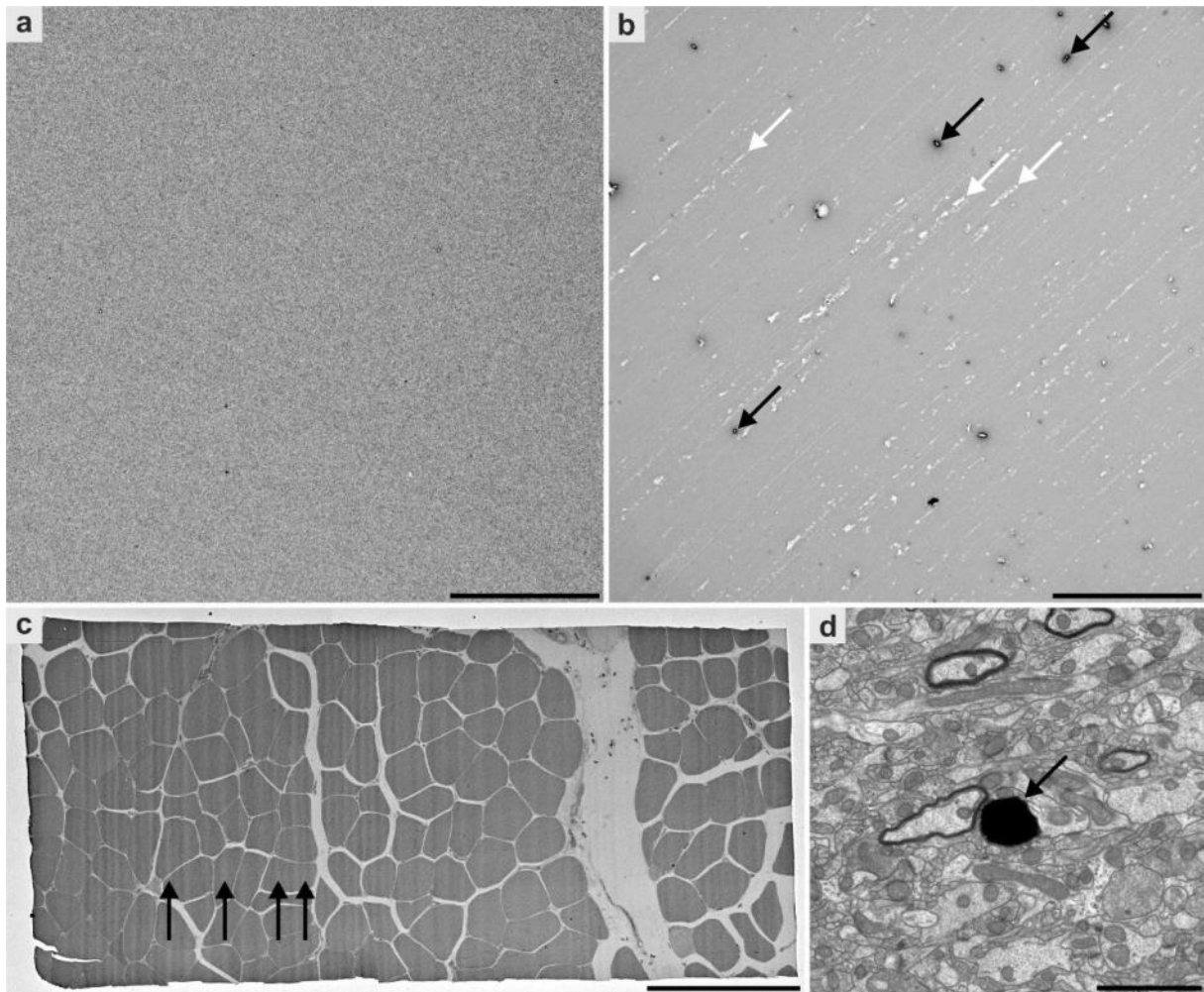


Fig. S2. Different artifacts of ultrathin sections from LDS. Images acquired by transmission electron microscopy. **a**, A good pioloform film shows almost no flaws as compared to a pioloform film in **b** with numerous imperfections. **b**, Water contamination leads to holes (black arrows), and improper smoothing of the curd soap causes smear artifacts (white arrows). **c**, Chatter (arrows) became easily visible at low magnification overview images such as this overview of an entire section. Here, cutting was performed on the 5th floor of a building, resulting in chatter due to low frequency vibrations. **d**, Contamination (arrow) likely due to the glow discharge procedure in a MED020 sputter coater that is used for carbon coating as well. **c**, Diagnostic muscle biopsy. **d**, Rodent brain, fixed by perfusion fixation. Scale bars, 50 μm (**a,b**), 200 μm (**c**), 2 μm (**d**).

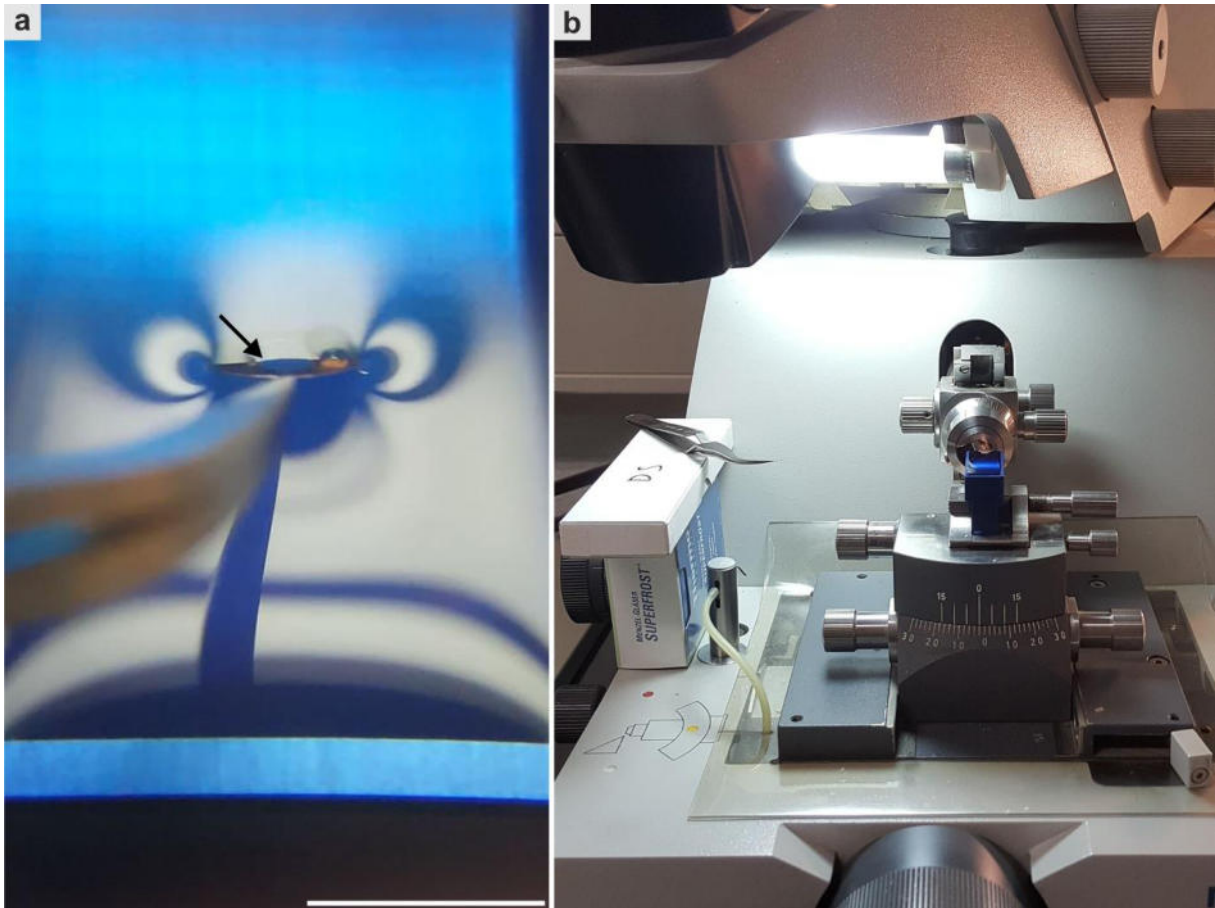


Fig. S3. Preparing LDS; collection and drying of a section using a glow-discharged and ethanol-smoothened pioloform-coated slot grid. a, The grid is inserted at the “6 o’clock position” to follow the section during the collection process. Ideal hydrophilicity of grids is indicated by a sharp and smooth water-grid borderline (arrow) which facilitates attachment of a section at the borderline and allows to collect the section by raising the grid out of the water. Note that the borderline is crossing the pioloform film; alternatively, the borderline may be placed on the metal surface directly underneath the forceps to compensate for mildly insufficient hydrophilicity (see Supplementary Table 3 for troubleshooting). **b**, After collection of a section, the self-closing forceps is placed next to the diamond knife, allowing examination of the attachment and drying processes. Scale bar, 5 mm (**a**).

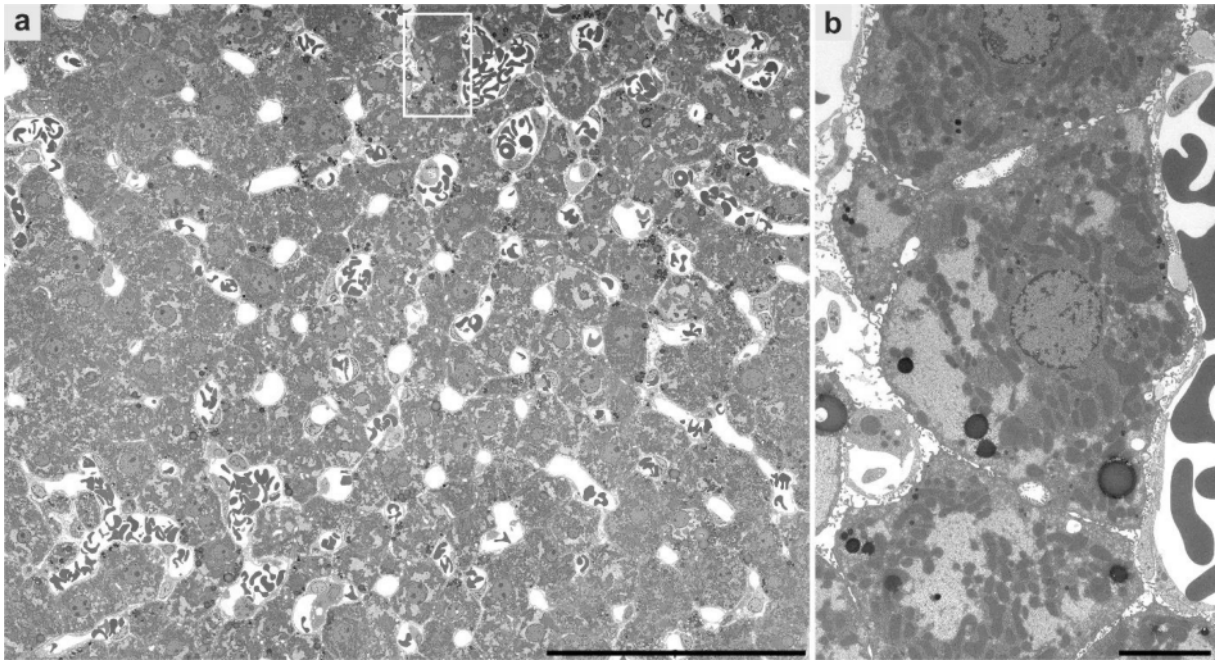


Fig. S4. Large-scale digitization of a medium-sized region of interest within a section of rodent liver using transmission electron microscopy. An intermediate magnification of 4646x was used, resulting in a pixel size of 9.3 nm. **a**, Microanatomical overview of parenchyma. **b**, Digitally magnified region from **a** shows hepatocytes with well-resolved glycogen, mitochondria, lysosomes, perisinusoidal space and intercellular bile ducts. Scale bars, 100 μm (**a**), 5 μm (**b**). See also www.nanotomy.org for download of the full resolution dataset.

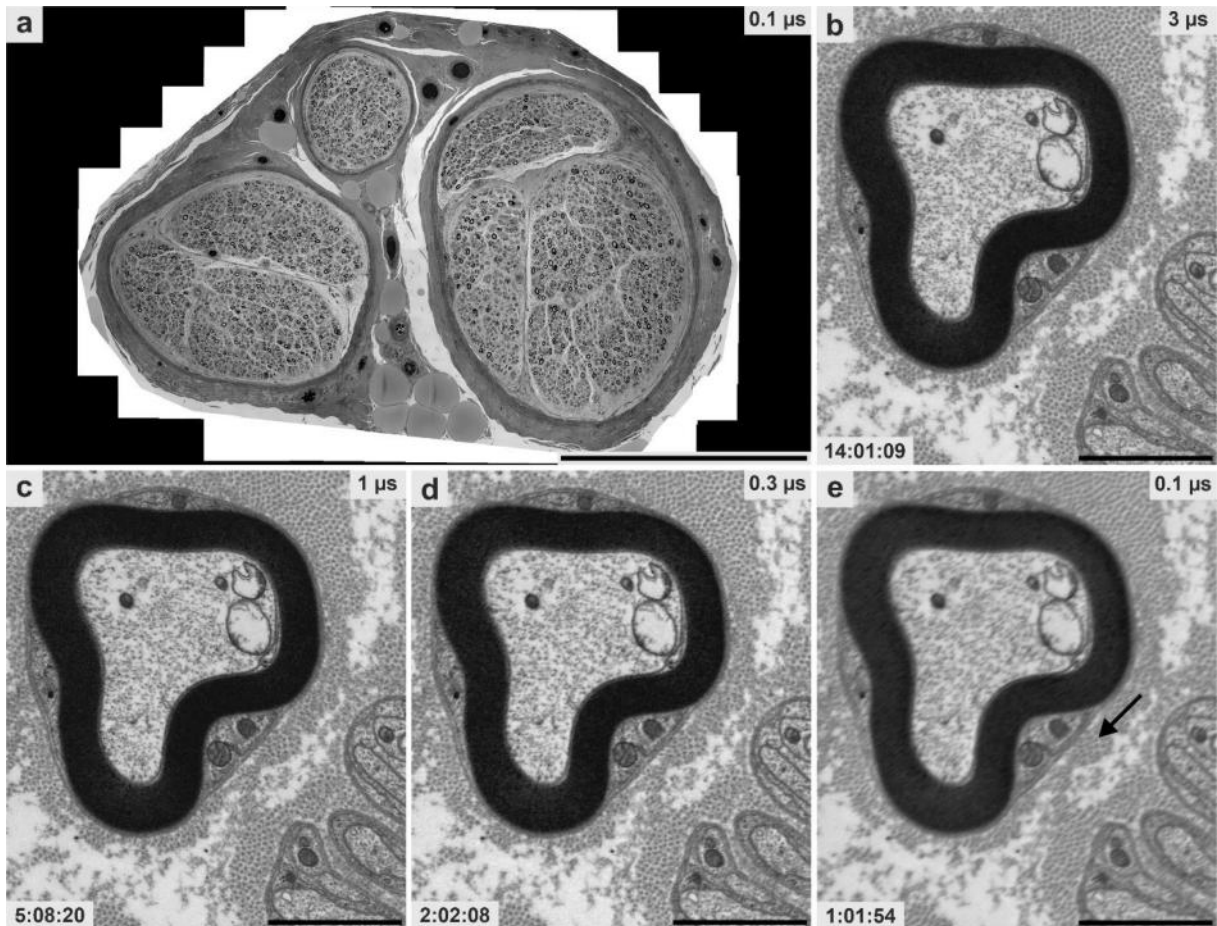


Fig. S5. Large-scale digitization of a diagnostic nerve sample using scanning transmission electron microscopy. **a**, An entire ultrathin section was digitized at 9 nm pixel size using different dwell times to analyze imaging time and quality. **b** to **d**, Image quality only moderately decreases with increased imaging speed using 3 μs , 1 μs and 0.3 μs dwell time, while imaging time is drastically decreasing from 14 to 2 h. Quality in **d** allows to clearly resolve diagnostically relevant structures such as collagen pockets (see step-by-step protocol 2E; QuPath analysis). **e**, At 0.1 μs dwell time, still individual collagen fibrils are resolved (arrow), but the image quality clearly appears blurred. Scale bars, 500 μm (**a**), 2 μm (**b-e**). See also www.nanotomy.org for internet browser-based pan-and-zoom analysis of the full resolution datasets of **c,d** and **e**.

Supplementary Table 1. Information on tissue blocks illustrated in this work*

Fig.	Tissue	Pathology	Species	Resin	Osmication	UA en bloc staining
2,6	Kidney	Chronic hypokalemic nephropathy	Human	Epon	30 min 1% in 0.1 M phosphate buffer	-
3	Kidney	Lupus nephritis	Human	Epon	30 min 1% in 0.1 M phosphate buffer	-
4	Brain	Alzheimer's disease	Mouse	Renlam	Overnight 1% in 0.5 M cacodylate buffer	+
ga,5	Muscle	Tubular aggregates	Human	Renlam	Overnight 1% in 0.5 M cacodylate buffer	+
S4	Liver	-	Rat	Epon	2 h 2% in distilled water	-
S5	Nerve	Neuropathy	Human	Renlam	Overnight 1% in 0.5 M cacodylate buffer	+

*In total, we prepared ultrathin sections of 100 different tissue blocks from different research projects to establish the LDS protocol. However, early preparations were less sophisticated and demonstrated higher amounts of preparation flaws so that more sections were needed to prepare one high-quality section ^{2,3}. ga, graphical abstract; UA uranyl acetate.

Supplementary Table 2. Information on large-scale datasets illustrated in this work*

Fig.	Imaging system	Pixel size	Dwell time	Tile size, p	Mosaic size	Tile number	Acquisition time	Repository number
2a,d	TEM	7.3 nm	-	2,048	254 x 254 μ m	400	1:06:40	2
2b,e	SEM-STEM	7.3 nm	3 μ s	12,288	245 x 229 μ m	9	01:09:37	3
2c,f	SEM-BSD	7.3 nm	3 μ s	12,288	269 x 269 μ m	16	01:35:32	4
3a-d	SEM-STEM	7.3 nm	1 μ s	8,192	239 x 239 μ m	16	00:24:51	5
4a-c	SEM-STEM	7.3 nm	1 μ s	8,192	1,794 x 1,017 μ m	510	12:32:09	6
5a**	SEM-STEM	9 nm	1 μ s	10,240	1,383 x 760 μ m	127	04:40:54	1
5b	SEM-STEM	100 nm	1 μ s	2,048	1,236 x 432 μ m	21	00:02:25	
5c-f	SEM-STEM	4 nm	3 μ s***	24,576	94 x 49 μ m	1	00:50:03****	7
6a	SEM-STEM	7.3 nm	0.3 μ s	12,288	245 x 229 μ m	9	00:09:18	9
6b	SEM-STEM	7.3 nm	0.2 μ s	20,480	245 x 229 μ m	9	00:07:07	10
6c	SEM-STEM	7.3 nm	0.1 μ s	12,288	245 x 229 μ m	9	00:03:21	11
6d	SEM-BSD	7.3 nm	3.0 μ s					12
6e	SEM-BSD	7.3 nm	1.0 μ s					13
6f	SEM-BSD	7.3 nm	0.1 μ s					14
S4a,b	TEM	9.3 nm	-	2,048	380 x 240 μ m	360	01:00:00	8
S5a,e	SEM-STEM	9 nm	0.1 μ s	10,240	1,347 x 917 μ m	155	01:01:54	15
S5b	SEM-STEM	9 nm	3.0 μ s	10,240	1,347 x 917 μ m	155	14:01:09	
S5c	SEM-STEM	9 nm	1.0 μ s	10,240	1,347 x 917 μ m	155	05:08:20	17
S5d	SEM-STEM	9 nm	0.3 μ s	10,240	1,347 x 917 μ m	155	02:02:08	16

*In total, we digitized large areas (entire ultrathin sections) from 92 different samples; 85 were diagnostic (76x skeletal muscle, 4x brain, 2x lung, 2x tumor, 1x nerve) and 10 experimental samples (5x kidney, 1x liver, 2x brain, 1x lung, 1x cell culture). Medium sized ROIs came from 5 different blocks of diagnostic samples (5x kidney). ** Same dataset as in graphical abstract; *** including line averaging of 3 x 3 μ s; **** for each of the 6 regions of interest. p, pixels.

Supplementary Table 3. Critical steps in preparation of large-scale digitization samples (troubleshooting)

Category	Artifact pattern	How to avoid them
Support film and grids		
Cleaning	Large spots on pioloform film	Cleaning sequence of first using acetone, then ethanol, then distilled water must be respected
Curd soap coating	Smears on pioloform film	Ensure homogeneous distribution of curd soap
Pioloform	Small dots and holes of pioloform film	Open the bottle with pioloform solution warmed to room temperature to avoid water contamination
Hydrophilization		
Glow discharging	Pioloform film destroyed in vacuum	Transfer grids to a separate parafilm strip to allow air circulation, thus avoiding damage of the pioloform film
Glow discharging	Overhydration; no sharp water-pioloform borderline during collection of sections Underhydration; sharp water-pioloform borderline, but wrinkles appear	Grids should only be moderately hydrophilic; during collection of sections from the knife's water trough, the water-grid borderline has to be sharp When overhydrated, reduce glow discharging time (Fig. S3) Conversely, sections may be attached on the metal surface next to the forceps to stabilize water within the slot area in case of underhydration
Glow discharging	Electron-dense contaminations on pioloform film	Avoid e.g. carbon contamination in the sputter coater, if it is also used for carbon coating (Fig. S2)
Glow discharging	Underhydration	Ideally, use glow-discharged grids within 1 to 2 h
Grid storage	Inhomogeneous wetting or wrinkles	Let freshly filmed grids dry for 2 d to ensure homogeneous wetting when collecting the sections and avoid use of grids older than 2 to 3 months to ensure adequate tension of the film
Ultramicrotomy		
Water borderline	Overhydration of pioloform film (no sharp borderline)	Place the forceps as far as possible at the grid periphery After ethanol smoothening, insert grid only to 1/3 to 1/2 into the water of the knife's trough and wait for 10 s to generate a sharp and stable water-grid borderline Do not fully submerge the grid when inserting it into the water trough
Water borderline	Underhydration of pioloform film	Prepare another batch of glow-discharged grids; do not perform additional glow discharging of the same grids since this may result in overhydration
Drying process	No or displaced Newton ring formation, wrinkles, section movement	Ensure a horizontal position of the grids held within forceps Avoid or remove compression or folds in the sections by adjusting sectioning parameters and using xylene or chloroform vapor to ensure smoothness Prepare straight block edges to fix the section onto the water-grid borderline during collection
Staining		
Embedding pepper	Electron dense contamination	Treat grids with 1% EDTA in distilled water prior to staining
Precipitates	Needle-like (uranyl acetate) or spherical (lead citrate) contamination	Use aqueous instead of ethanolic uranyl acetate solution Place NaOH pellets next to lead citrate in closed Petri dish
Other contamination	Amorphous electron-dense contamination	Rinse intensely after staining with uranyl acetate to avoid excess contamination and let the sections dry in a horizontal position for adequate Newton ring formation
Detachment artifacts	Small or medium sized, ring- or comma-shaped wrinkles, probably due to water-induced swelling of the sections Some areas, e.g. strongly fixed structures or areas with pure resin, e.g. cell culture with low cell density, seem to be prone to these artifacts	Trim block areas of pure resin or overfixed areas away Ensure adequate drying of the sections after collection at room temperature for 48 h Stabilize sections, fixed individually by forceps, at 120°C in an oven for 15-30 min prior to staining

Supplementary Table 4. Comparison of large-scale digitization using TEM, STEM and BSD

	TEM	SEM-STEM	SEM-BSD
Substrate	Slot grid	Slot grid	Silicon wafer
Imaging speed	Fixed, about 3 μ s*	Variable, about 1 μ s	Variable, 6 to 12 μ s
Image tiles (field dimensions)	2,048 or 4,096 pixels per side	Variable, up to 32,768 pixels per side	
Field size	15 μ m or 30 μ m (at 7.3 nm pixel size)	Variable, 50 to 100 μ m	
Autofocus	Not available with our systems	Autofocus/ autostigmatation in center of image tiles	
Stitching	TrakEM2	Atlas 5 or TrakEM2	
Zoomable dataset	bigtif	Atlas 5 or bigtif	
Limitations	Fixed imaging speed, Small-size image tiles**), pre- irradiation recommended Vulnerable sections	Beam damage (support film required) Pre-irradiation required	Slow imaging speed Special preparation for improved results Pre-irradiation sometimes necessary
Advantages	Good resolution and SNR, compatible with many old or conventional TEM systems	Good resolution and SNR, high imaging speed. Up to 12 grids in the sample holder Choice of adjustable imaging parameters such as dwell time, tile and pixel size, averaging, autofocus and autostigmator. Low-grade lens distortions, high degree of automation.	Stable preparation
	Grids interchangeable (TEM, SEM-STEM; shuttle workflow)		

* μ s per pixel, 2k CCD camera. TEM, transmission electron microscopy; SEM, scanning electron microscope; STEM, scanning transmission electron microscopy; BSD, backscattered electron detection.

References

1. Cardona, A. et al. TrakEM2 software for neural circuit reconstruction. *PLoS One* **7**, e38011 (2012).
2. Dittmayer, C. et al. Morphological characteristics of the transition from juvenile to adult dermatomyositis. *Neuropathol. Appl. Neurobiol.* **46**, 790–794 (2020).
3. Dittmayer, C. Optimierte Verfahren zur morphologischen und histochemischen Auswertung der Niere. *Medical thesis* (2019).

1) Import of region of interest (ROI) and lens correction (LC)

The screenshot shows the Fiji software interface with three panels: Template, Project Objects, and Layers. The Template panel shows a single item 'anything'. The Project Objects panel shows 'Untitled 0 [project]'. The Layers panel shows 'Top Level [layer set]' with a sub-layer '1: z=0.0'. A context menu is open over the '1: z=0.0' layer, with 'Import sequence as grid...' selected.

The screenshot shows a Windows desktop environment. The background is a scenic image of a snow-covered mountain range with a single evergreen tree in the foreground. Overlaid on the desktop are several windows: a Fiji software window titled '(Fiji Is Just) ImageJ' with a menu bar (File, Edit, Image, Process, Analyze, Plugins, Window, Help) and a toolbar; a 'System log' window with 'StdOut' and 'StdErr' sections; and a large black window. The Windows taskbar at the bottom shows the search bar with the text 'Zur Suche Text hier eingeben' and various application icons. The system tray in the bottom right corner shows the time '11:46' and the date '15.10.2018'.

1) Import of ROI and LC

The screenshot displays the Fiji software interface with the 'Conventions' dialog box open. The dialog box contains the following settings:

- file name matches:
- first image:
- last image:
- Reverse list order
- number of rows:
- number of columns:
- number of slices:
- The top left coordinates for the imported grid:
 - base x:
 - base y:
- Amount of image overlap, in pixels
 - bottom-top overlap:
 - left-right overlap:
- link images
- montage with phase correlation
- homogenize contrast

Buttons:

In the background, the Fiji interface shows the 'Template' panel with 'anything' selected, 'Project Objects' with 'Untitled 0 [project]', and 'Layers' with 'Top Level [layer set]' and '1: z=0.0 [layer]'. The main image area shows a dark image with a red ROI line. The 'System log' window in the bottom right corner shows the following output:

```
StdOut
accepting 01_ROI80280.tif
accepting 01_ROI80281.tif
accepting 01_ROI80282.tif
accepting 01_ROI80283.tif
accepting 01_ROI80284.tif
accepting 01_ROI80285.tif
accepting 01_ROI80286.tif
accepting 01_ROI80287.tif
accepting 01_ROI80288.tif

StdErr
```

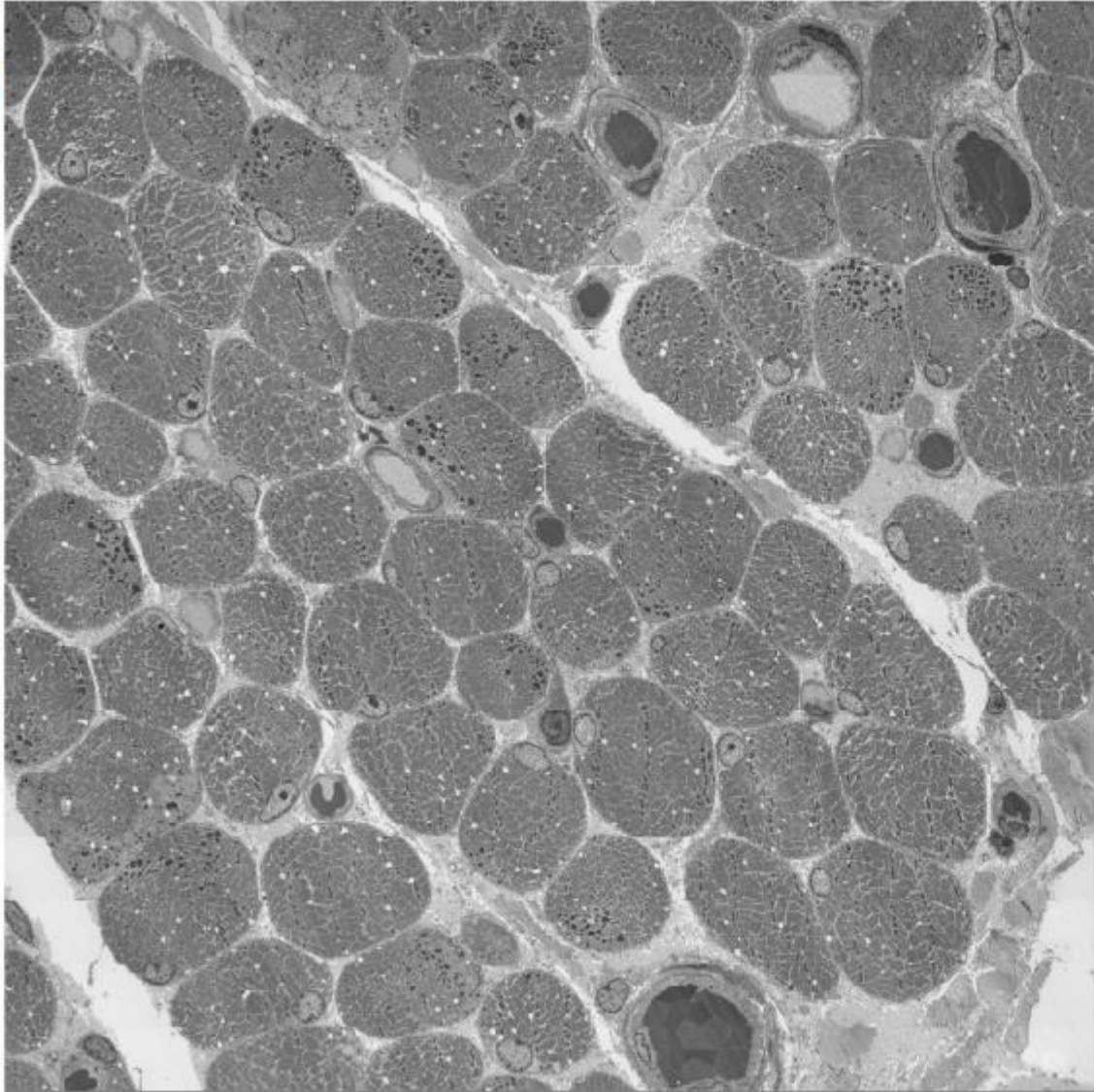

1) Import of ROI and LC

Template
● anything

Project Objects
● Untitled 0 [project]

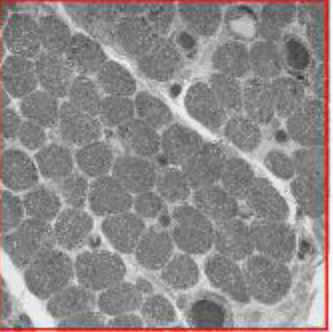
Layers
● Top Level [layer set]
● 1: z=0.0 [layer]

1/1 z=0.0 pixels (2.8%) -- Untitled 0 29568.0x29568.0x1.0 pixel



Layers
Patches

Tool options	Annotations	Live filter	
Profiles	Z space	Opacity	Labels
01_ROI80000.tif			
#8			
01_ROI80001.tif			
#25			
01_ROI80002.tif			
#42			
01_ROI80003.tif			
#59			
01_ROI80004.tif			
#76			
01_ROI80005.tif			
#93			
01_ROI80006.tif			
#110			
01_ROI80007.tif			
#127			
01_ROI80008.tif			
#144			



(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=15514 pixel, y=0 pixel, value=97 [Patch #144]

Log

File Edit Font

Importing 1/1

at java.awt.EventQueueDispatchThread.run (k

1) Import of ROI and LC

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [Image...].tif

- Add...
 - new layer
 - many new layers...
- Rename...
- Resize LayerSet...
- Autoresize LayerSet
- Translate layers in Z...
- Reverse layer Z coords...
- Reset layer Z and thickness
- Search...
- Import stack...

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=15514 pixel, y=0 pixel, value=97 [Patch #144]

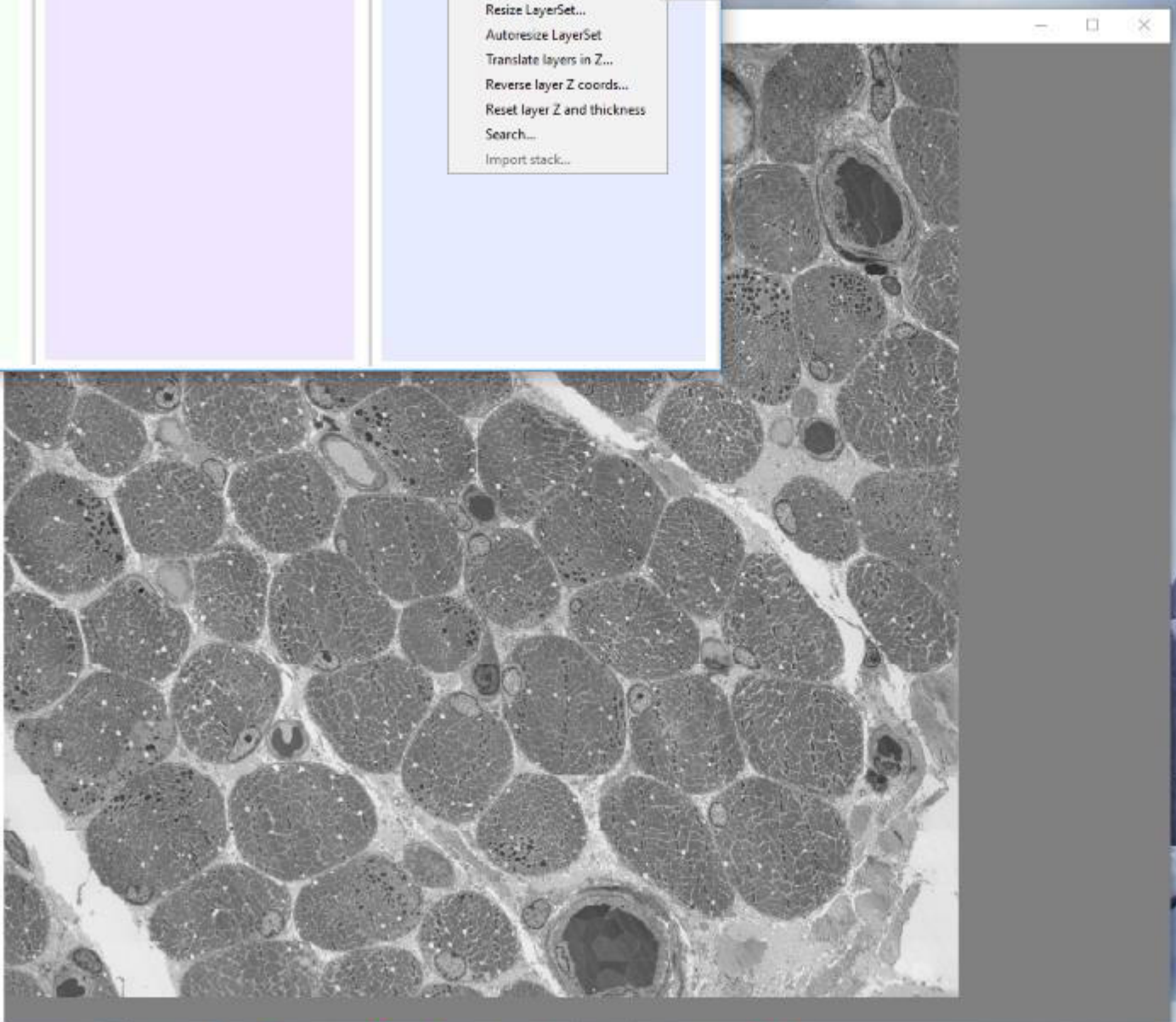
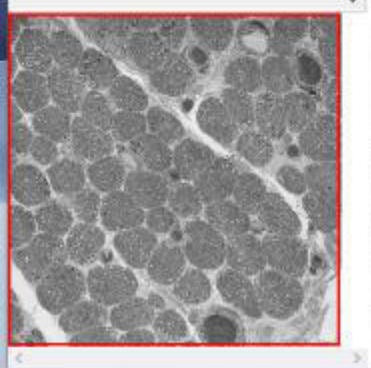
Log

File Edit Font

Importing 1/1

at java.awt.EventQueueDispatchThread.run (k...

#59	01_ROI80004.tif
#76	01_ROI80005.tif
#93	01_ROI80006.tif
#110	01_ROI80007.tif
#127	01_ROI80008.tif
#144	



1) Import of ROI and LC

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]

New Layer

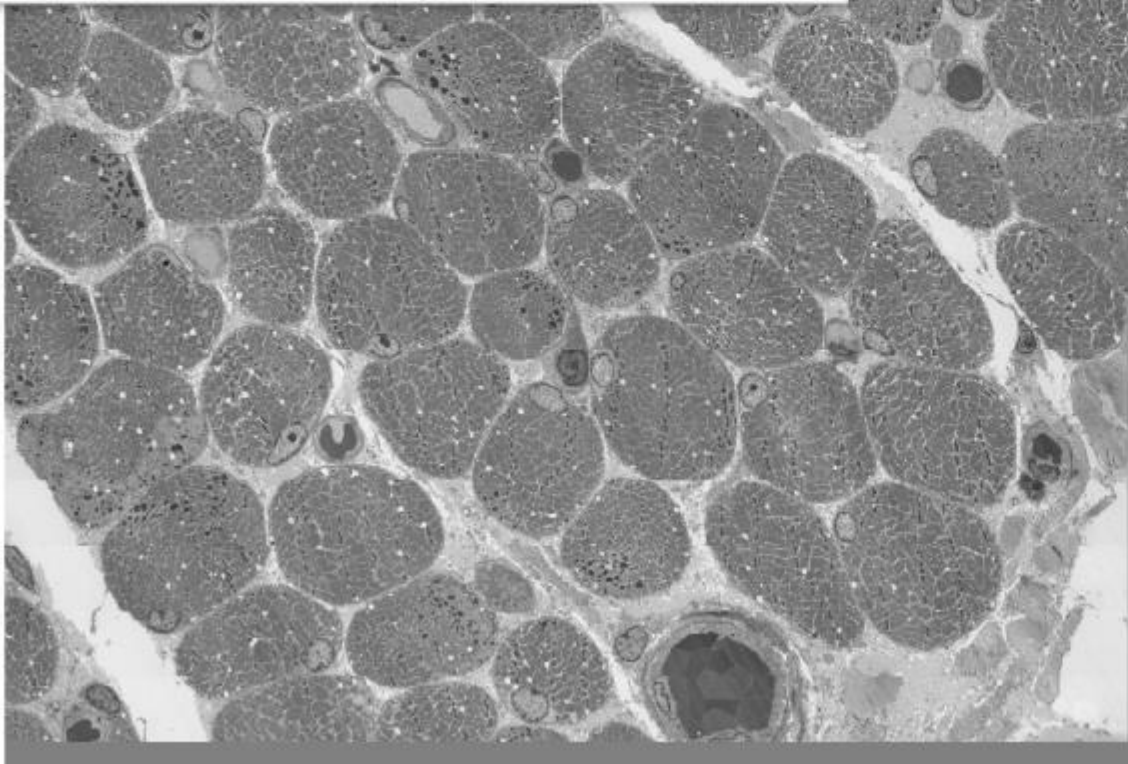
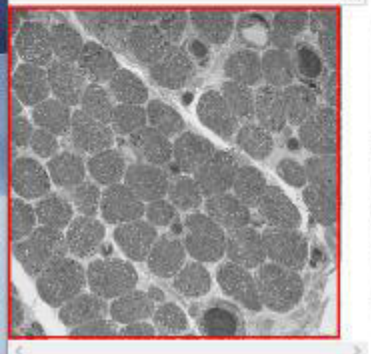
In pixels:

z coordinate: 0.000

thickness: 1.000

OK Cancel

#59
01_ROI80004.tif
#76
01_ROI80005.tif
#93
01_ROI80006.tif
#110
01_ROI80007.tif
#127
01_ROI80008.tif
#144



(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=15514 pixel, y=0 pixel, value=97 [Patch #144]

Log

File Edit Font

Importing 1/1

1) Import of ROI and LC

The screenshot shows the Fiji software interface with three panels: Template, Project Objects, and Layers. The Template panel on the left contains a single item labeled 'anything'. The Project Objects panel in the middle shows 'Untitled 0 [project]'. The Layers panel on the right shows a 'Top Level [layer set]' containing two items, '1: z-' and '2: z-', with a context menu open over the '1: z-' item. The menu options are: Add..., Show, Adjust..., Rename..., Import stack..., Import grid..., Import sequence as grid... (highlighted), Import from text file..., and Delete....

The screenshot shows the top of the Fiji software window. The title bar reads '(Fiji Is Just) ImageJ'. The menu bar includes File, Edit, Image, Process, Analyze, Plugins, Window, and Help. Below the menu bar is a toolbar with various icons for image manipulation. The status bar at the bottom of this window indicates 'x=23202 pixel, y=6458 pixel'.

The screenshot shows the Log window in Fiji software. The title bar reads 'Log'. The menu bar includes File, Edit, and Font. The main area of the window displays the text 'Importing 1/1'.

The screenshot shows a large, dark image, likely a microscopy image, with a red bounding box highlighting a small region in the bottom-left corner. The image is mostly black with some faint, indistinct features.

1) Import of ROI and LC

Template

- anything

Project Objects

- Untitled 0 [project]

Layers

- Top Level [layer set]
 - 1: z=0.0 [layer]
 - 2: z=0.0 [layer]

Conventions

file name matches:

first image:

last image:

Reverse list order

number of rows:

number of columns:

number of slices:

The top left coordinate for the imported grid:

base x:

base y:

Amount of image overlap, in pixels

bottom-top overlap:

left-right overlap:

link images

montage with phase correlation

homogenize contrast

OK Cancel

(Fiji Is Just) ImageJ

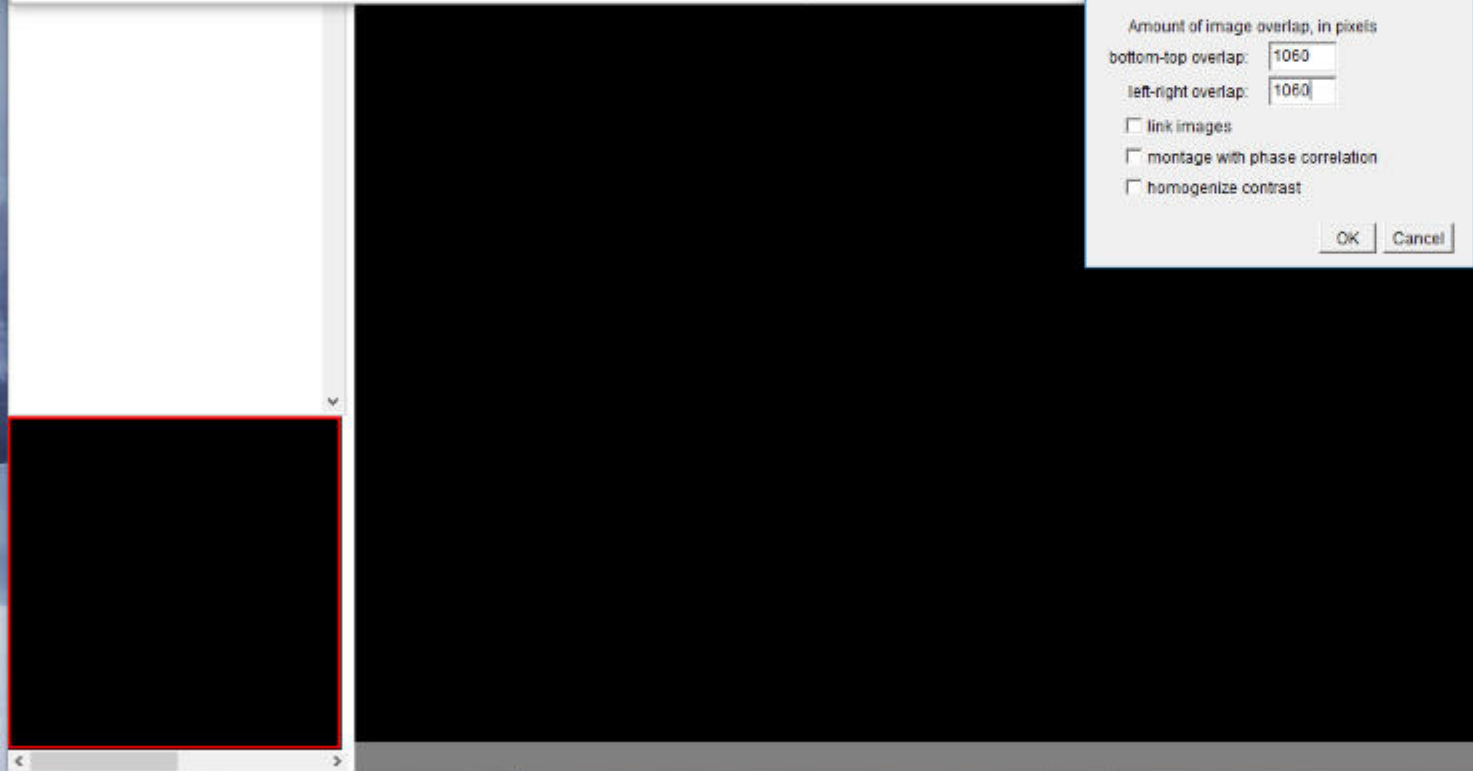
File Edit Image Process Analyze Plugins Window Help

x=23202 pixel, y=6458 pixel

Log

File Edit Font

Importing 1/1



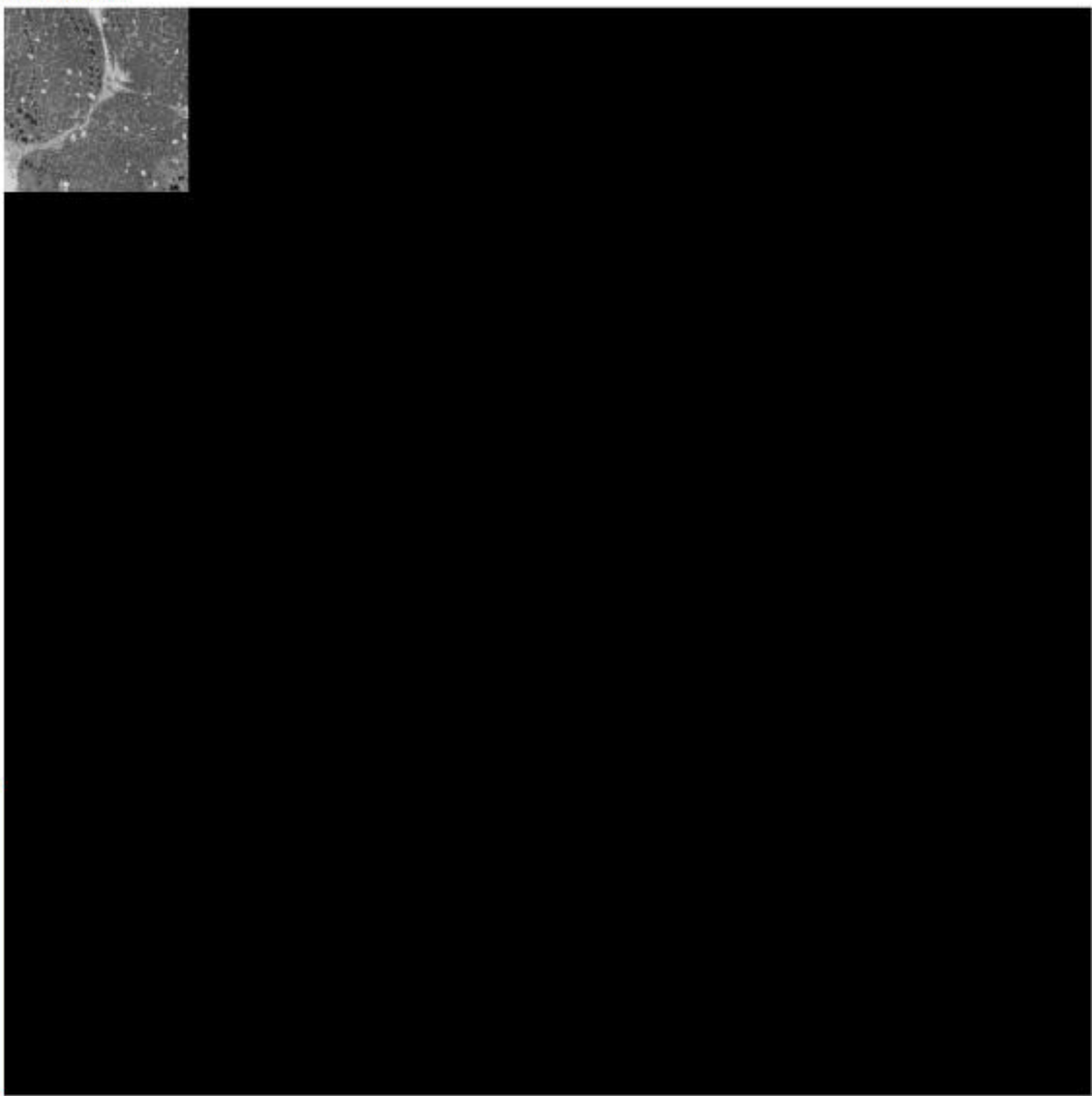
1) Import of ROI and LC

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

1/2 z=0.0 pixels (2.8%) -- Untitled 0 29568.0x29568.0x1.0 pixel



Layers
Tool options
Annotations
Live filter
Patches
Profiles
Z space
Opacity
Labels

- 02_IC80007.tif
- #312
- 02_IC80008.tif
- #301
- 02_IC80009.tif
- #305
- 02_IC80010.tif
- #309
- 02_IC80011.tif
- #313
- 02_IC80012.tif
- #302
- 02_IC80013.tif
- #306
- 02_IC80014.tif
- #310
- 02_IC80015.tif
- #314

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

4 macros installed

Log

File Edit Font

Importing 1/1
Importing 1/1

2) Apply filter

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

(Fiji Is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=4282 pixel, y=4212 pixel, value=144 [Patch #314]

1/2 z:0.0 pixels (2.8%) -- Untitled 0 29568.0x29568.0x1.0 pixel

Layers: Tool options Annotations Live filter Patches Profiles Z space Opacity Labels

- 02_IC80007.tif #312
- 02_IC80008.tif #301
- 02_IC80009.tif #305
- 02_IC80010.tif #309
- 02_IC80011.tif #313
- 02_IC80012.tif #302
- 02_IC80013.tif #306
- 02_IC80014.tif #310
- 02_IC80015.tif #314

Context menu for selected layer:

- Patch
- Duplicate
- Color...
- Lock
- Move
- Delete...
- Revert
- Properties...
- Show centered
- Send to previous layer
- Send to next layer
- Send linked group to...
- Undo (Strg+Z)
- Redo (Strg+Umschalt+Z)
- Hide/Unhide
- Plugins
- Align
- Transform
- Link
- Adjust images
- Script
- Import
- Export
- Display
- Project
- Selection
- Tool
- Search... (Strg+F)

Sub-menu for Adjust images:

- Enhance contrast layer-wise...
- Enhance contrast (selected images)...
- Adjust image filters (selected images)
- Set Min and Max layer-wise...
- Set Min and Max (selected images)...
- Adjust min and max (selected images)...
- Mask image borders (layer-wise)...
- Mask image borders (selected images)...
- Remove alpha masks (layer-wise)...
- Remove alpha masks (selected images)...
- Split images under polyline ROI
- Blend (layer-wise)...
- Blend (selected images)...
- Match intensities (layer-wise)...
- Remove intensity maps (layer-wise)...

Log

File Edit Font

Importing 1/1
Importing 1/1

at java.awt.EventQueue.read...

2) Apply filter

Chosen Filters

1 NormalizedLocalContrast

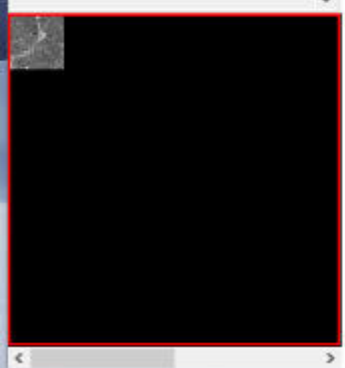
Parameter Value

brx	500
bry	500
stds	3.0
cent	true
stret	true

Apply to: Selected images (1) Set

Push F1 for help

#313	02_IC80012.tif
#302	02_IC80013.tif
#306	02_IC80014.tif
#310	02_IC80015.tif
#314	



(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=17164 pixel, y=11829 pixel

Log

File Edit Font

Importing 1/1
Importing 1/1

at java.awt.EventQueueThread.read.run (k

2) Apply filter

Chosen Filters

1 NormalizedLocalContrast

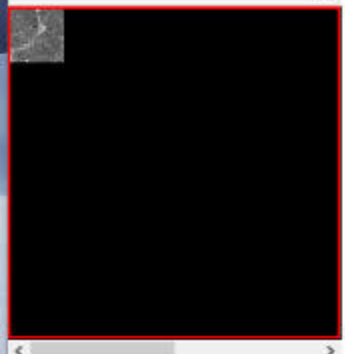
Parameter	Value
brx	500
bry	500
stds	2.5
cent	true
stret	true

Apply to: Selected images (1)

- Selected images (1)
- All images in layer 1
- All images in layer range...

Layer list:

- #313 02_IC80012.tif
- #302 02_IC80013.tif
- #306 02_IC80014.tif
- #310 02_IC80015.tif
- #314



(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=17164 pixel, y=11829 pixel

Log

File Edit Font

Importing 1/1
Importing 1/1

2) Apply filter

Chosen Filters

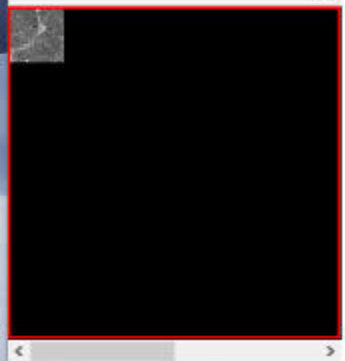
1 NormalizedLocalContrast

Parameter	Value
brx	500
bry	500
stds	2.5
cent	true
stret	true

Apply to: All images in layer range... Set

Layer list:

- #313 02_IC80012.tif
- #302 02_IC80013.tif
- #306 02_IC80014.tif
- #310 02_IC80015.tif
- #314



(Fiji Is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=13057 pixel, y=12882 pixel

Log

File Edit Font

Importing 1/1
Importing 1/1

2) Apply filter

Chosen Filters

1 NormalzeLocalContrast

Parameter Value

brx	500
bry	500
stds	2.5
cent	true
stret	true

Apply to: All images in layer range... Set

Apply filters

Start: 1: z=0.0 [layer]

End: 2: z=0.0 [layer]

Image title matches:

Visible images only

OK Cancel

Push F1 for help

#313	02_IC80012.tif
#302	02_IC80013.tif
#306	02_IC80014.tif
#310	02_IC80015.tif
#314	

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=13057 pixel, y=12882 pixel

Log

File Edit Font

Importing 1/1

Importing 1/1

at java.awt.EventQueue.read...


2) Apply filter

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

1/2 z=0.0 pixels (2.8%) -- Untitled 0 29568.0x29568.0x1.0 pixel



Layers
Tool options
Annotations
Live filter
Patches
Profiles
Z space
Opacity
Labels

- 02_IC80007.tif
- #312
- 02_IC80008.tif
- #301
- 02_IC80009.tif
- #305
- 02_IC80010.tif
- #309
- 02_IC80011.tif
- #313
- 02_IC80012.tif
- #302
- 02_IC80013.tif
- #306
- 02_IC80014.tif
- #310
- 02_IC80015.tif
- #314

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Set filters - 2 seconds

Log

File Edit Font

Importing 1/1
Importing 1/1

at java.awt.EventQueueThread.run(...)

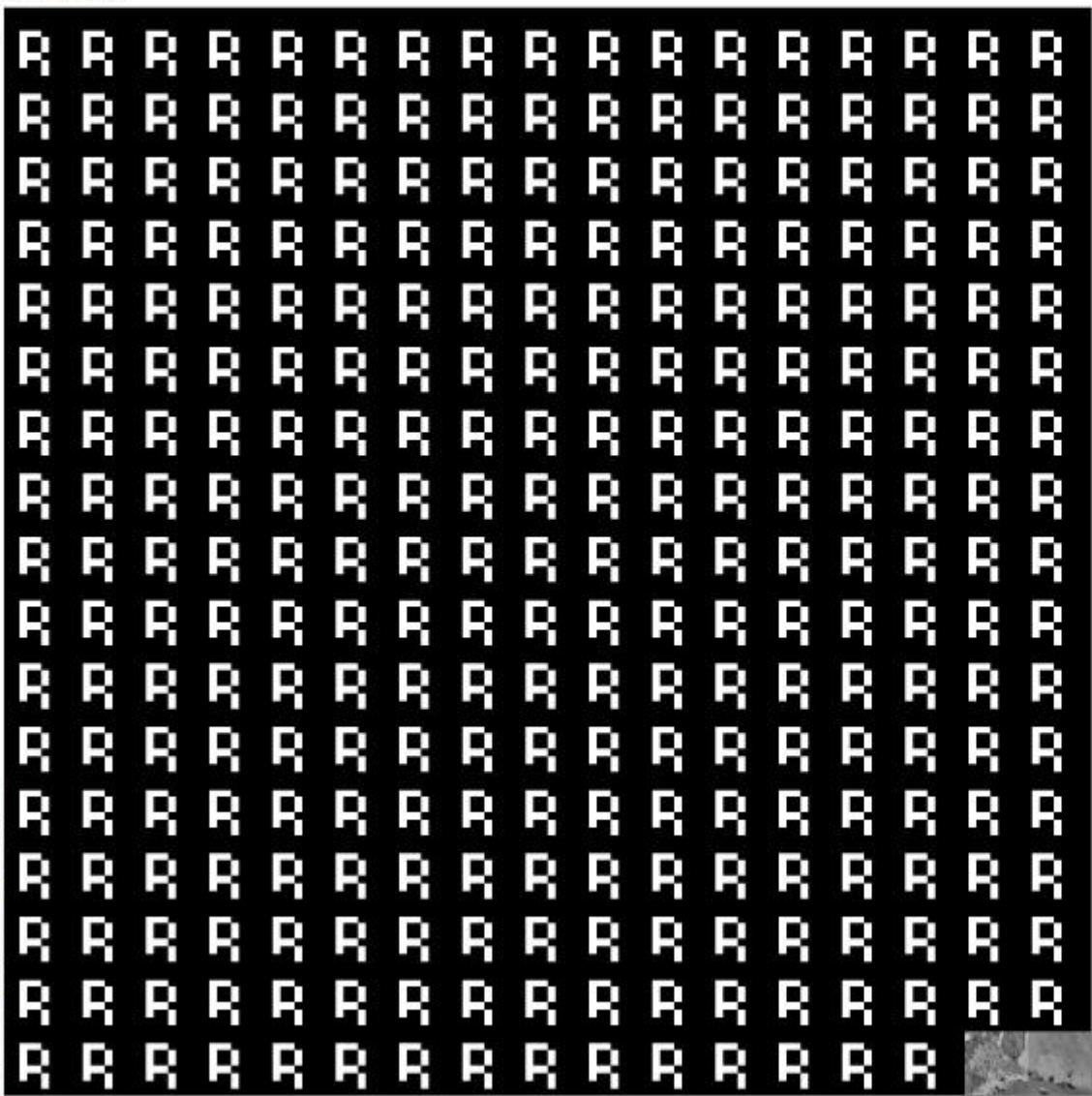
2) Apply filter

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=-0.0 [layer]

2/2 z=0.0 pixels (2.8%) -- Untitled 0 29568.0x29568.0x1.0 pixel



Layers Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels

- 01_ROI80007.tif #127
- 01_ROI80008.tif #144
- 01_ROI80009.tif #161
- 01_ROI80010.tif #178
- 01_ROI80011.tif #195
- 01_ROI80012.tif #212
- 01_ROI80013.tif #229
- 01_ROI80014.tif #246
- 01_ROI80015.tif #263

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Set filters - 6 seconds

Log

File Edit Font

Importing 1/1
Importing 1/1

at java.awt.EventQueue.invokeAndWait(...)

2) Apply filter

Template
● anything

Project Objects
● Untitled 0 [project]

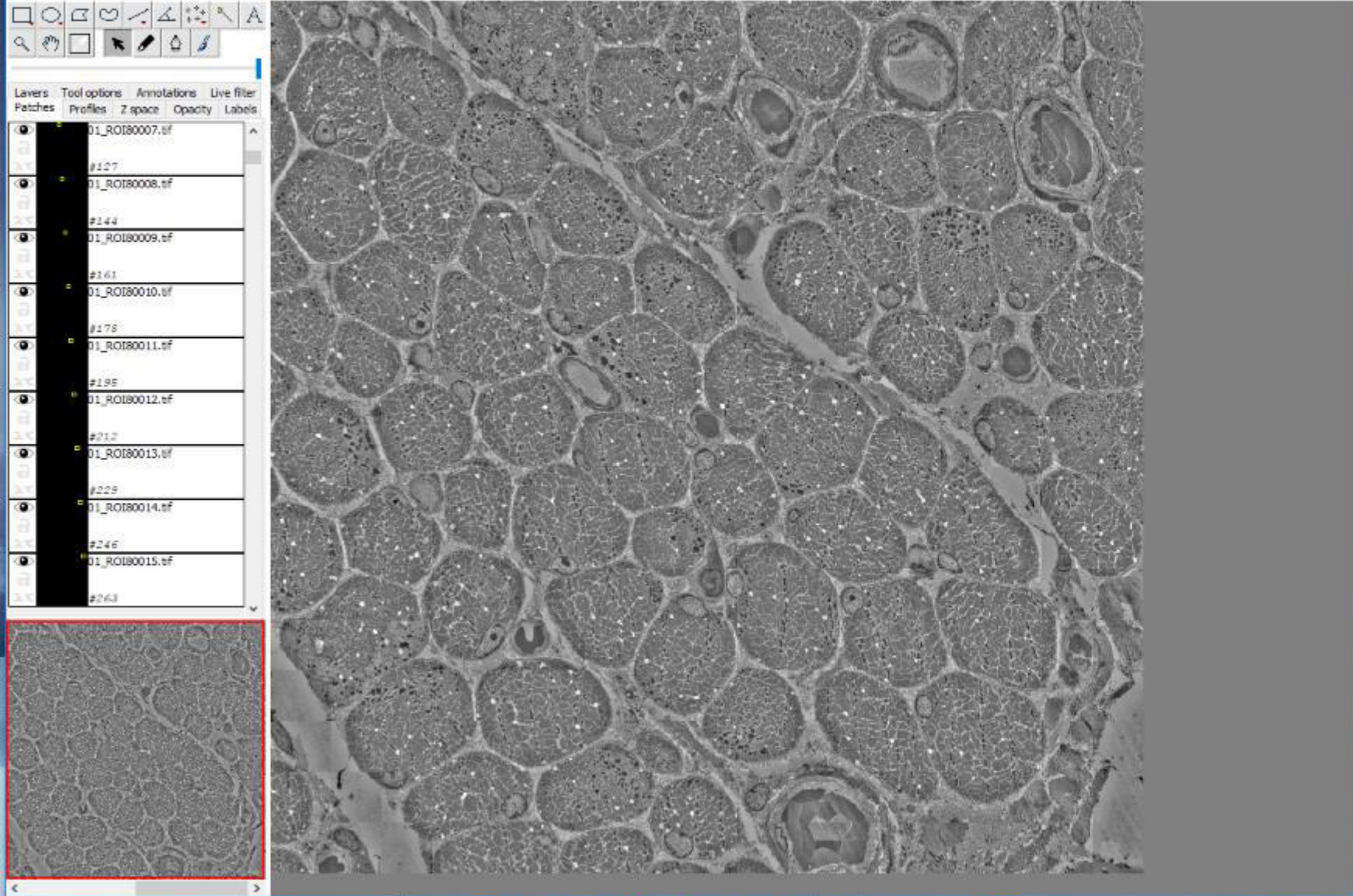
Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Done Set filters (71.66s approx.)

2/2 z=0.0 pixels (2.8%) -- Untitled 0 29568.0x29568.0x1.0 pixel



Log

File Edit Font

Importing 1/1
Importing 1/1

3) Alignment of ROI and LC

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=5721 pixel, y=7581 pixel

1/2 z=0.0 pixels (2.8%) -- Untitled 0 29568.0x29568.0x1.0 pixel

Layers Tool options Annotations Live filter Patches Profiles Z space Opacity Labels

- 02_IC80007.tif
- #312
- 02_IC80008.tif
- #301
- 02_IC80009.tif
- #305
- 02_IC80010.tif
- #309
- 02_IC80011.tif
- #313
- 02_IC80012.tif
- #302
- 02_IC80013.tif
- #306
- 02_IC80014.tif
- #310
- 02_IC80015.tif
- #314

Undo Strg+Z
Redo Strg-Umschalt+Z

Hide/Unhide >
Plugins >
Align
Transform
Link
Adjust images
Script
Import
Export
Display
Project
Selection
Tool
Search... Strg+F

- Align stack slices
- Align layers
- Align layers manually with landmarks
- Align multi-layer mosaic
- Montage all images in this layer**
- Montage selected images
- Montage multiple layers

Log

File Edit Font

Importing 1/1
Importing 1/1

at java.awt.EventQueueDispatchThread.run(E...

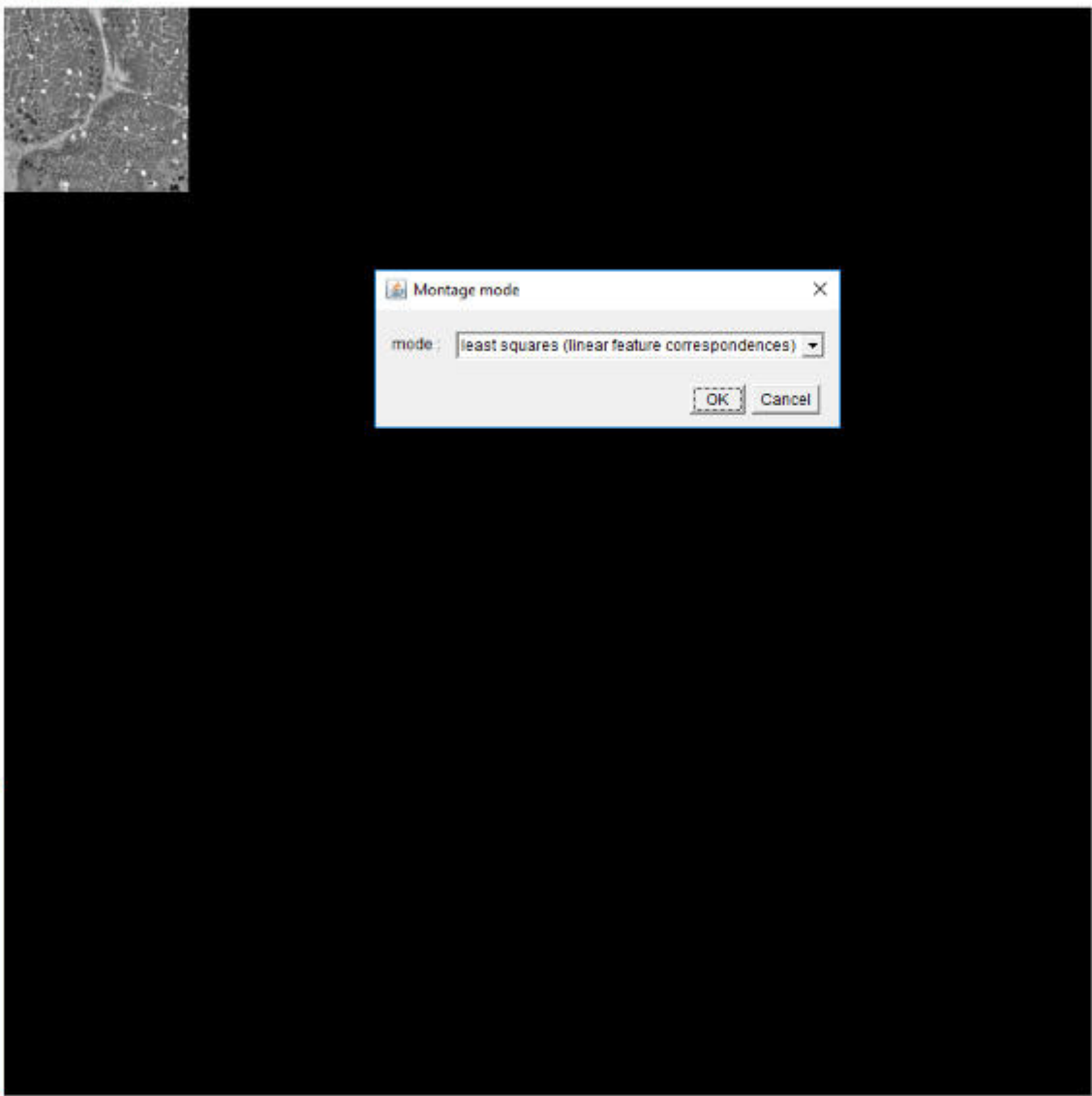
3) Alignment of ROI and LC

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

1/2 z=0.0 pixels (2.8%) -- Untitled 0 29568.0x29568.0x1.0 pixel



Layers: Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels

- 02_IC80007.tif
- #312
- 02_IC80008.tif
- #301
- 02_IC80009.tif
- #305
- 02_IC80010.tif
- #309
- 02_IC80011.tif
- #313
- 02_IC80012.tif
- #302
- 02_IC80013.tif
- #306
- 02_IC80014.tif
- #310
- 02_IC80015.tif
- #314

Montage mode

mode: least squares (linear feature correspondences)

OK Cancel

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 4 seconds

Log

File Edit Font

Importing 1/1
Importing 1/1
Using 0 images as reference.

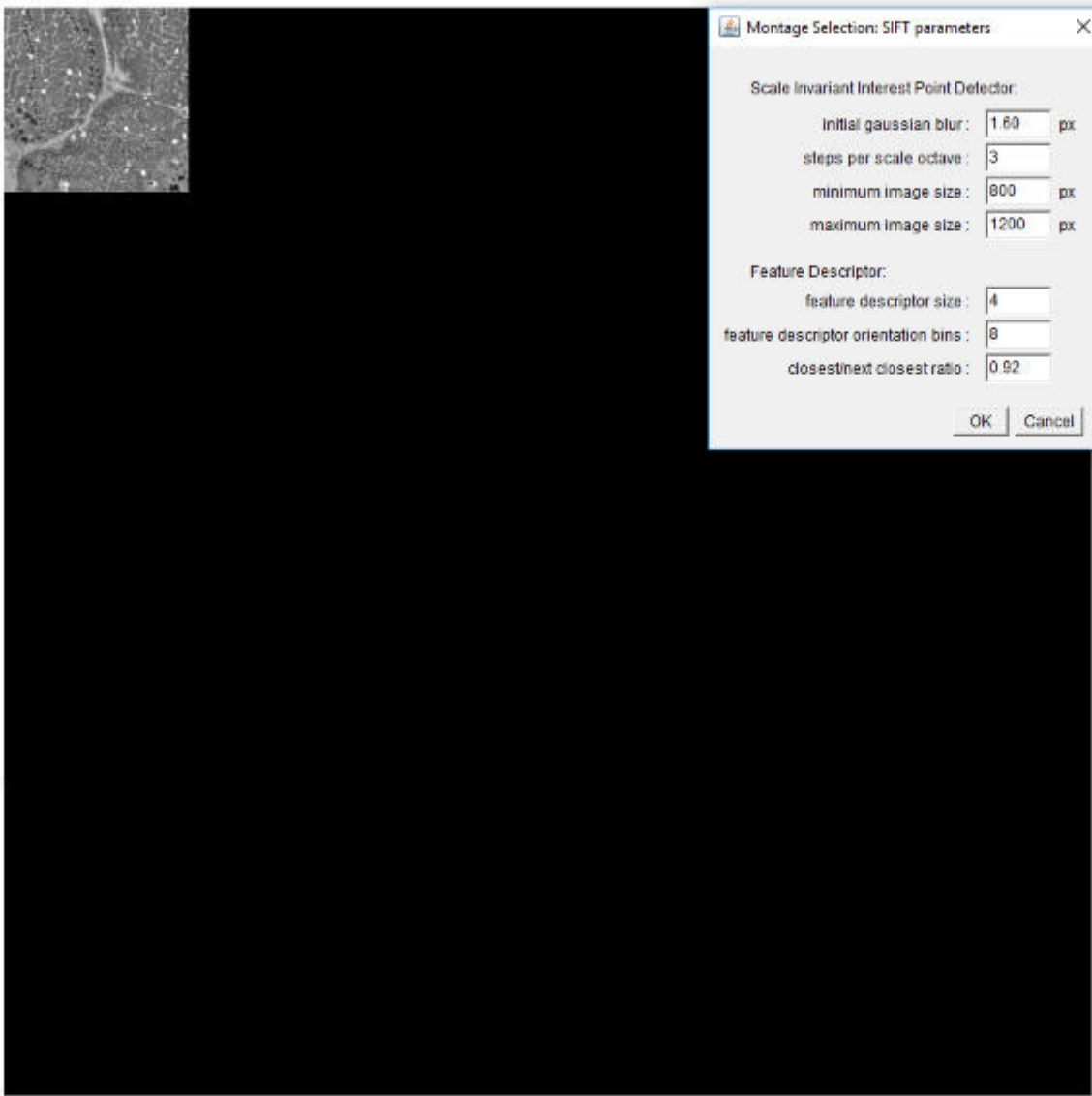
3) Alignment of ROI and LC

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

1/2 z=0.0 pixels (2.8%) -- Untitled 0 29568.0x29568.0x1.0 pixel



Layers: Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels

- 02_IC80007.tif #312
- 02_IC80008.tif #301
- 02_IC80009.tif #305
- 02_IC80010.tif #309
- 02_IC80011.tif #313
- 02_IC80012.tif #302
- 02_IC80013.tif #306
- 02_IC80014.tif #310
- 02_IC80015.tif #314

Montage Selection: SIFT parameters

Scale Invariant Interest Point Detector:

- Initial gaussian blur: 1.60 px
- steps per scale octave: 3
- minimum image size: 800 px
- maximum image size: 1200 px

Feature Descriptor:

- feature descriptor size: 4
- feature descriptor orientation bins: 8
- closest/next closest ratio: 0.92

OK Cancel

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 12 seconds

Log

File Edit Font

Importing 1/1
Importing 1/1
Using 0 images as reference.

at java.awt.EventQueue.invokeAndWait(...)

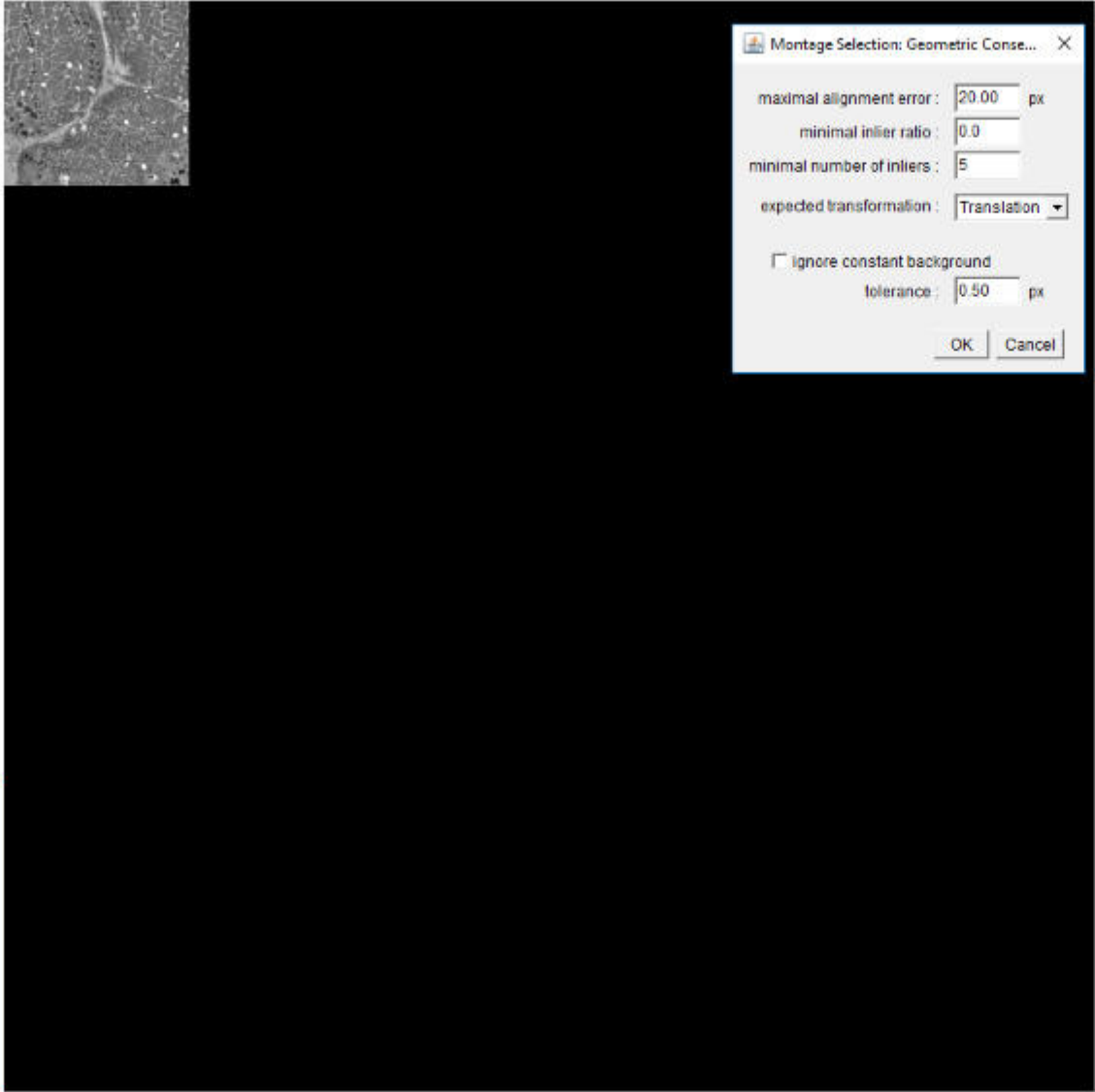
3) Alignment of ROI and LC

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

1/2 z=0.0 pixels (2.8%) -- Untitled 0 29568.0x29568.0x1.0 pixel



Layers
Tool options
Annotations
Live filter
Patches
Profiles
Z space
Opacity
Labels

- 02_IC80007.tif
- #312
- 02_IC80008.tif
- #301
- 02_IC80009.tif
- #305
- 02_IC80010.tif
- #309
- 02_IC80011.tif
- #313
- 02_IC80012.tif
- #302
- 02_IC80013.tif
- #306
- 02_IC80014.tif
- #310
- 02_IC80015.tif
- #314

Montage Selection: Geometric Conse... X

maximal alignment error : 20.00 px

minimal inlier ratio : 0.0

minimal number of inliers : 5

expeted transformation : Translation

ignore constant background

tolerance : 0.50 px

OK Cancel

(Fiji Is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 21 seconds

Log

File Edit Font

Importing 1/1
Importing 1/1
Using 0 images as reference.

at java.awt.EventQueue.invokeAndWait...

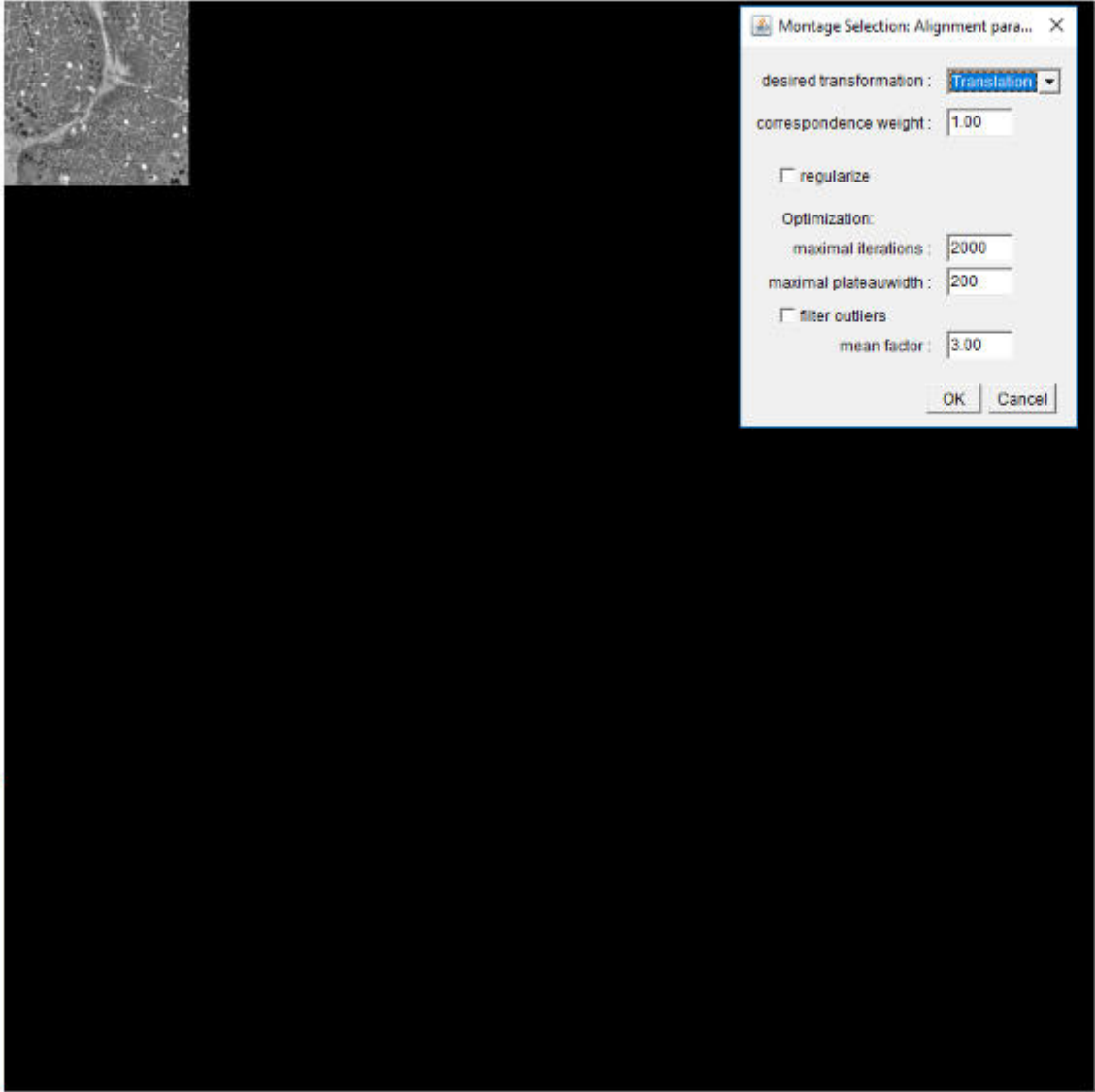
3) Alignment of ROI and LC

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

1/2 z=0.0 pixels (2.8%) -- Untitled 0 29568.0x29568.0x1.0 pixel



Layers: Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels

- 02_IC80007.tif #312
- 02_IC80008.tif #301
- 02_IC80009.tif #305
- 02_IC80010.tif #309
- 02_IC80011.tif #313
- 02_IC80012.tif #302
- 02_IC80013.tif #306
- 02_IC80014.tif #310
- 02_IC80015.tif #314

Montage Selection: Alignment para... X

desired transformation: Translation

correspondence weight: 1.00

regularize

Optimization:

maximal iterations: 2000

maximal plateauwidth: 200

filter outliers

mean factor: 3.00

OK Cancel

(Fiji Is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 25 seconds

Log

File Edit Font

Importing 1/1
Importing 1/1
Using 0 images as reference.

at java.awt.EventQueue.invokeAndWait(...)

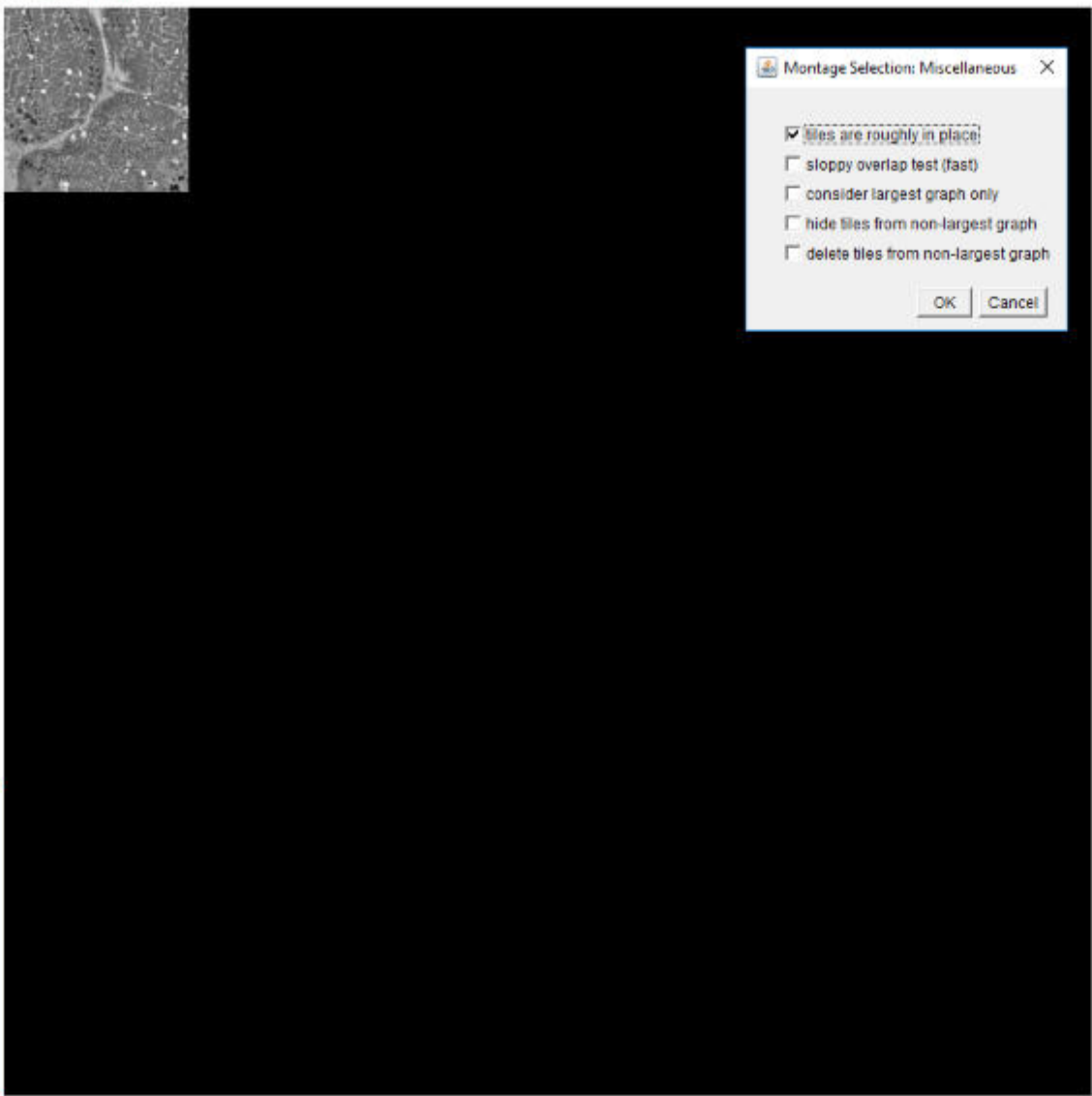
3) Alignment of ROI and LC

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

1/2 z=0.0 pixels (2.8%) -- Untitled 0 29568.0x29568.0x1.0 pixel



Layers
Patches Profiles Z space Opacity Labels

- 02_IC80007.tif
- #312
- 02_IC80008.tif
- #301
- 02_IC80009.tif
- #305
- 02_IC80010.tif
- #309
- 02_IC80011.tif
- #313
- 02_IC80012.tif
- #302
- 02_IC80013.tif
- #306
- 02_IC80014.tif
- #310
- 02_IC80015.tif
- #314

Montage Selection: Miscellaneous

- tiles are roughly in place
- sloppy overlap test (fast)
- consider largest graph only
- hide tiles from non-largest graph
- delete tiles from non-largest graph

OK Cancel

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 29 seconds

Log

File Edit Font

Importing 1/1
Importing 1/1
Using 0 images as reference.

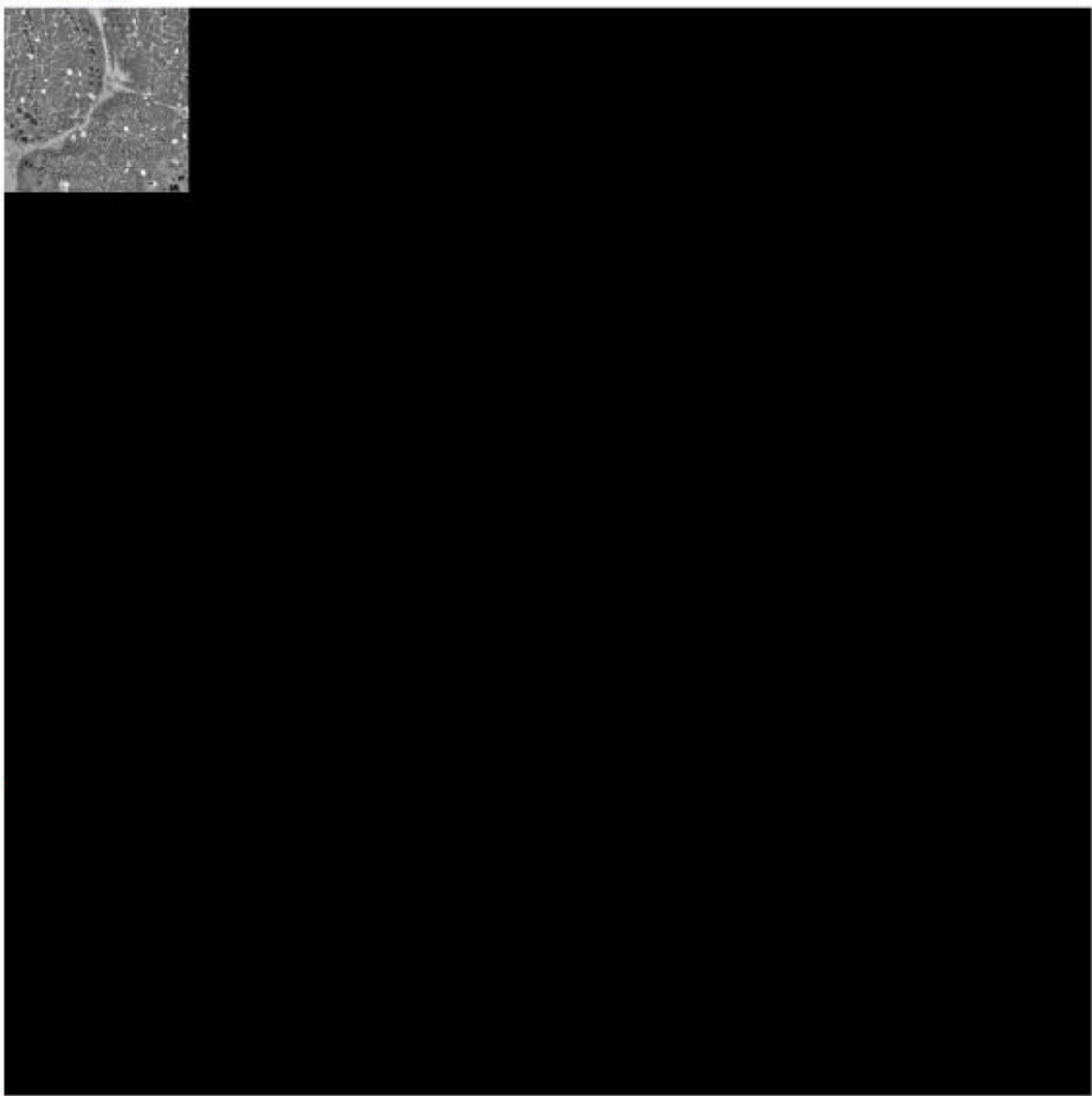
3) Alignment of ROI and LC

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

1/2 z=0.0 pixels (2.8%) -- Untitled 0 29568.0x29568.0x1.0 pixel



Layers
Tool options
Annotations
Live filter
Patches
Profiles
Z space
Opacity
Labels

- 02_IC80007.tif
- #312
- 02_IC80008.tif
- #301
- 02_IC80009.tif
- #305
- 02_IC80010.tif
- #309
- 02_IC80011.tif
- #313
- 02_IC80012.tif
- #302
- 02_IC80013.tif
- #306
- 02_IC80014.tif
- #310
- 02_IC80015.tif
- #314

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 33 seconds

Log

File Edit Font

Importing 1/1
Importing 1/1
Using 0 images as reference.

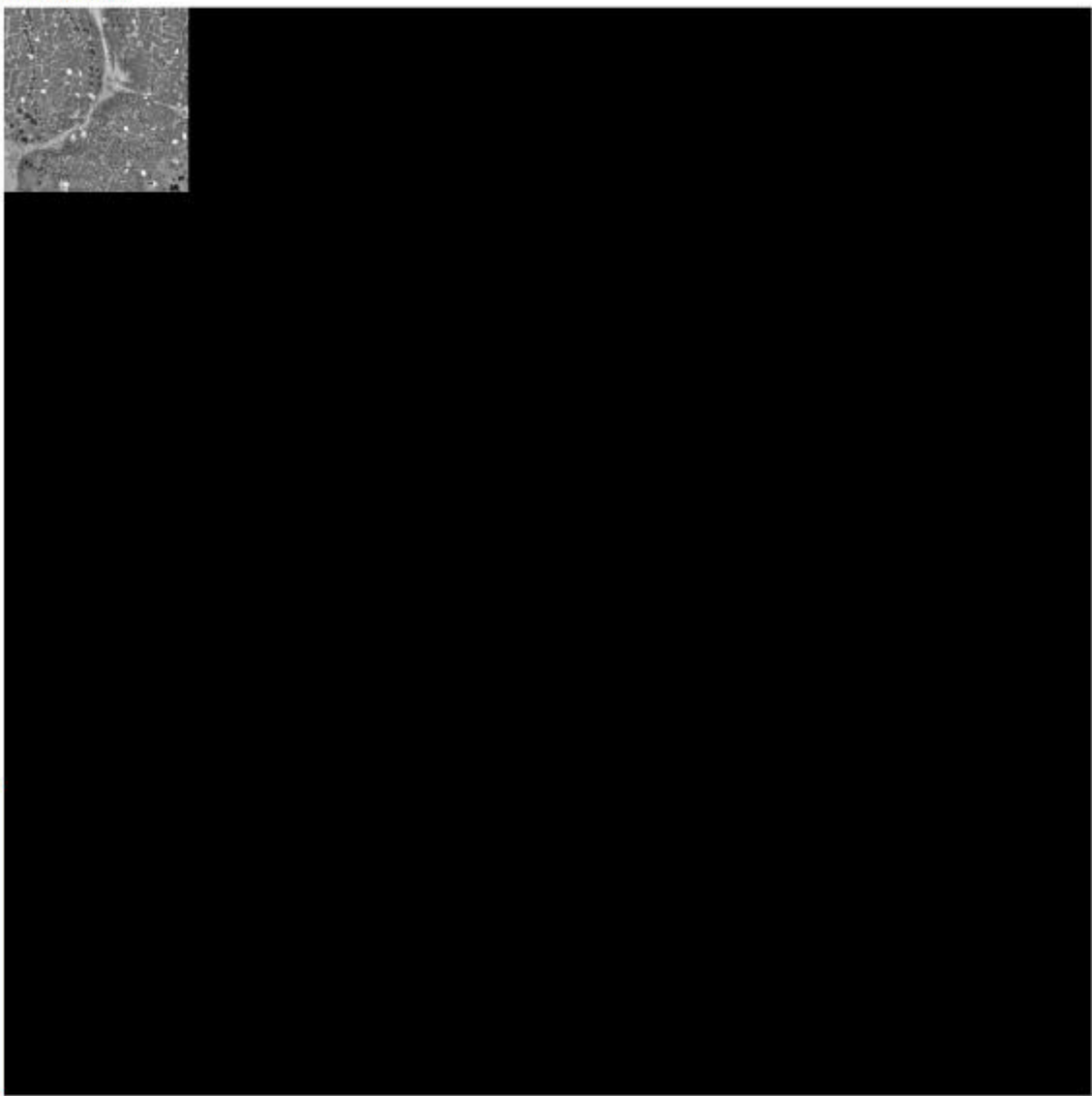
3) Alignment of ROI and LC

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

1/2 z=0.0 pixels (2.8%) -- Untitled 0 29568.0x29568.0x1.0 pixel



Layers
Tool options
Annotations
Live filter
Patches
Profiles
Z space
Opacity
Labels

- 02_IC80007.tif
- #312
- 02_IC80008.tif
- #301
- 02_IC80009.tif
- #305
- 02_IC80010.tif
- #309
- 02_IC80011.tif
- #313
- 02_IC80012.tif
- #302
- 02_IC80013.tif
- #306
- 02_IC80014.tif
- #310
- 02_IC80015.tif
- #314

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 36 seconds

Log

File Edit Font

Importing 1/1
Importing 1/1
Using 0 images as reference.

- 3309 features extracted in tile 8 "02_LC80007.tif" (took 3609 ms).
- 3479 features extracted in tile 10 "02_LC80005.tif" (took 3687 ms).
- 3063 features extracted in tile 15 "02_LC80000.tif" (took 3734 ms).
- 4059 features extracted in tile 6 "02_LC80009.tif" (took 3750 ms).
- 4010 features extracted in tile 5 "02_LC80010.tif" (took 3765 ms).
- 3740 features extracted in tile 9 "02_LC80006.tif" (took 3765 ms).
- 3589 features extracted in tile 13 "02_LC80002.tif" (took 3781 ms).
- 3474 features extracted in tile 14 "02_LC80001.tif" (took 3797 ms).
- 3197 features extracted in tile 11 "02_LC80004.tif" (took 3812 ms).
- 3567 features extracted in tile 4 "02_LC80011.tif" (took 3828 ms).
- 3703 features extracted in tile 1 "02_LC80014.tif" (took 3844 ms).
- 4412 features extracted in tile 3 "02_LC80012.tif" (took 3875 ms).
- 3108 features extracted in tile 12 "02_LC80003.tif" (took 3906 ms).
- 4112 features extracted in tile 2 "02_LC80013.tif" (took 3937 ms).
- 3817 features extracted in tile 0 "02_LC80015.tif" (took 4000 ms).
- 4244 features extracted in tile 7 "02_LC80008.tif" (took 4047 ms).

3) Alignment of ROI and LC

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

1/2 z=0.0 pixels (2.8%) -- Untitled 0 29568.0x29568.0x1.0 pixel

Layers
Patches Profiles Z space Opacity Labels

- 02_IC80007.tif
- #312
- 02_IC80008.tif
- #301
- 02_IC80009.tif
- #305
- 02_IC80010.tif
- #309
- 02_IC80011.tif
- #313
- 02_IC80012.tif
- #302
- 02_IC80013.tif
- #306
- 02_IC80014.tif
- #310
- 02_IC80015.tif
- #314

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 42 seconds

Log

File Edit Font

```
average residual error 4.4696953107219946 px
took 6093 ms
Model found for files "02_LC80014.tif z=0.0 #310" and "02_LC80011.tif z=0.0 #313":
correspondences 320 of 572
average residual error 8.01024838606405 px
took 6109 ms
Model found for files "02_LC80013.tif z=0.0 #306" and "02_LC80005.tif z=0.0 #304":
correspondences 95 of 385
average residual error 4.479301709003431 px
took 6202 ms
Model found for files "02_LC80015.tif z=0.0 #314" and "02_LC80014.tif z=0.0 #310":
correspondences 445 of 700
average residual error 8.49453596577971 px
took 6327 ms
Model found for files "02_LC80015.tif z=0.0 #314" and "02_LC80005.tif z=0.0 #304":
correspondences 5 of 279
average residual error 1.1235182646124096 px
took 6421 ms
Model found for files "02_LC80015.tif z=0.0 #314" and "02_LC80006.tif z=0.0 #308":
correspondences 31 of 336
average residual error 1.0267802872996505 px
took 6593 ms
Model found for files "02_LC80013.tif z=0.0 #306" and "02_LC80009.tif z=0.0 #305":
correspondences 738 of 986
average residual error 5.719614722944101 px
took 6812 ms
Model found for files "02_LC80013.tif z=0.0 #306" and "02_LC80011.tif z=0.0 #313":
correspondences 53 of 323
average residual error 6.891237155661658 px
took 6905 ms
Model found for files "02_LC80013.tif z=0.0 #306" and "02_LC80012.tif z=0.0 #302":
correspondences 857 of 1116
average residual error 7.80128950471586 px
took 7452 ms
Model found for files "02_LC80014.tif z=0.0 #310" and "02_LC80012.tif z=0.0 #302":
correspondences 239 of 516
average residual error 10.22152234554671 px
took 7468 ms
```

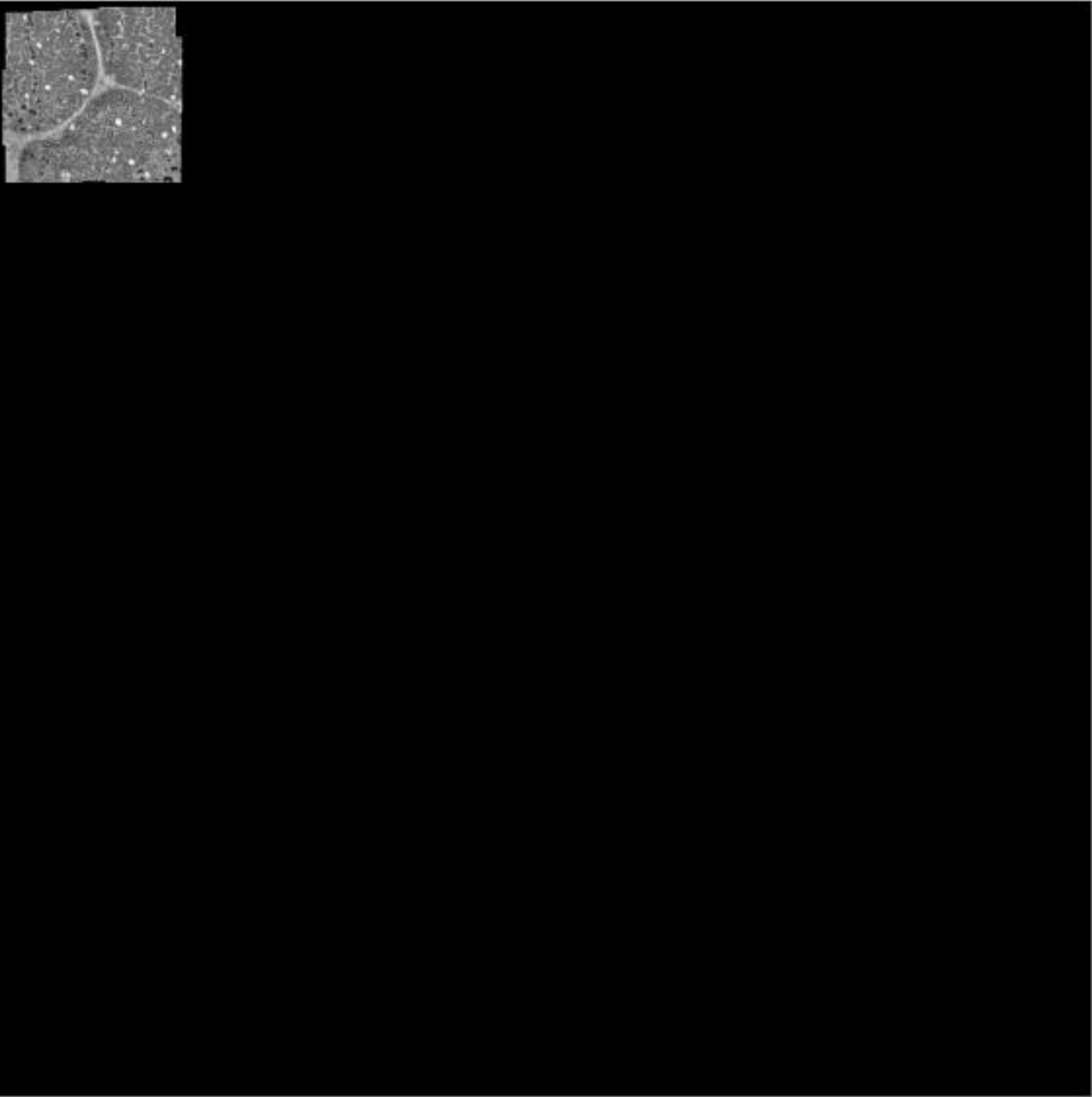
3) Alignment of ROI and LC

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

1/2 z=0.0 pixels (2.8%) -- Untitled 0 29568.0x29568.0x1.0 pixel



Layers: Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels

- 02_LC80007.tif
- #312
- 02_LC80008.tif
- #301
- 02_LC80009.tif
- #305
- 02_LC80010.tif
- #309
- 02_LC80011.tif
- #313
- 02_LC80012.tif
- #302
- 02_LC80013.tif
- #306
- 02_LC80014.tif
- #310
- 02_LC80015.tif
- #314

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Creating bucket 28672,28672,896,896

Log

File Edit Font

```
178: 8.28023225189189 60.30213913791472
179: 8.27809362590816 60.30213913791472
180: 8.27597863115077 60.30213913791472
181: 8.273886878034011 60.30213913791472
182: 8.271817985726397 60.30213913791472
Model found for files "02_LC80002.tif z=0.0 #307" and "02_LC80001.tif z=0.0 #303":
correspondences 694 of 928
average residual error 9.690581311036881 px
took 2609 ms
183: 8.269771581319299 60.30213913791472
184: 8.267747300203089 60.30213913791472
185: 8.265744785550496 60.30213913791472
186: 8.263763688166913 60.30213913791472
187: 8.26180366628741 60.30213913791472
188: 8.259864385380178 60.30213913791472
189: 8.257945517956179 60.30213913791472
190: 8.256046743384788 60.30213913791472
191: 8.254167747715181 60.30213913791472
192: 8.252308223503292 60.30213913791472
193: 8.250467869644103 60.30213913791472
194: 8.24864639120911 60.30213913791472
195: 8.24684349928876 60.30213913791472
196: 8.245058910839683 60.30213913791472
197: 8.243292348536556 60.30213913791472
198: 8.241543540628436 60.30213913791472
199: 8.239812220799397 60.30213913791472
200: 8.238098128033332 60.30213913791472
201: 8.236401006482774 60.30213913791472
202: 8.23472060534158 60.30213913791472
203: 8.233056678721379 60.30213913791472
204: 8.231408985531619 60.30213913791472
205: 8.229777289363119 60.30213913791472
206: 8.22816135837499 60.30213913791472
Successfully optimized configuration of 16 tiles after 207 iterations:
average displacement: 7.895px
minimal displacement: 7.140px
maximal displacement: 9.380px
Montage done.
```

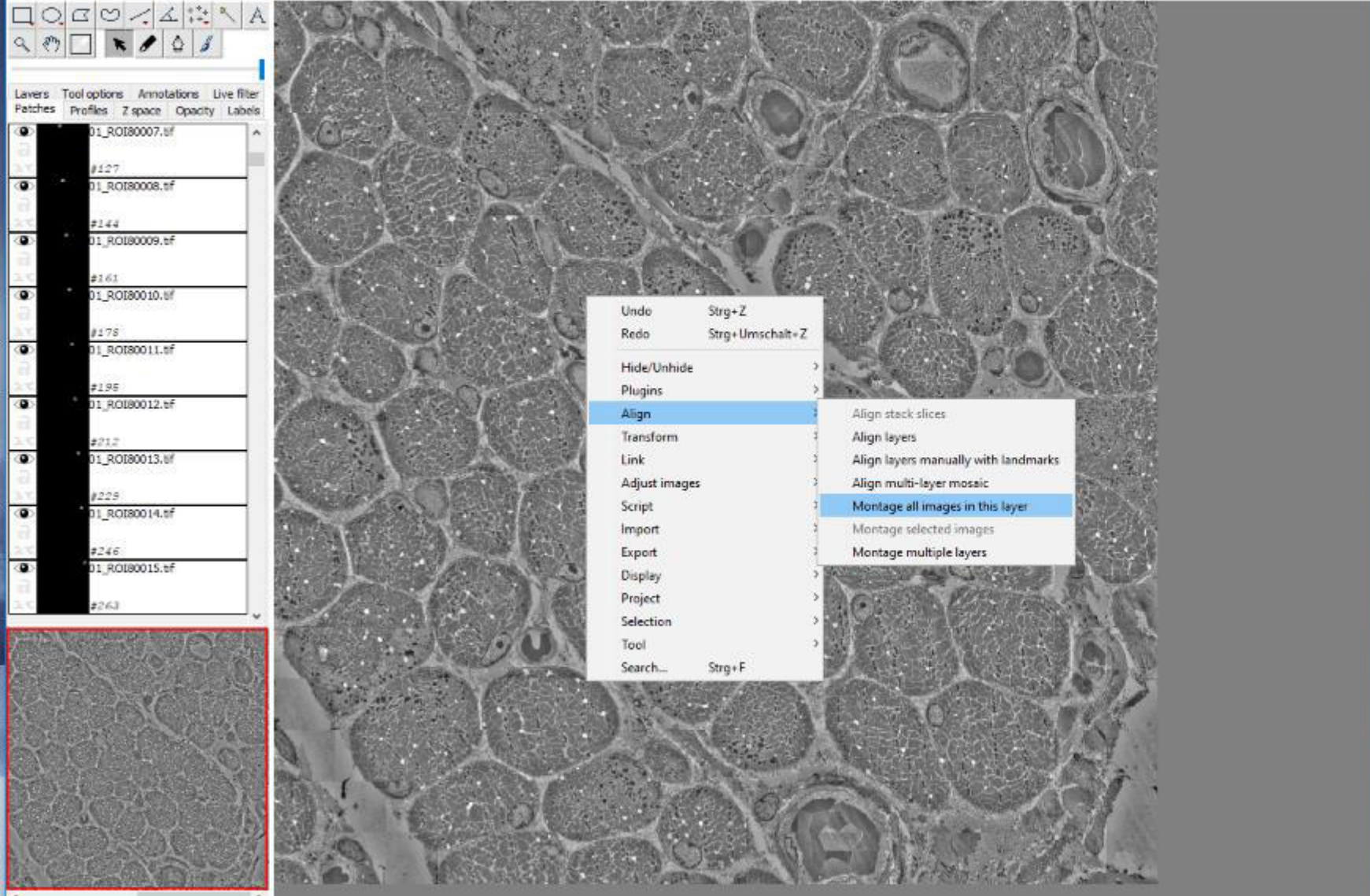

3) Alignment of ROI and LC

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

2/2 z=0.0 pixels (2.8%) -- Untitled 0 29568.0x29568.0x1.0 pixel



(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=10425 pixel, y=9863 pixel, value=128 [Patch #98]

Log

File Edit Font

```
178. 8.28023225189189 60.30213913791472
179. 8.27809362590816 60.30213913791472
180. 8.27597863115077 60.30213913791472
181. 8.273886878034011 60.30213913791472
182. 8.271817985726397 60.30213913791472
Model found for files *02_LC80002.tif z=0.0 #307* and *02_LC80001.tif z=0.0 #303*:
correspondences 694 of 928
average residual error 9.690581311036881 px
took 2609 ms
183. 8.269771581319299 60.30213913791472
184. 8.267747300203089 60.30213913791472
185. 8.265744785550496 60.30213913791472
186. 8.263763688166913 60.30213913791472
187. 8.26180366628741 60.30213913791472
188. 8.259864385380178 60.30213913791472
189. 8.257945517956179 60.30213913791472
190. 8.256046743384788 60.30213913791472
191. 8.254167747715181 60.30213913791472
192. 8.252308223503292 60.30213913791472
193. 8.250467889644103 60.30213913791472
194. 8.24864639120911 60.30213913791472
195. 8.24684349928876 60.30213913791472
196. 8.245058910839683 60.30213913791472
197. 8.243292348536556 60.30213913791472
198. 8.241543540628436 60.30213913791472
199. 8.239812220799397 60.30213913791472
200. 8.238098128033332 60.30213913791472
201. 8.236401006482774 60.30213913791472
202. 8.23472060534158 60.30213913791472
203. 8.233056678721379 60.30213913791472
204. 8.231408985531619 60.30213913791472
205. 8.229777289368119 60.30213913791472
206. 8.22816135837499 60.30213913791472
Successfully optimized configuration of 16 tiles after 207 iterations:
average displacement: 7.895px
minimal displacement: 7.140px
maximal displacement: 9.380px
Montage done.
```


3) Alignment of ROI and LC

Template
● anything

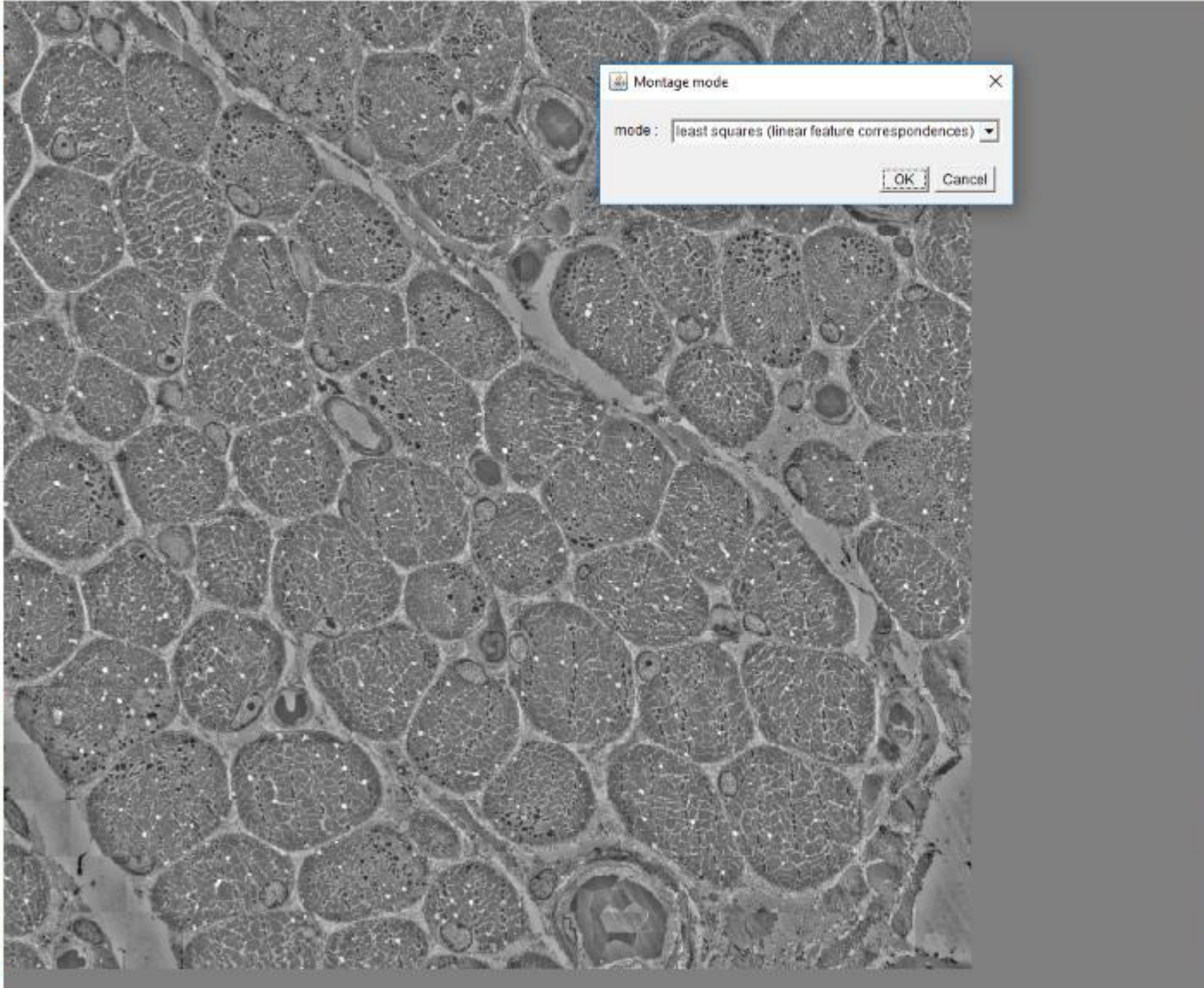
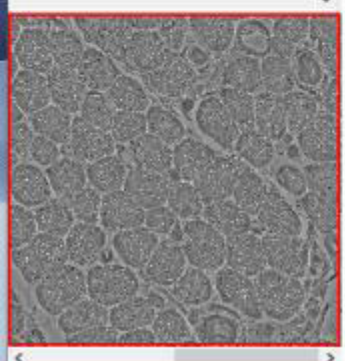
Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

2/2 z=0.0 pixels (2.8%) -- Untitled 0 29568.0x29568.0x1.0 pixel

Layers
Patches Profiles Z space Opacity Labels

- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144
- 01_ROI80009.tif
- #161
- 01_ROI80010.tif
- #178
- 01_ROI80011.tif
- #195
- 01_ROI80012.tif
- #212
- 01_ROI80013.tif
- #229
- 01_ROI80014.tif
- #246
- 01_ROI80015.tif
- #263



Montage mode

mode : least squares (linear feature correspondences)

OK Cancel

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File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 2 seconds

Log

File Edit Font

```
179. 8.27809362590816 60.30213913791472
180. 8.27597863115077 60.30213913791472
181. 8.273886878094011 60.30213913791472
182. 8.271817985726397 60.30213913791472
Model found for files *02_LC80002.tif z=0.0 #307* and *02_LC80001.tif z=0.0 #303*
correspondences 694 of 928
average residual error 9.690581311036881 px
took 2609 ms
183. 8.269771581319299 60.30213913791472
184. 8.267747300203089 60.30213913791472
185. 8.265744785550496 60.30213913791472
186. 8.263763688166913 60.30213913791472
187. 8.26180366628741 60.30213913791472
188. 8.259864385380178 60.30213913791472
189. 8.257945517956179 60.30213913791472
190. 8.256046743384788 60.30213913791472
191. 8.254167747715181 60.30213913791472
192. 8.252308223503292 60.30213913791472
193. 8.250467869644103 60.30213913791472
194. 8.24864639120911 60.30213913791472
195. 8.24684349928876 60.30213913791472
196. 8.245058910839683 60.30213913791472
197. 8.243292348536556 60.30213913791472
198. 8.241543540628436 60.30213913791472
199. 8.239812220799397 60.30213913791472
200. 8.238098128033332 60.30213913791472
201. 8.236401006482774 60.30213913791472
202. 8.23472060534158 60.30213913791472
203. 8.233056678721379 60.30213913791472
204. 8.231408985531619 60.30213913791472
205. 8.229777289363119 60.30213913791472
206. 8.22816135837499 60.30213913791472
Successfully optimized configuration of 16 tiles after 207 iterations:
average displacement: 7.895px
minimal displacement: 7.140px
maximal displacement: 9.380px
Montage done.
Using 0 images as reference.
```


3) Alignment of ROI and LC

Template: anything

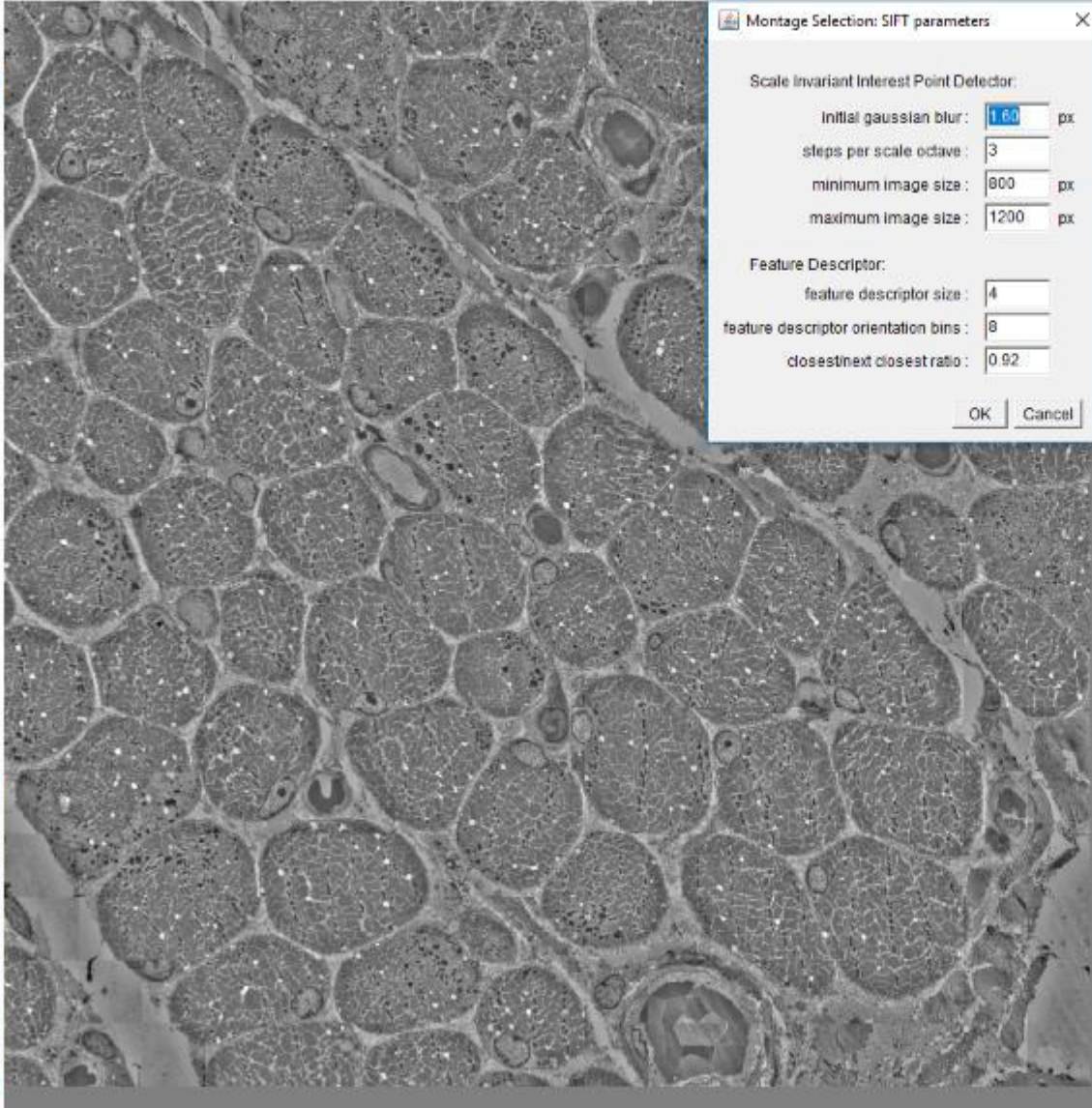
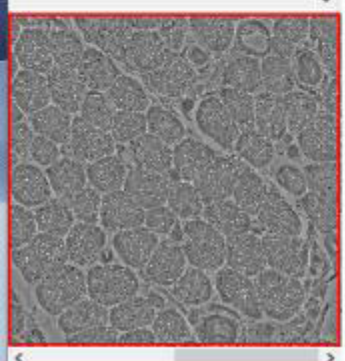
Project Objects: Untitled 0 [project]

Layers: Top Level [layer set], 1: z=0.0 [layer], 2: z=0.0 [layer]

2/2 z=0.0 pixels (2.8%) -- Untitled 0 29568.0x29568.0x1.0 pixel

Layers: Tool options, Annotations, Live filter, Patches, Profiles, Z space, Opacity, Labels

- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144
- 01_ROI80009.tif
- #161
- 01_ROI80010.tif
- #178
- 01_ROI80011.tif
- #195
- 01_ROI80012.tif
- #212
- 01_ROI80013.tif
- #229
- 01_ROI80014.tif
- #246
- 01_ROI80015.tif
- #263



Montage Selection: SIFT parameters

Scale Invariant Interest Point Detector:

- Initial gaussian blur: 1.60 px
- steps per scale octave: 3
- minimum image size: 800 px
- maximum image size: 1200 px

Feature Descriptor:

- feature descriptor size: 4
- feature descriptor orientation bins: 8
- closest/next closest ratio: 0.92

OK Cancel

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File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 5 seconds

Log

File Edit Font

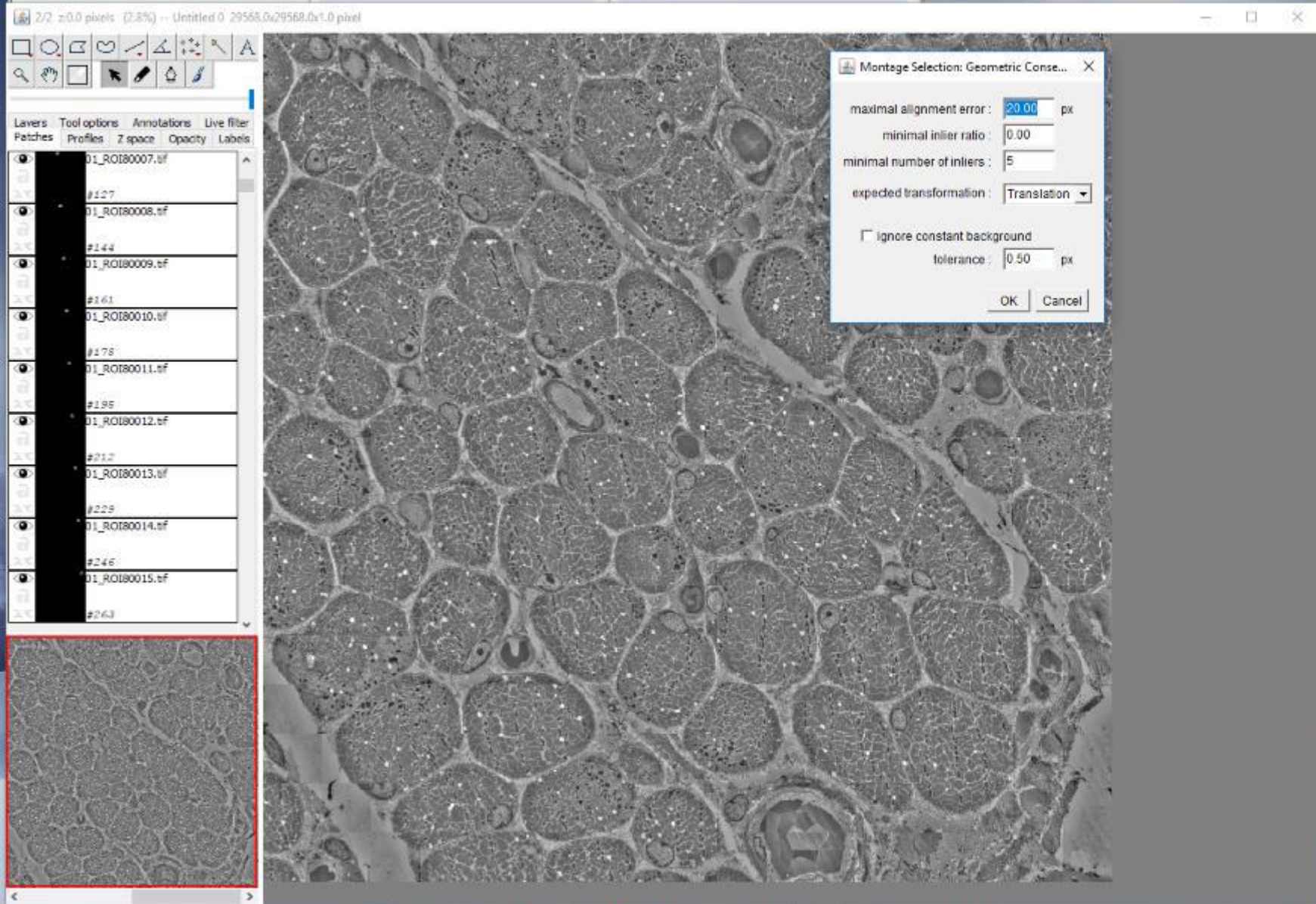
```
179. 8.27809362590816 60.30213913791472
180. 8.27597863115077 60.30213913791472
181. 8.273886878094011 60.30213913791472
182. 8.271817985726397 60.30213913791472
Model found for files *02_LC80002.tif z=0.0 #307* and *02_LC80001.tif z=0.0 #303*
correspondences 694 of 928
average residual error 9.890581311036881 px
took 2609 ms
183. 8.269771581319299 60.30213913791472
184. 8.267747300203089 60.30213913791472
185. 8.265744785550496 60.30213913791472
186. 8.263763688166913 60.30213913791472
187. 8.26180366628741 60.30213913791472
188. 8.259864385390178 60.30213913791472
189. 8.257945517956179 60.30213913791472
190. 8.256046743384788 60.30213913791472
191. 8.254167747715181 60.30213913791472
192. 8.252308223503292 60.30213913791472
193. 8.250467869644103 60.30213913791472
194. 8.24864639120911 60.30213913791472
195. 8.24684349928876 60.30213913791472
196. 8.245058910839683 60.30213913791472
197. 8.243292348536556 60.30213913791472
198. 8.241543540628436 60.30213913791472
199. 8.239812220799397 60.30213913791472
200. 8.238098128033332 60.30213913791472
201. 8.236401006482774 60.30213913791472
202. 8.23472060534158 60.30213913791472
203. 8.233056678721379 60.30213913791472
204. 8.231408985531619 60.30213913791472
205. 8.229777289363119 60.30213913791472
206. 8.22816135837499 60.30213913791472
Successfully optimized configuration of 16 tiles after 207 iterations:
average displacement: 7.895px
minimal displacement: 7.140px
maximal displacement: 9.380px
Montage done.
Using 0 images as reference.
```


3) Alignment of ROI and LC

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]



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File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 7 seconds

Log

File Edit Font

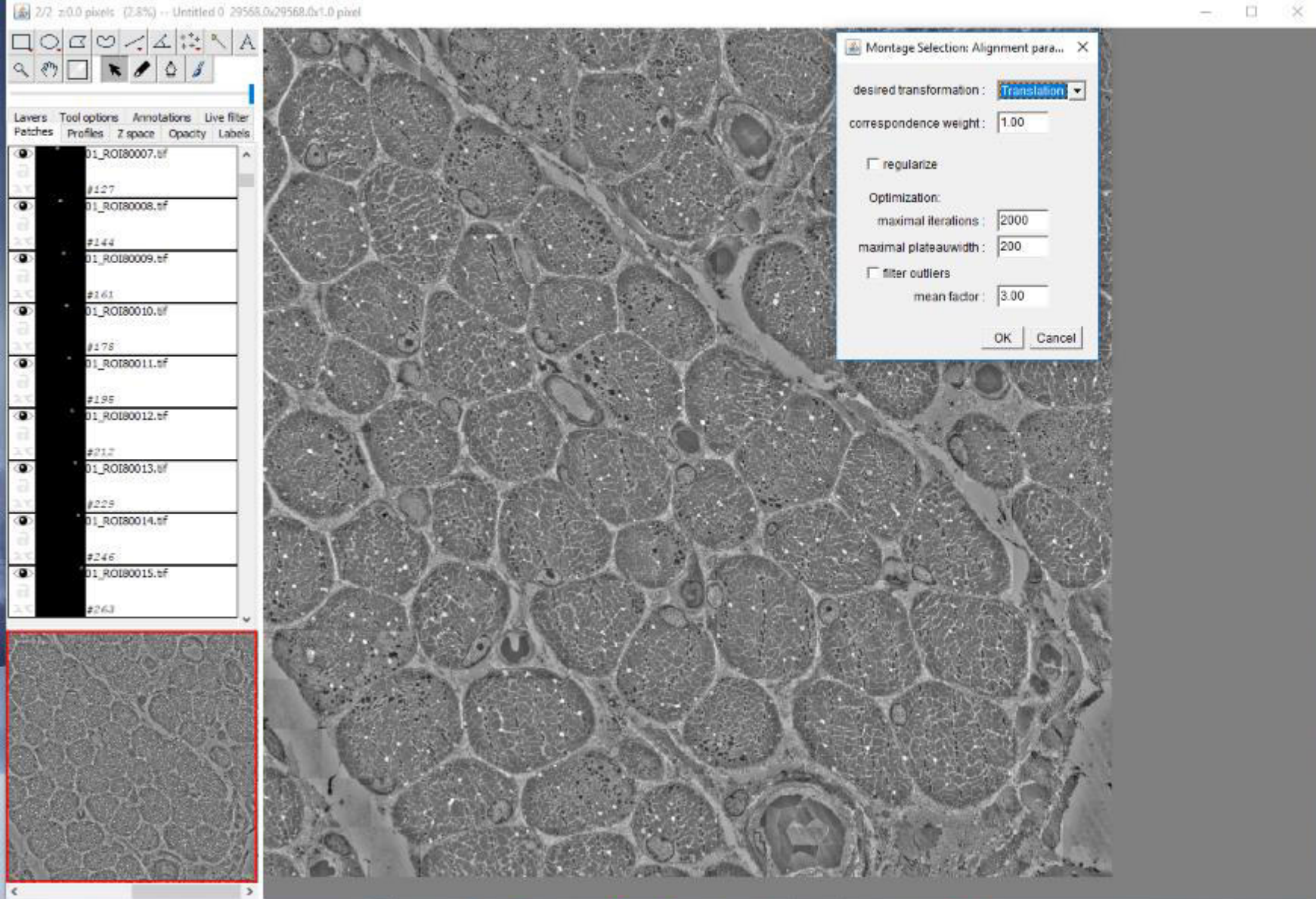
```
179. 8.27809362590816 60.30213913791472
180. 8.27597863115077 60.30213913791472
181. 8.273886878094011 60.30213913791472
182. 8.271817985726397 60.30213913791472
Model found for files '*02_LC80002.tif z=0.0 #307*' and '*02_LC80001.tif z=0.0 #303*'
correspondences 694 of 928
average residual error 9.690581311036881 px
took 2609 ms
183. 8.269771581319299 60.30213913791472
184. 8.267747300203089 60.30213913791472
185. 8.265744785550496 60.30213913791472
186. 8.263763688166913 60.30213913791472
187. 8.26180366628741 60.30213913791472
188. 8.259864385380178 60.30213913791472
189. 8.257945517956179 60.30213913791472
190. 8.256046743384788 60.30213913791472
191. 8.254167747715181 60.30213913791472
192. 8.252308223503292 60.30213913791472
193. 8.250467869644103 60.30213913791472
194. 8.24864639120911 60.30213913791472
195. 8.24684349928876 60.30213913791472
196. 8.245058910839683 60.30213913791472
197. 8.243292348536556 60.30213913791472
198. 8.241543540628436 60.30213913791472
199. 8.239812220799397 60.30213913791472
200. 8.238098128033332 60.30213913791472
201. 8.236401006482774 60.30213913791472
202. 8.23472060534158 60.30213913791472
203. 8.233056678721379 60.30213913791472
204. 8.231408985531619 60.30213913791472
205. 8.229777289363119 60.30213913791472
206. 8.22816135837499 60.30213913791472
Successfully optimized configuration of 16 tiles after 207 iterations:
average displacement: 7.895px
minimal displacement: 7.140px
maximal displacement: 9.380px
Montage done.
Using 0 images as reference.
```


3) Alignment of ROI and LC

Template: anything

Project Objects: Untitled 0 [project]

Layers: Top Level [layer set], 1: z=0.0 [layer], 2: z=0.0 [layer]



Montage Selection: Alignment para...

desired transformation: Translation

correspondence weight: 1.00

regularize

Optimization:

maximal iterations: 2000

maximal plateauwidth: 200

filter outliers

mean factor: 3.00

OK Cancel

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 10 seconds

Log

File Edit Font

```
179. 8.27809362590816 60.30213913791472
180. 8.27597863115077 60.30213913791472
181. 8.273886878094011 60.30213913791472
182. 8.271817985726397 60.30213913791472
Model found for files *02_LC80002.tif z=0.0 #307* and *02_LC80001.tif z=0.0 #303*
correspondences 694 of 928
average residual error 9.890581311036881 px
took 2609 ms
183. 8.269771581319299 60.30213913791472
184. 8.267747300203089 60.30213913791472
185. 8.265744785550496 60.30213913791472
186. 8.263763688166913 60.30213913791472
187. 8.26180366628741 60.30213913791472
188. 8.259864385390178 60.30213913791472
189. 8.257945517956179 60.30213913791472
190. 8.256046743384788 60.30213913791472
191. 8.254167747715181 60.30213913791472
192. 8.252308223503292 60.30213913791472
193. 8.250467869644103 60.30213913791472
194. 8.24864639120911 60.30213913791472
195. 8.24684349928876 60.30213913791472
196. 8.245058910839683 60.30213913791472
197. 8.243292348536556 60.30213913791472
198. 8.241543540628436 60.30213913791472
199. 8.239812220799397 60.30213913791472
200. 8.238098128033332 60.30213913791472
201. 8.236401006482774 60.30213913791472
202. 8.23472060534158 60.30213913791472
203. 8.233056678721379 60.30213913791472
204. 8.231408985531619 60.30213913791472
205. 8.229777289363119 60.30213913791472
206. 8.22816135837499 60.30213913791472
Successfully optimized configuration of 16 tiles after 207 iterations:
average displacement: 7.895px
minimal displacement: 7.140px
maximal displacement: 9.380px
Montage done.
Using 0 images as reference.
```


3) Alignment of ROI and LC

Template
● anything

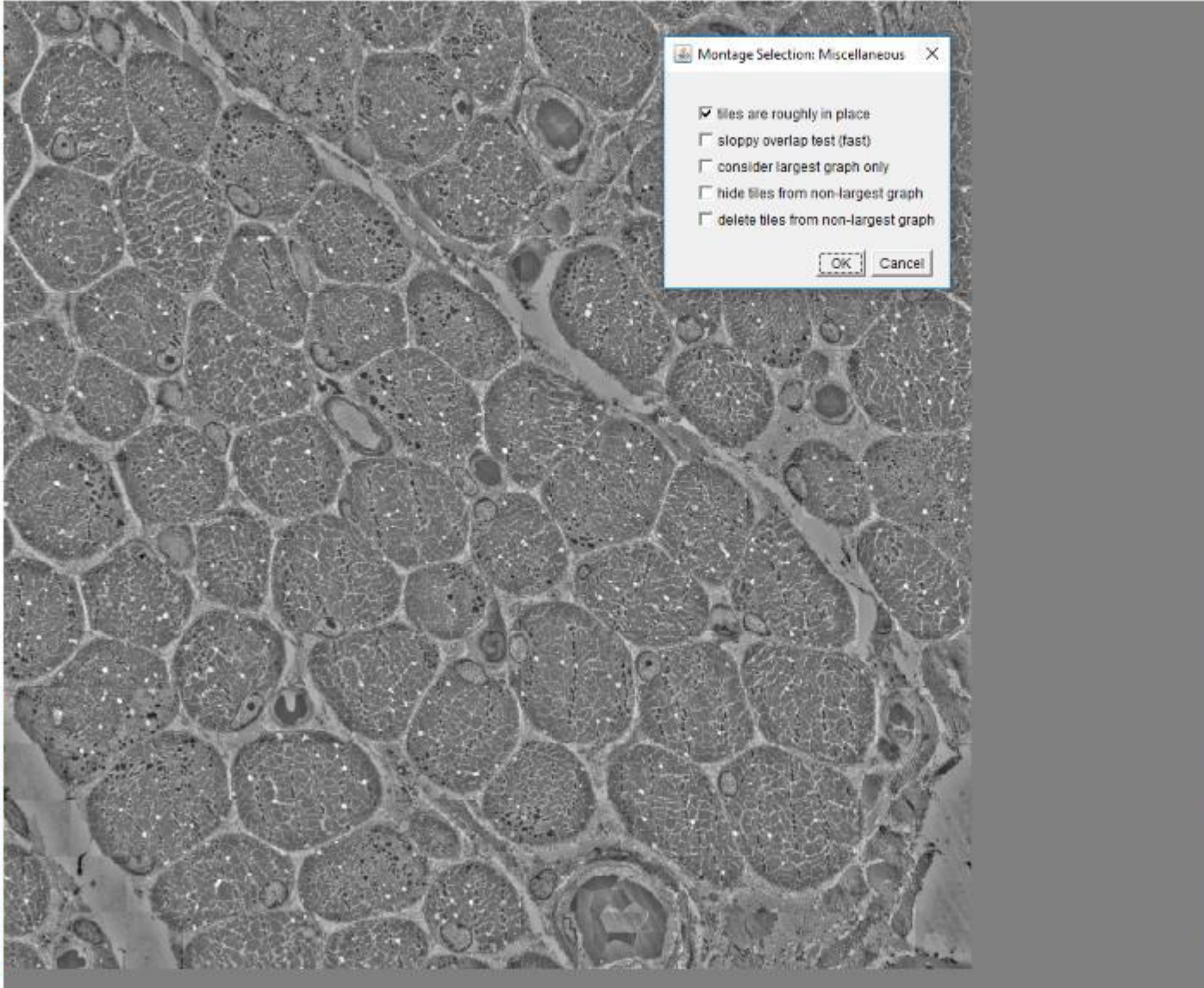
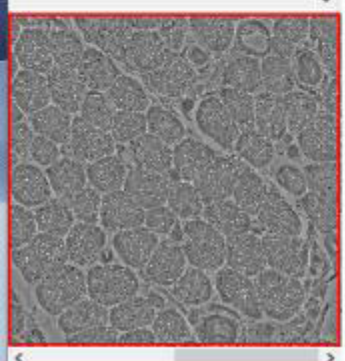
Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

2/2 z=0.0 pixels (2.8%) -- Untitled 0 29568.0x29568.0x1.0 pixel

Layers
Patches
Profiles
Z space
Opacity
Labels

- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144
- 01_ROI80009.tif
- #161
- 01_ROI80010.tif
- #178
- 01_ROI80011.tif
- #195
- 01_ROI80012.tif
- #212
- 01_ROI80013.tif
- #229
- 01_ROI80014.tif
- #246
- 01_ROI80015.tif
- #263



(Fiji Is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 11 seconds

Log

File Edit Font

```
179. 8.27809362590816 60.30213913791472
180. 8.27597863115077 60.30213913791472
181. 8.273886878094011 60.30213913791472
182. 8.271817985726397 60.30213913791472
Model found for files *02_LC80002.tif z=0.0 #307* and *02_LC80001.tif z=0.0 #303*
correspondences 694 of 928
average residual error 9.890581311036881 px
took 2609 ms
183. 8.269771581319299 60.30213913791472
184. 8.267747300203089 60.30213913791472
185. 8.265744785550496 60.30213913791472
186. 8.263763688166913 60.30213913791472
187. 8.26180366628741 60.30213913791472
188. 8.259864385390178 60.30213913791472
189. 8.257945517956179 60.30213913791472
190. 8.256046743384788 60.30213913791472
191. 8.254167747715181 60.30213913791472
192. 8.252308223503292 60.30213913791472
193. 8.250467869644103 60.30213913791472
194. 8.24864639120911 60.30213913791472
195. 8.24684349928876 60.30213913791472
196. 8.245058910839683 60.30213913791472
197. 8.243292348536556 60.30213913791472
198. 8.241543540628436 60.30213913791472
199. 8.239812220799397 60.30213913791472
200. 8.238098128033332 60.30213913791472
201. 8.236401006482774 60.30213913791472
202. 8.23472060534158 60.30213913791472
203. 8.233056678721379 60.30213913791472
204. 8.231408985531619 60.30213913791472
205. 8.229777289363119 60.30213913791472
206. 8.22816135837499 60.30213913791472
Successfully optimized configuration of 16 tiles after 207 iterations:
average displacement: 7.895px
minimal displacement: 7.140px
maximal displacement: 9.380px
Montage done.
Using 0 images as reference.
```

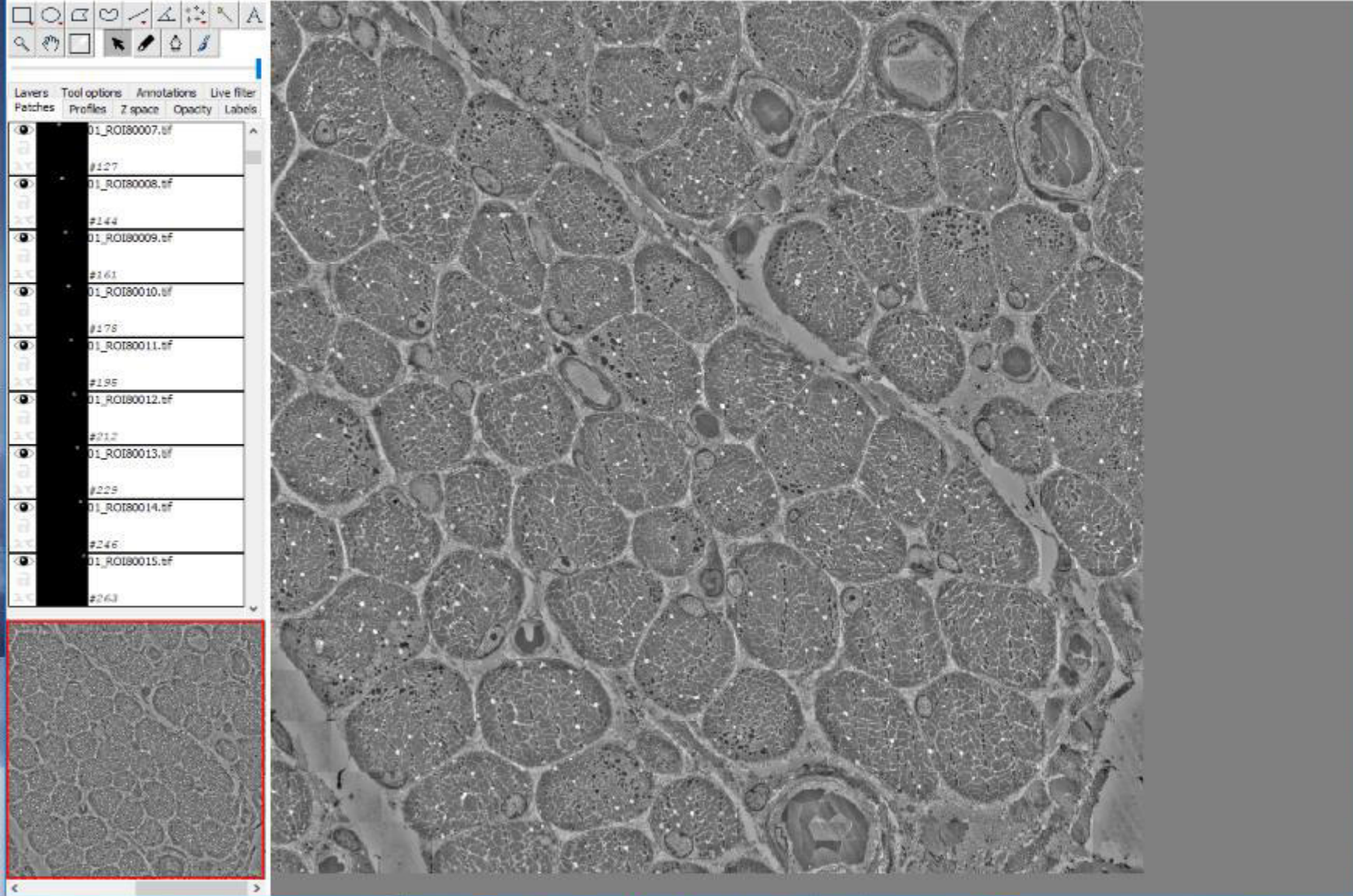

3) Alignment of ROI and LC

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

2/2 z=0.0 pixels (2.8%) -- Untitled 0 29568.0x29568.0x1.0 pixel



Layers Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels

- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144
- 01_ROI80009.tif
- #161
- 01_ROI80010.tif
- #178
- 01_ROI80011.tif
- #195
- 01_ROI80012.tif
- #212
- 01_ROI80013.tif
- #229
- 01_ROI80014.tif
- #246
- 01_ROI80015.tif
- #263

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 17 seconds

Log

File Edit Font

```
179. 8.27809362590816 60.30213913791472
180. 8.27597863115077 60.30213913791472
181. 8.273886878094011 60.30213913791472
182. 8.271817985726397 60.30213913791472
Model found for files *02_LC80002.tif z=0.0 #307* and *02_LC80001.tif z=0.0 #303*
correspondences 694 of 928
average residual error 9.690581311036881 px
took 2609 ms
183. 8.269771581319299 60.30213913791472
184. 8.267747300203089 60.30213913791472
185. 8.265744785550496 60.30213913791472
186. 8.263763688166913 60.30213913791472
187. 8.26180366628741 60.30213913791472
188. 8.259864385390178 60.30213913791472
189. 8.257945517956179 60.30213913791472
190. 8.256046743384788 60.30213913791472
191. 8.254167747715181 60.30213913791472
192. 8.252308223503292 60.30213913791472
193. 8.250467869644103 60.30213913791472
194. 8.24864639120911 60.30213913791472
195. 8.24684349928876 60.30213913791472
196. 8.245058910839683 60.30213913791472
197. 8.243292348536556 60.30213913791472
198. 8.241543540628436 60.30213913791472
199. 8.239812220799397 60.30213913791472
200. 8.238098128033332 60.30213913791472
201. 8.236401006482774 60.30213913791472
202. 8.23472060534158 60.30213913791472
203. 8.233056678721379 60.30213913791472
204. 8.231408985531619 60.30213913791472
205. 8.229777289363119 60.30213913791472
206. 8.22816135837499 60.30213913791472
Successfully optimized configuration of 16 tiles after 207 iterations:
average displacement: 7.895px
minimal displacement: 7.140px
maximal displacement: 9.380px
Montage done.
Using 0 images as reference.
```


3) Alignment of ROI and LC

Template
● anything

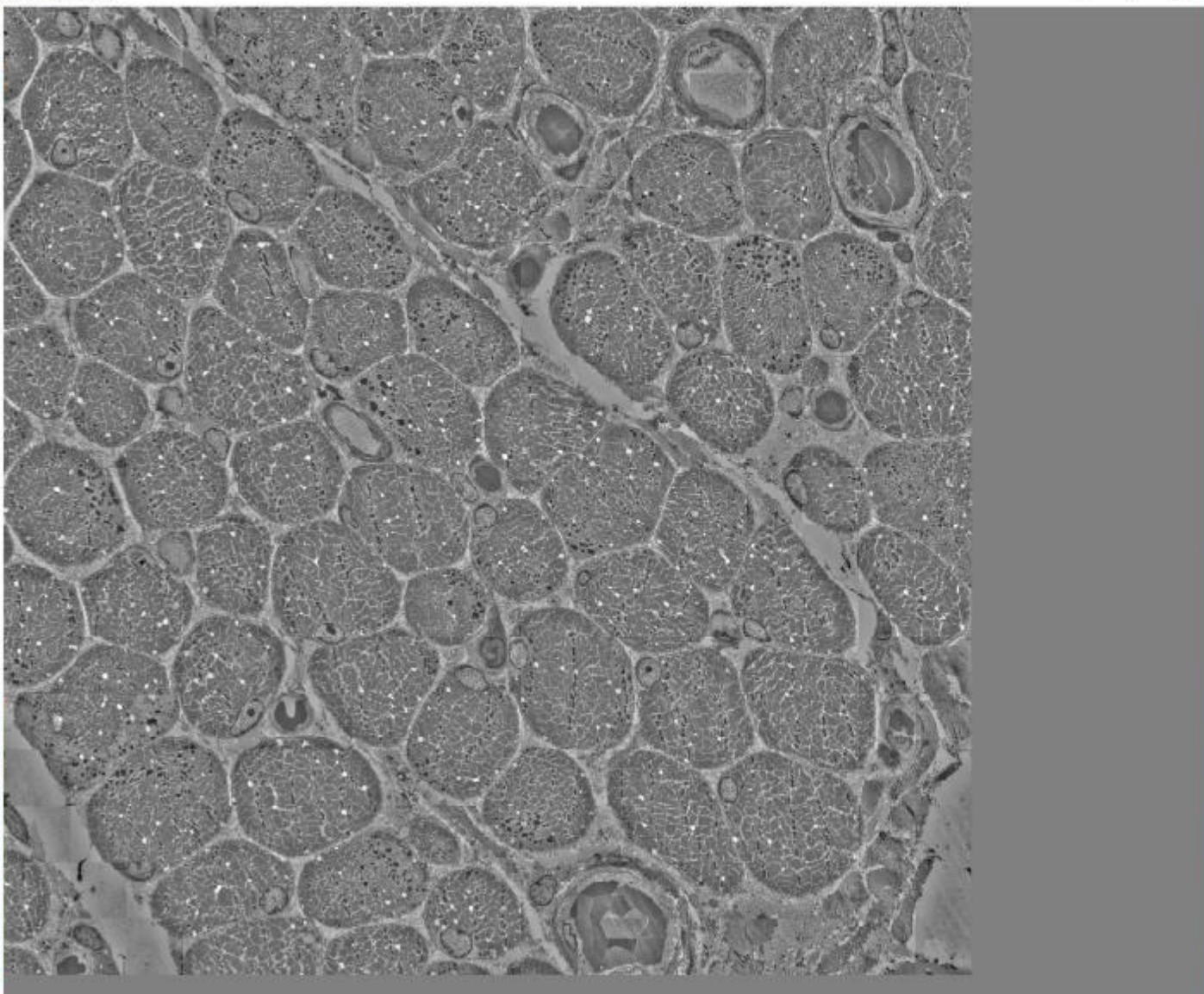
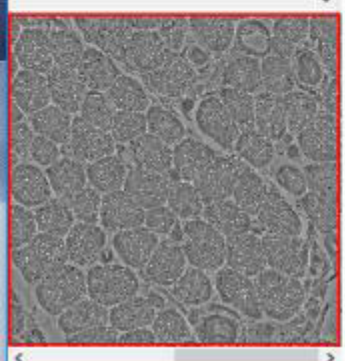
Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

2/2 z:0.0 pixels (2.8%) -- Untitled 0 29568.0x29568.0x1.0 pixel

Layers Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels

- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144
- 01_ROI80009.tif
- #161
- 01_ROI80010.tif
- #178
- 01_ROI80011.tif
- #195
- 01_ROI80012.tif
- #212
- 01_ROI80013.tif
- #229
- 01_ROI80014.tif
- #246
- 01_ROI80015.tif
- #263



(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 20 seconds

Log

File Edit Font

Successfully optimized configuration of 16 tiles after 207 iterations:
average displacement: 7.896px
minimal displacement: 7.140px
maximal displacement: 9.380px
Montage done.
Using 0 images as reference.
3631 features extracted in tile 12 "01_ROI80276.tif" (took 3546 ms).
5127 features extracted in tile 9 "01_ROI80279.tif" (took 3625 ms).
3690 features extracted in tile 13 "01_ROI80275.tif" (took 3640 ms).
4428 features extracted in tile 11 "01_ROI80277.tif" (took 3640 ms).
4203 features extracted in tile 28 "01_ROI80260.tif" (took 3671 ms).
2804 features extracted in tile 17 "01_ROI80271.tif" (took 3687 ms).
2437 features extracted in tile 14 "01_ROI80274.tif" (took 3718 ms).
3741 features extracted in tile 10 "01_ROI80278.tif" (took 3734 ms).
4860 features extracted in tile 7 "01_ROI80281.tif" (took 3750 ms).
4709 features extracted in tile 8 "01_ROI80280.tif" (took 3812 ms).
4107 features extracted in tile 15 "01_ROI80273.tif" (took 3828 ms).
3803 features extracted in tile 31 "01_ROI80257.tif" (took 3812 ms).
5551 features extracted in tile 20 "01_ROI80268.tif" (took 3875 ms).
6464 features extracted in tile 24 "01_ROI80264.tif" (took 3890 ms).
3707 features extracted in tile 5 "01_ROI80283.tif" (took 3906 ms).
2818 features extracted in tile 6 "01_ROI80282.tif" (took 3921 ms).
4551 features extracted in tile 25 "01_ROI80263.tif" (took 4125 ms).
4421 features extracted in tile 29 "01_ROI80259.tif" (took 4171 ms).
3039 features extracted in tile 30 "01_ROI80258.tif" (took 4234 ms).
4467 features extracted in tile 22 "01_ROI80266.tif" (took 4250 ms).
5491 features extracted in tile 21 "01_ROI80267.tif" (took 4250 ms).
6594 features extracted in tile 1 "01_ROI80287.tif" (took 4265 ms).
6365 features extracted in tile 18 "01_ROI80270.tif" (took 4437 ms).
2430 features extracted in tile 0 "01_ROI80288.tif" (took 4437 ms).
4791 features extracted in tile 16 "01_ROI80272.tif" (took 4453 ms).
5089 features extracted in tile 26 "01_ROI80262.tif" (took 4515 ms).
3742 features extracted in tile 27 "01_ROI80261.tif" (took 4546 ms).
6946 features extracted in tile 3 "01_ROI80285.tif" (took 4578 ms).
6132 features extracted in tile 4 "01_ROI80284.tif" (took 4718 ms).
5385 features extracted in tile 19 "01_ROI80269.tif" (took 4734 ms).
4073 features extracted in tile 23 "01_ROI80265.tif" (took 4750 ms).
7458 features extracted in tile 2 "01_ROI80286.tif" (took 5109 ms).

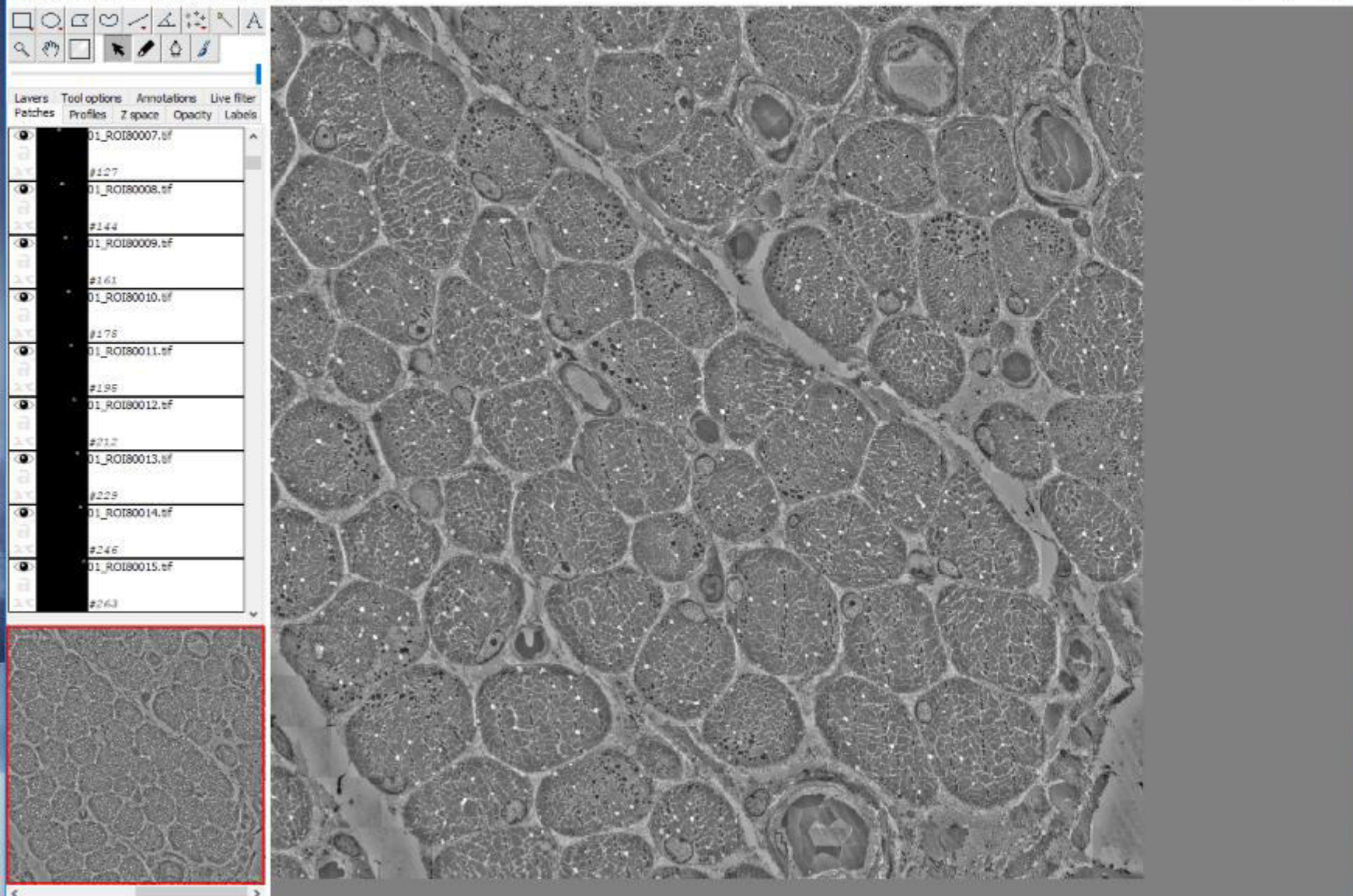
3) Alignment of ROI and LC

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

2/2 z=0.0 pixels (2.8%) -- Untitled 0 29568.0x29568.0x1.0 pixel



Layers
Patches Profiles Z space Opacity Labels

- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144
- 01_ROI80009.tif
- #161
- 01_ROI80010.tif
- #178
- 01_ROI80011.tif
- #195
- 01_ROI80012.tif
- #212
- 01_ROI80013.tif
- #229
- 01_ROI80014.tif
- #246
- 01_ROI80015.tif
- #263

(Fiji Is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 4' 36"

Log

File Edit Font

```
172. 37.19566486495603 89.00850813379758
173. 37.09326991280224 89.00850813379758
174. 36.99174734686101 89.00850813379758
175. 36.89100664843258 89.00850813379758
176. 36.791036329081386 89.00850813379758
177. 36.691905136666726 89.00850813379758
178. 36.59360853233147 89.00850813379758
179. 36.49607463020617 89.00850813379758
180. 36.39933657936719 89.00850813379758
181. 36.303343307951344 89.00850813379758
182. 36.20815265467391 89.00850813379758
183. 36.11369612648955 89.00850813379758
184. 36.01999299106979 89.00850813379758
185. 35.92702715078566 89.00850813379758
186. 35.834817769778816 89.00850813379758
187. 35.74338157378625 89.00850813379758
188. 35.65265658367984 89.00850813379758
189. 35.56266339148171 89.00850813379758
190. 35.473389989314796 89.00850813379758
191. 35.38483626431343 89.00850813379758
192. 35.296969402885175 89.00850813379758
193. 35.20975380329317 89.00850813379758
194. 35.12323164929965 89.00850813379758
195. 35.037367707167554 89.00850813379758
196. 34.95220150267441 89.00850813379758
197. 34.86771831111595 89.00850813379758
198. 34.78389347377455 89.00850813379758
199. 34.700681313880935 89.00850813379758
200. 34.61814064359026 89.00850813379758
201. 34.53621992430825 89.00850813379758
202. 34.45493702302032 89.00850813379758
203. 34.37425049222979 89.00850813379758
204. 34.29416944437982 89.00850813379758
205. 34.21471244269573 89.00850813379758
206. 34.135822851723866 89.00850813379758
207. 34.057555241367865 89.00850813379758
208. 33.97985498720809 89.00850813379758
209. 33.90273716402593 89.00850813379758
```


3) Alignment of ROI and LC

Template
● anything

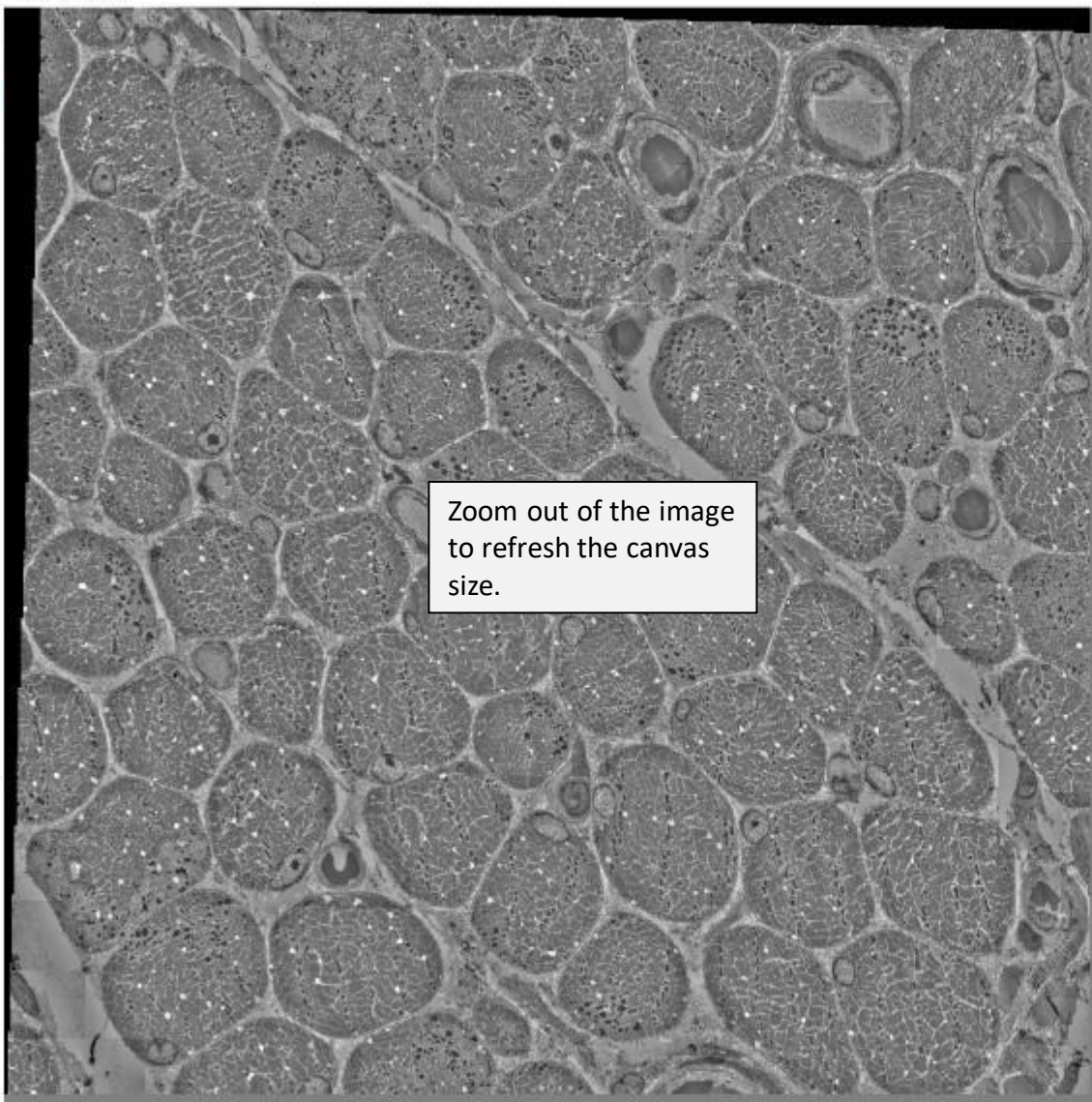
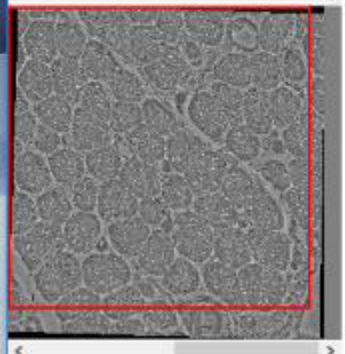
Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

2/2 z:0.0 pixels (2.8%) -- Untitled 0 30886.0x32532.0x1.0 pixel

Layers Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels

- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144
- 01_ROI80009.tif
- #161
- 01_ROI80010.tif
- #178
- 01_ROI80011.tif
- #195
- 01_ROI80012.tif
- #212
- 01_ROI80013.tif
- #229
- 01_ROI80014.tif
- #246
- 01_ROI80015.tif
- #263



Zoom out of the image to refresh the canvas size.

(Fiji Is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Creating bucket 30720,30720,166,1812

Log

File Edit Font

```
646: 21 94806209222424 89.00850813379758
647: 21 93883120619108 89.00850813379758
648: 21 929626720570644 89.00850813379758
649: 21 92045454417951 89.00850813379758
650: 21 9113085142891 89.00850813379758
651: 21 902190495379468 89.00850813379758
652: 21 893100332266332 89.00850813379758
653: 21 88403793834698 89.00850813379758
654: 21 8750031770481 89.00850813379758
655: 21 86599586987444 89.00850813379758
656: 21 857015897618336 89.00850813379758
657: 21 84806331514934 89.00850813379758
658: 21 839137786997362 89.00850813379758
659: 21 830239259843506 89.00850813379758
660: 21 821367675317283 89.00850813379758
661: 21 8125227648115 89.00850813379758
662: 21 803704581382263 89.00850813379758
663: 21 794912963702963 89.00850813379758
664: 21 786147669415282 89.00850813379758
665: 21 77740871238826 89.00850813379758
666: 21 76869589238395 89.00850813379758
667: 21 76000911055796 89.00850813379758
668: 21 751348302564644 89.00850813379758
669: 21 742713347713135 89.00850813379758
670: 21 73410406902835 89.00850813379758
671: 21 725520366150892 89.00850813379758
672: 21 716962129851503 89.00850813379758
673: 21 70842923923725 89.00850813379758
674: 21 699921644388894 89.00850813379758
675: 21 69143912566002 89.00850813379758
676: 21 68298164453311 89.00850813379758
677: 21 6745490948582 89.00850813379758
678: 21 66614135805232 89.00850813379758
```

Successfully optimized configuration of 289 tiles after 679 iterations:
average displacement: 15.966px
minimal displacement: 9.368px
maximal displacement: 37.504px
Montage done.

3) Alignment of ROI and LC

Template
● anything

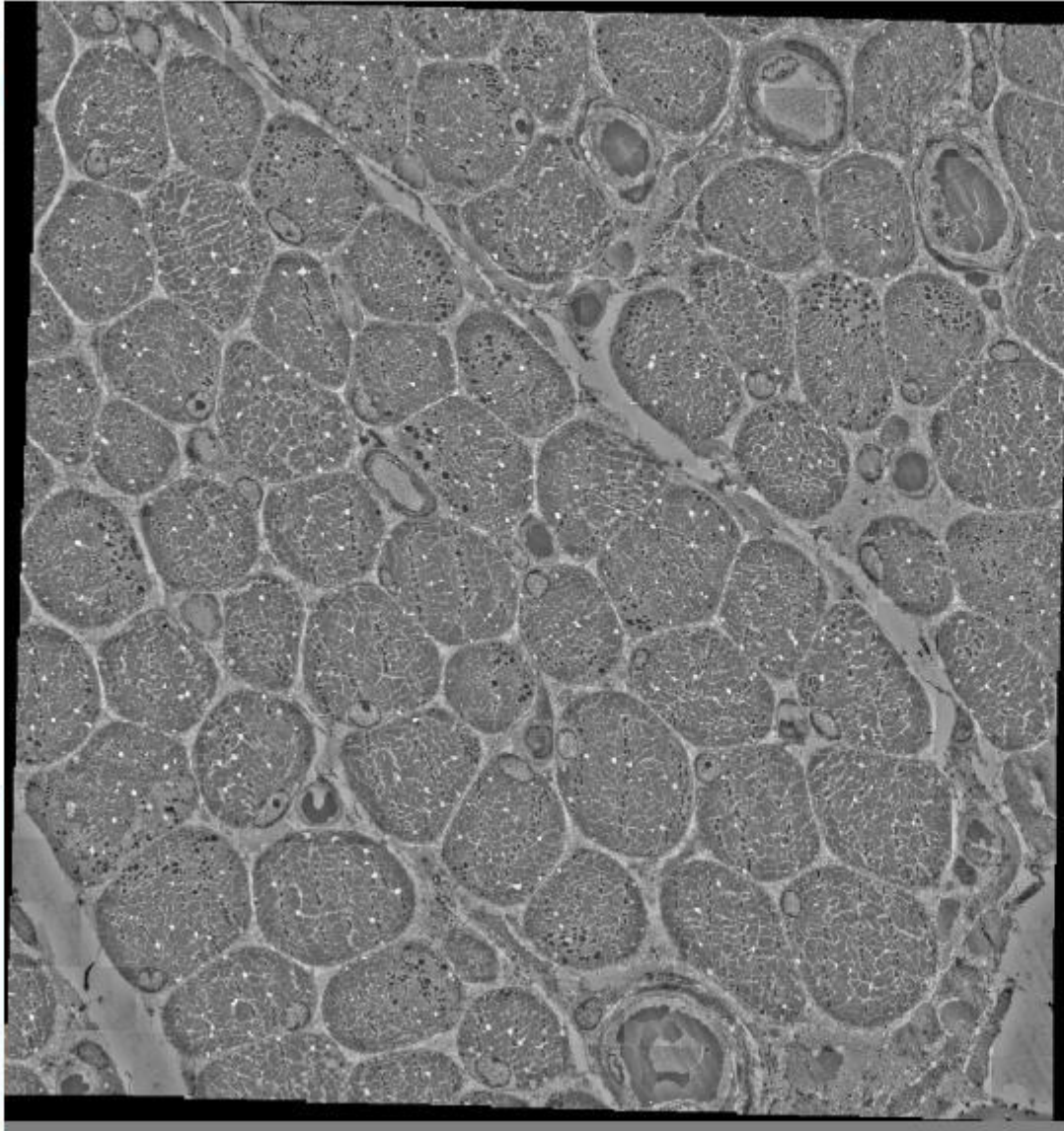
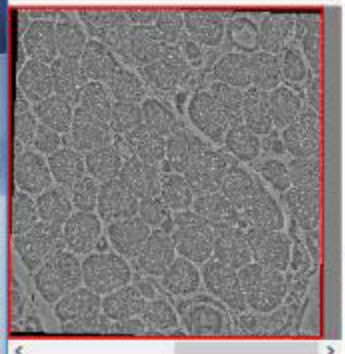
Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

2/2 z=0.0 pixels (2.6%) -- Untitled 0 30886.0x32532.0x1.0 pixel

Layers Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels

- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144
- 01_ROI80009.tif
- #161
- 01_ROI80010.tif
- #178
- 01_ROI80011.tif
- #195
- 01_ROI80012.tif
- #212
- 01_ROI80013.tif
- #229
- 01_ROI80014.tif
- #246
- 01_ROI80015.tif
- #263



(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=32144 pixel, y=1605 pixel

Log

File Edit Font

```
646: 21 948062209222424 89.00850813379758
647: 21 93883120619108 89.00850813379758
648: 21 929626720570644 89.00850813379758
649: 21 92045454417951 89.00850813379758
650: 21 9113085142891 89.00850813379758
651: 21 902190495379468 89.00850813379758
652: 21 893100332266332 89.00850813379758
653: 21 88403793834698 89.00850813379758
654: 21 8750031770481 89.00850813379758
655: 21 86599586987444 89.00850813379758
656: 21 857015897618336 89.00850813379758
657: 21 84806331514934 89.00850813379758
658: 21 839137786997362 89.00850813379758
659: 21 830239259843506 89.00850813379758
660: 21 821367675317283 89.00850813379758
661: 21 8125227648115 89.00850813379758
662: 21 803704581382263 89.00850813379758
663: 21 794912963702963 89.00850813379758
664: 21 786147669415282 89.00850813379758
665: 21 77740871238826 89.00850813379758
666: 21 76869589238395 89.00850813379758
667: 21 76000911055796 89.00850813379758
668: 21 751348302564644 89.00850813379758
669: 21 742713347713135 89.00850813379758
670: 21 73410406902835 89.00850813379758
671: 21 725520366150892 89.00850813379758
672: 21 716962129851503 89.00850813379758
673: 21 70842923923725 89.00850813379758
674: 21 699921644388894 89.00850813379758
675: 21 69143912566002 89.00850813379758
676: 21 68298164453311 89.00850813379758
677: 21 6745490948582 89.00850813379758
678: 21 66614135805232 89.00850813379758
```

Successfully optimized configuration of 289 tiles after 679 iterations:
average displacement: 15.966px
minimal displacement: 9.368px
maximal displacement: 37.504px
Montage done.

4) Lens correction

The screenshot shows the 'Project Objects' panel with 'Untitled 0 [project]' selected. The 'Layers' panel shows a 'Top Level [layer set]' containing two layers: '1: z=0.0 [layer]' (selected) and '2: z=0.0 [layer]'.

The main image window displays a tiled image of a galaxy field. A white border is visible around the central tile, indicating it is the active image. The status bar at the top of the window reads '1/2 z=0.0 pixels (2.6%) -- Untitled 0 30886.0x32532.0x1.0 pixel'.

Activate one of the images in the center that overlaps with the neighboring images by left clicking on it (here; image 10/16) -> white image borders.

The screenshot shows the Fiji toolbar with various tools. The status bar at the bottom of the toolbar indicates 'x=4548 pixel, y=4548 pixel, value=108 [Patch #309]'.

The Log window displays the following text:

```
646: 21.94806209222424 89.00850813379758  
647: 21.93893120619108 89.00850813379758  
648: 21.929626720570644 89.00850813379758  
649: 21.92045454417951 89.00850813379758  
650: 21.9113085142891 89.00850813379758  
651: 21.902190495379468 89.00850813379758  
652: 21.893100332266332 89.00850813379758  
653: 21.88403793834698 89.00850813379758  
654: 21.8750031770481 89.00850813379758  
655: 21.86599586987444 89.00850813379758  
656: 21.857015897618336 89.00850813379758  
657: 21.84806331514934 89.00850813379758  
658: 21.839137786997362 89.00850813379758  
659: 21.830239259843506 89.00850813379758  
660: 21.821367675317283 89.00850813379758  
661: 21.8125227648115 89.00850813379758  
662: 21.803704581382263 89.00850813379758  
663: 21.794912963702963 89.00850813379758  
664: 21.786147669415282 89.00850813379758  
665: 21.77740871238826 89.00850813379758  
666: 21.76869589238395 89.00850813379758  
667: 21.76000911055796 89.00850813379758  
668: 21.751348302564644 89.00850813379758  
669: 21.742713347713135 89.00850813379758  
670: 21.73410406902835 89.00850813379758  
671: 21.725520366150892 89.00850813379758  
672: 21.716962129851503 89.00850813379758  
673: 21.70842923923725 89.00850813379758  
674: 21.699921644388894 89.00850813379758  
675: 21.69143912566002 89.00850813379758  
676: 21.68298164453311 89.00850813379758  
677: 21.6745490948582 89.00850813379758  
678: 21.66614135805232 89.00850813379758  
Successfully optimized configuration of 289 tiles after 679 iterations:  
average displacement: 15.966px  
minimal displacement: 9.368px  
maximal displacement: 37.504px  
Montage done.
```


4) Lens correction

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

1/2 z=0.0 pixels (2.6%) -- Untitled 0 30886.0x32532.0x1.0 pixel

Layers: 02_iCB0007.tif, #312, 02_iCB0008.tif, #301, 02_iCB0009.tif, #305, 02_iCB0010.tif, #308, 02_iCB0011.tif, #313, 02_iCB0012.tif, #302, 02_iCB0013.tif, #306, 02_iCB0014.tif, #310, 02_iCB0015.tif, #314

Press „ctrl a“ to add all other images -> red image borders.

(Fiji Is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=4548 pixel, y=4548 pixel, value=108 [Patch #309]

Log

File Edit Font

```
646: 21.94806209222424 89.00850813379758
647: 21.93893120619108 89.00850813379758
648: 21.929626720570644 89.00850813379758
649: 21.92045454417951 89.00850813379758
650: 21.9113085142891 89.00850813379758
651: 21.902190495379468 89.00850813379758
652: 21.893100332266332 89.00850813379758
653: 21.88403793834698 89.00850813379758
654: 21.8750031770481 89.00850813379758
655: 21.86599586987444 89.00850813379758
656: 21.857015897618336 89.00850813379758
657: 21.84806331514934 89.00850813379758
658: 21.839137786997362 89.00850813379758
659: 21.830239259843506 89.00850813379758
660: 21.821367675317283 89.00850813379758
661: 21.8125227648115 89.00850813379758
662: 21.803704581382263 89.00850813379758
663: 21.794912963702963 89.00850813379758
664: 21.786147669415282 89.00850813379758
665: 21.77740871238826 89.00850813379758
666: 21.76869589238395 89.00850813379758
667: 21.76000911055796 89.00850813379758
668: 21.751348302564644 89.00850813379758
669: 21.742713347713135 89.00850813379758
670: 21.73410406902835 89.00850813379758
671: 21.725520366150892 89.00850813379758
672: 21.716962129851503 89.00850813379758
673: 21.70842923923725 89.00850813379758
674: 21.699921644388894 89.00850813379758
675: 21.69143912566002 89.00850813379758
676: 21.68298164453311 89.00850813379758
677: 21.6745490948582 89.00850813379758
678: 21.66614135805232 89.00850813379758
Successfully optimized configuration of 289 tiles after 679 iterations:
average displacement: 15.966px
minimal displacement: 9.368px
maximal displacement: 37.504px
Montage done.
```


4) Lens correction

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

1/2 z=0.0 pixels (2.6%) -- Untitled 0 30886.0x32532.0x1.0 pixel

Layers Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels

- 02_iCB0007.tif
- #312
- 02_iCB0008.tif
- #301
- 02_iCB0009.tif
- #305
- 02_iCB0010.tif
- #308
- 02_iCB0011.tif
- #313
- 02_iCB0012.tif
- #302
- 02_iCB0013.tif
- #306
- 02_iCB0014.tif
- #310
- 02_iCB0015.tif
- #314



Context menu for the selected patch:

- Patch
 - Fill ROI in alpha mask F
 - Fill inverse ROI in alpha mask Umschalt+F
 - Remove alpha mask
 - Unlink from images
 - Snap
 - Montage
 - Lens correction**
 - Blend
 - Open image Umschalt+D
 - View volume
 - View orthoslices
- Duplicate
- Color...
- Lock
- Move
- Delete...
- Revert
- Properties...
- Show centered
- Send to previous layer
- Send to next layer
- Send linked group to...
- Undo Strg+Z
- Redo Strg+Umschalt+Z
- Hide/Unhide
- Plugins
- Align
- Transform
- Link
- Adjust images
- Script
- Import
- Export
- Display
- Project
- Selection
- Tool
- Search... Strg+F

(Fiji Is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=14486 pixel, y=5847 pixel

Log

File Edit Font

```
646: 21 94806209222424 89.00850813379758
647: 21 93883120619108 89.00850813379758
648: 21 929626720570644 89.00850813379758
649: 21 92045454417951 89.00850813379758
650: 21 9113085142891 89.00850813379758
651: 21 902190495379468 89.00850813379758
652: 21 893100332266332 89.00850813379758
653: 21 88403793834698 89.00850813379758
654: 21 8750031770481 89.00850813379758
655: 21 86599586987444 89.00850813379758
656: 21 857015897618336 89.00850813379758
657: 21 84806331514934 89.00850813379758
658: 21 839137786997362 89.00850813379758
659: 21 830239259843506 89.00850813379758
660: 21 821367675317283 89.00850813379758
661: 21 8125227648115 89.00850813379758
662: 21 803704581382263 89.00850813379758
663: 21 794912963702963 89.00850813379758
664: 21 786147669415282 89.00850813379758
665: 21 77740871238826 89.00850813379758
666: 21 76869589238395 89.00850813379758
667: 21 76000911055796 89.00850813379758
668: 21 751348302564644 89.00850813379758
669: 21 742713347713135 89.00850813379758
670: 21 73410406902835 89.00850813379758
671: 21 725520366150892 89.00850813379758
672: 21 716962129851503 89.00850813379758
673: 21 70842923923725 89.00850813379758
674: 21 699921644388894 89.00850813379758
675: 21 69143912566002 89.00850813379758
676: 21 68298164453311 89.00850813379758
677: 21 6745490948582 89.00850813379758
678: 21 66614135805232 89.00850813379758
Successfully optimized configuration of 289 tiles after 679 iterations:
average displacement: 15.966px
minimal displacement: 9.368px
maximal displacement: 37.504px
Montage done.
```

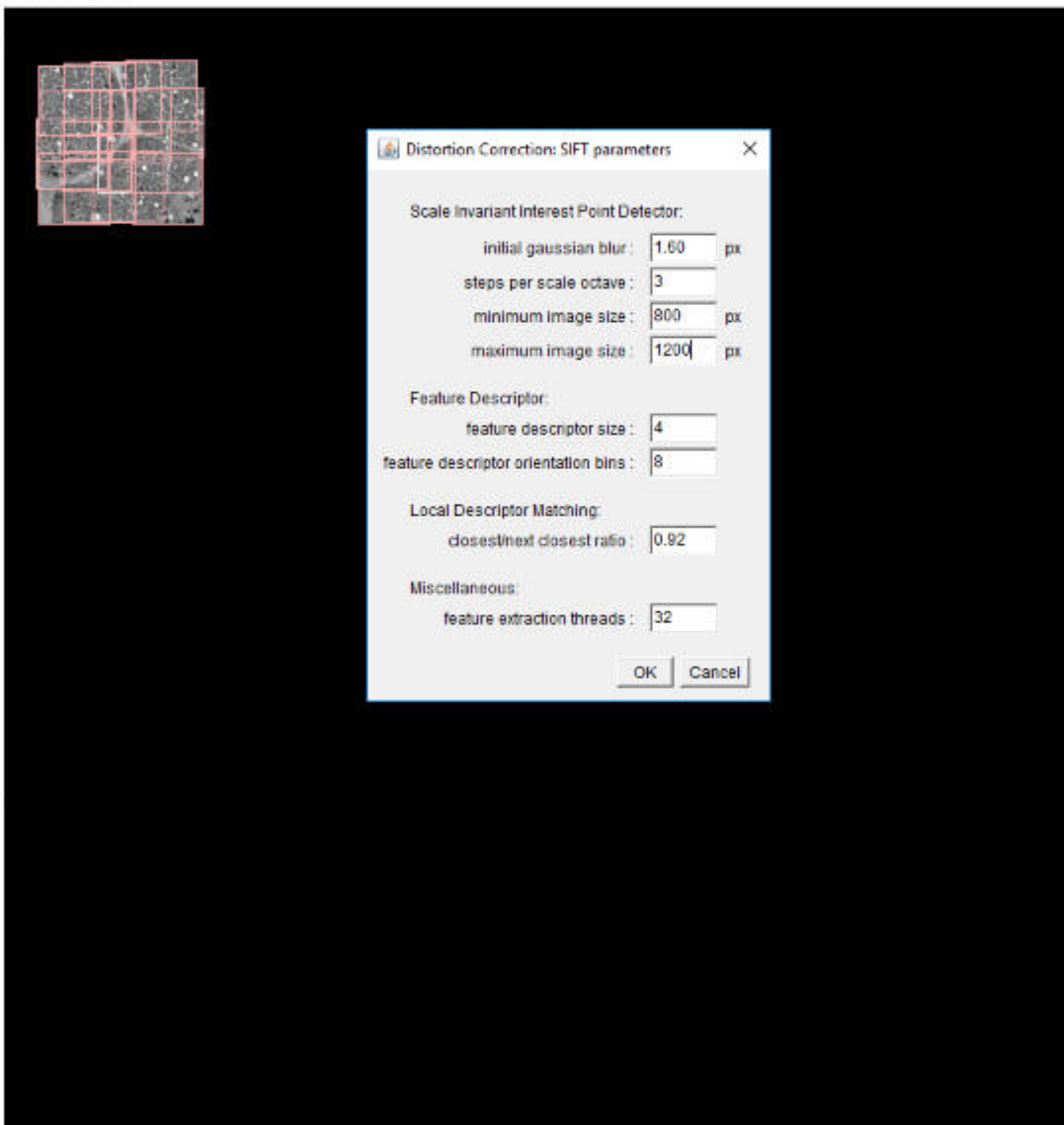
4) Lens correction

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

1/2 z=0.0 pixels (2.6%) -- Untitled 0 30886.0x32532.0x1.0 pixel



Layers
Patches Profiles Z space Opacity Labels

- 02_iCB0007.tif
- #312
- 02_iCB0008.tif
- #301
- 02_iCB0009.tif
- #305
- 02_iCB0010.tif
- #308
- 02_iCB0011.tif
- #313
- 02_iCB0012.tif
- #302
- 02_iCB0013.tif
- #306
- 02_iCB0014.tif
- #310
- 02_iCB0015.tif
- #314

Distortion Correction: SIFT parameters

Scale Invariant Interest Point Detector:

- initial gaussian blur: 1.60 px
- steps per scale octave: 3
- minimum image size: 800 px
- maximum image size: 1200 px

Feature Descriptor:

- feature descriptor size: 4
- feature descriptor orientation bins: 8

Local Descriptor Matching:

- closest/next closest ratio: 0.92

Miscellaneous:

- feature extraction threads: 32

OK Cancel

(Fiji Is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Lens correction - 7 seconds

Log

File Edit Font

```
646: 21.94806209222424 89.00850813379758
647: 21.93893120619108 89.00850813379758
648: 21.929626720570644 89.00850813379758
649: 21.92045454417951 89.00850813379758
650: 21.9113085142891 89.00850813379758
651: 21.902190495379468 89.00850813379758
652: 21.893100332266332 89.00850813379758
653: 21.88403793834698 89.00850813379758
654: 21.8750031770481 89.00850813379758
655: 21.86599586987444 89.00850813379758
656: 21.857015897618336 89.00850813379758
657: 21.84806331514934 89.00850813379758
658: 21.839137786997362 89.00850813379758
659: 21.830239259843506 89.00850813379758
660: 21.821367675317283 89.00850813379758
661: 21.8125227648115 89.00850813379758
662: 21.803704581382263 89.00850813379758
663: 21.794912963702963 89.00850813379758
664: 21.786147669415282 89.00850813379758
665: 21.77740871238826 89.00850813379758
666: 21.76869589238395 89.00850813379758
667: 21.76000911055796 89.00850813379758
668: 21.751348302564644 89.00850813379758
669: 21.742713347713135 89.00850813379758
670: 21.73410406902835 89.00850813379758
671: 21.725520366150892 89.00850813379758
672: 21.716962129851503 89.00850813379758
673: 21.70842923923725 89.00850813379758
674: 21.699921644388894 89.00850813379758
675: 21.69143912566002 89.00850813379758
676: 21.68298164453311 89.00850813379758
677: 21.6745490948582 89.00850813379758
678: 21.66614135805232 89.00850813379758
Successfully optimized configuration of 289 tiles after 679 iterations:
average displacement: 15.966px
minimal displacement: 9.368px
maximal displacement: 37.504px
Montage done.
```


4) Lens correction

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

1/2 z=0.0 pixels (2.6%) -- Untitled 0 30886.0x32532.0x1.0 pixel

Layers: Tool options Annotations Live filter Patches Profiles Z space Opacity Labels

- 02_iCB0007.tif
- #312
- 02_iCB0008.tif
- #301
- 02_iCB0009.tif
- #305
- 02_iCB0010.tif
- #308
- 02_iCB0011.tif
- #313
- 02_iCB0012.tif
- #302
- 02_iCB0013.tif
- #306
- 02_iCB0014.tif
- #310
- 02_iCB0015.tif
- #314

Distortion Correction: Geometric filters

maximal alignment error: 32.00 px
minimal inlier ratio: 0.00
minimal number of inliers: 5
expected transformation: Rigid

test multiple hypotheses
 ignore constant background
tolerance: 5.00 px
 (files are roughly in place)

OK Cancel

(Fiji Is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Lens correction - 15 seconds

Log

File Edit Font

```
646: 21 94806209222424 89.00850813379758
647: 21 93893120619108 89.00850813379758
648: 21 929626720570644 89.00850813379758
649: 21 92045454417951 89.00850813379758
650: 21 9113085142891 89.00850813379758
651: 21 902190495379468 89.00850813379758
652: 21 893100332266332 89.00850813379758
653: 21 88403793834698 89.00850813379758
654: 21 8750031770481 89.00850813379758
655: 21 86599586987444 89.00850813379758
656: 21 857015897618336 89.00850813379758
657: 21 84806331514934 89.00850813379758
658: 21 839137786997362 89.00850813379758
659: 21 830239259843506 89.00850813379758
660: 21 821367675317283 89.00850813379758
661: 21 8125227648115 89.00850813379758
662: 21 803704581382263 89.00850813379758
663: 21 794912963702963 89.00850813379758
664: 21 786147669415282 89.00850813379758
665: 21 77740871238826 89.00850813379758
666: 21 76869589238395 89.00850813379758
667: 21 76000911055796 89.00850813379758
668: 21 751348302564644 89.00850813379758
669: 21 742713347713135 89.00850813379758
670: 21 73410406902835 89.00850813379758
671: 21 725520366150892 89.00850813379758
672: 21 716962129851503 89.00850813379758
673: 21 70842923923725 89.00850813379758
674: 21 699921644388894 89.00850813379758
675: 21 69143912566002 89.00850813379758
676: 21 68298164453311 89.00850813379758
677: 21 6745490948582 89.00850813379758
678: 21 66614135805232 89.00850813379758
Successfully optimized configuration of 289 tiles after 679 iterations:
average displacement: 15.966px
minimal displacement: 9.368px
maximal displacement: 37.504px
Montage done.
```

4) Lens correction

Project Objects: Untitled 0 [project]

Layers: Top Level [layer set], 1: z=0.0 [layer], 2: z=0.0 [layer]

1/2 z=0.0 pixels (2.6%) -- Untitled 0 30886.0x32532.0x1.0 pixel

Layers: 02_IC80007.tif, #312, 02_IC80008.tif, #301, 02_IC80009.tif, #305, 02_IC80010.tif, #308, 02_IC80011.tif, #313, 02_IC80012.tif, #302, 02_IC80013.tif, #306, 02_IC80014.tif, #310, 02_IC80015.tif, #314

Distortion Correction: Montage Op... X

desired transformation: Translation

regularize model

Optimization:

maximal iterations: 2000

maximal plateauwidth: 200

OK Cancel

(Fiji Is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Lens correction - 19 seconds

Log

File Edit Font

```
646: 21.94806209222424 89.00850813379758
647: 21.93893120619108 89.00850813379758
648: 21.929626720570644 89.00850813379758
649: 21.92045454417951 89.00850813379758
650: 21.9113085142891 89.00850813379758
651: 21.902190495379468 89.00850813379758
652: 21.893100332266332 89.00850813379758
653: 21.88403793834698 89.00850813379758
654: 21.8750031770481 89.00850813379758
655: 21.86599586987444 89.00850813379758
656: 21.857015897618336 89.00850813379758
657: 21.84806331514934 89.00850813379758
658: 21.839137786997362 89.00850813379758
659: 21.830239259843506 89.00850813379758
660: 21.821367675317283 89.00850813379758
661: 21.8125227648115 89.00850813379758
662: 21.803704581382263 89.00850813379758
663: 21.794912963702963 89.00850813379758
664: 21.786147669415282 89.00850813379758
665: 21.77740871238826 89.00850813379758
666: 21.76869589238395 89.00850813379758
667: 21.76000911055796 89.00850813379758
668: 21.751348302564644 89.00850813379758
669: 21.742713347713135 89.00850813379758
670: 21.73410406902835 89.00850813379758
671: 21.725520366150892 89.00850813379758
672: 21.716962129851503 89.00850813379758
673: 21.70842923923725 89.00850813379758
674: 21.699921644388894 89.00850813379758
675: 21.69143912566002 89.00850813379758
676: 21.68298164453311 89.00850813379758
677: 21.6745490948582 89.00850813379758
678: 21.66614135805232 89.00850813379758
Successfully optimized configuration of 289 tiles after 679 iterations:
average displacement: 15.966px
minimal displacement: 9.368px
maximal displacement: 37.504px
Montage done.
```


4) Lens correction

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

1/2 z=0.0 pixels (2.6%) -- Untitled 0 30886.0x32532.0x1.0 pixel

Layers
Tool options
Annotations
Live filter
Patches
Profiles
Z space
Opacity
Labels

- 02_iCB0007.tif
- #312
- 02_iCB0008.tif
- #301
- 02_iCB0009.tif
- #305
- 02_iCB0010.tif
- #308
- 02_iCB0011.tif
- #313
- 02_iCB0012.tif
- #302
- 02_iCB0013.tif
- #306
- 02_iCB0014.tif
- #310
- 02_iCB0015.tif
- #314

Distortion Correction: Lens Distortion

Lens Model

power of polynomial kernel: 5

lambda: 0.01000

Apply Distortion Correction:

Start: 1: z=0.0 [layer]

End: 2: z=0.0 [layer]

clear present transforms

visualize distortion model

OK Cancel

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Lens correction - 27 seconds

Log

File Edit Font

```
646: 21.94806209222424 89.00850813379758
647: 21.93893120619108 89.00850813379758
648: 21.929626720570644 89.00850813379758
649: 21.92045454417951 89.00850813379758
650: 21.9113085142891 89.00850813379758
651: 21.902190495379468 89.00850813379758
652: 21.893100332266332 89.00850813379758
653: 21.88403793834698 89.00850813379758
654: 21.8750031770481 89.00850813379758
655: 21.86599586987444 89.00850813379758
656: 21.857015897618336 89.00850813379758
657: 21.84806331514934 89.00850813379758
658: 21.839137786997362 89.00850813379758
659: 21.830239259843506 89.00850813379758
660: 21.821367675317283 89.00850813379758
661: 21.8125227648115 89.00850813379758
662: 21.803704581382263 89.00850813379758
663: 21.794912963702963 89.00850813379758
664: 21.786147669415282 89.00850813379758
665: 21.77740871238826 89.00850813379758
666: 21.76869589238395 89.00850813379758
667: 21.76000911055796 89.00850813379758
668: 21.751348302564644 89.00850813379758
669: 21.742713347713135 89.00850813379758
670: 21.73410406902835 89.00850813379758
671: 21.725520366150892 89.00850813379758
672: 21.716962129851503 89.00850813379758
673: 21.70842923923725 89.00850813379758
674: 21.699921644388894 89.00850813379758
675: 21.69143912566002 89.00850813379758
676: 21.68298164453311 89.00850813379758
677: 21.6745490948582 89.00850813379758
678: 21.66614135805232 89.00850813379758
```

Successfully optimized configuration of 289 tiles after 679 iterations:
average displacement: 15.966px
minimal displacement: 9.368px
maximal displacement: 37.504px
Montage done.

4) Lens correction

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

1/2 z=0.0 pixels (2.6%) -- Untitled 0 30886.0x32532.0x1.0 pixel

Layers: Tool options Annotations Live filter Patches Profiles Z space Opacity Labels

- 02_iCB0007.tif
- #312
- 02_iCB0008.tif
- #301
- 02_iCB0009.tif
- #305
- 02_iCB0010.tif
- #308
- 02_iCB0011.tif
- #313
- 02_iCB0012.tif
- #302
- 02_iCB0013.tif
- #306
- 02_iCB0014.tif
- #310
- 02_iCB0015.tif
- #314

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

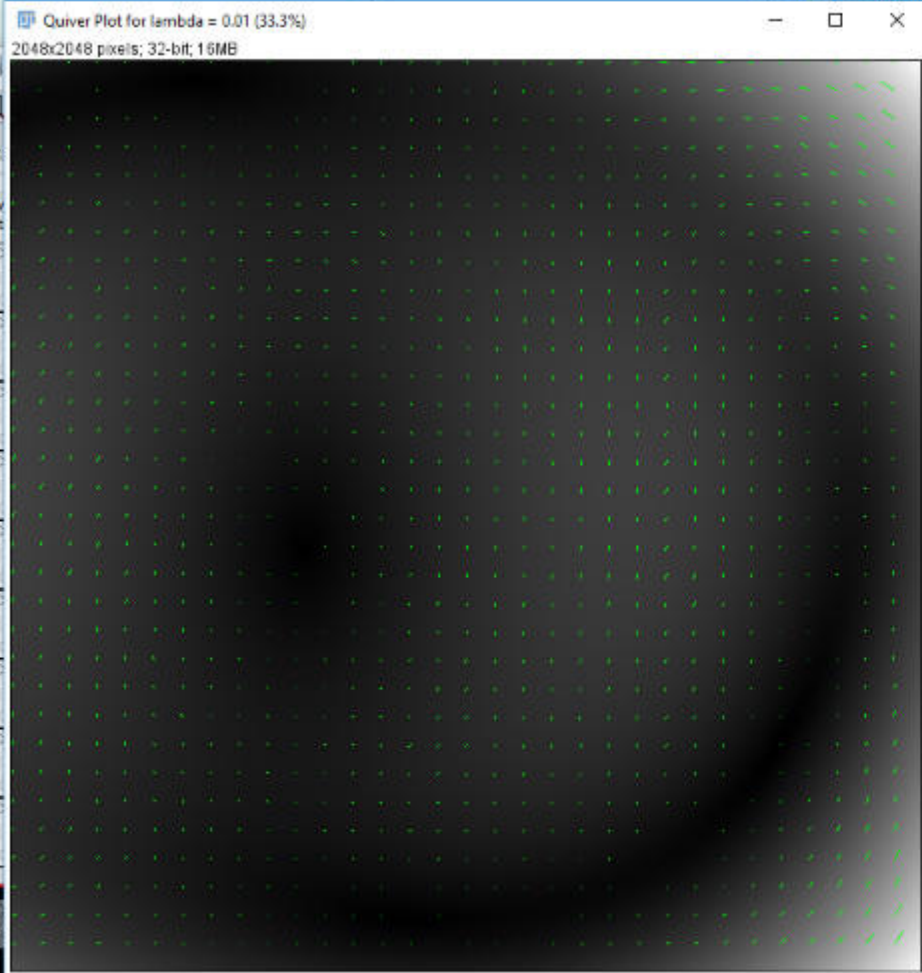
Regenerating mipmaps (249 to go)

Log

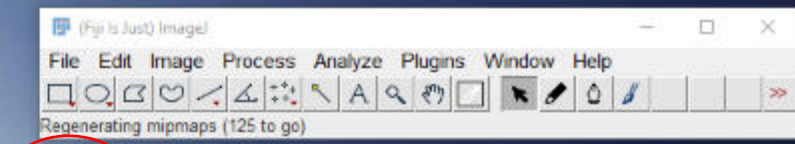
File Edit Font

```
171: 11.128573083122743 11.130200512487223
172: 11.128582440517913 11.130200512487223
173: 11.128591739782104 11.130200512487223
174: 11.12860093276899 11.130200512487223
175: 11.128610021290116 11.130200512487223
176: 11.128619007116088 11.130200512487223
177: 11.128627891977724 11.130200512487223
178: 11.128636677567162 11.130200512487223
179: 11.12864536553894 11.130200512487223
180: 11.128653957511029 11.130200512487223
181: 11.128662455065841 11.130200512487223
182: 11.128670859751205 11.130200512487223
183: 11.128679173081292 11.130200512487223
184: 11.12868739653754 11.130200512487223
185: 11.128695531569527 11.130200512487223
186: 11.128703579595824 11.130200512487223
187: 11.12871154200482 11.130200512487223
188: 11.128719420155521 11.130200512487223
189: 11.12872721537832 11.130200512487223
190: 11.128734928975748 11.130200512487223
191: 11.128742562223202 11.130200512487223
192: 11.128750116369647 11.130200512487223
193: 11.128757592638294 11.130200512487223
194: 11.128764992227262 11.130200512487223
195: 11.12877231631022 11.130200512487223
196: 11.128779566037007 11.130200512487223
197: 11.128786742534231 11.130200512487223
198: 11.128793846905854 11.130200512487223
199: 11.12880088023376 11.130200512487223
200: 11.128807843578304 11.130200512487223
201: 11.128814737978843 11.130200512487223
202: 11.128821564454253 11.130200512487223
203: 11.128828324003434 11.130200512487223
Successfully optimized configuration of 16 tiles after 204 iterations:
average displacement: 11.130px
minimal displacement: 9.291px
maximal displacement: 16.567px
0. epsilon = 11.142904602966755
```


4) Lens correction



The result should look like this (<-); a lens-like configuration, the green lines pointing to one or multiple centers.



```
Log
File Edit Font
173: 2.8161614089643896 2.8172816038633077
174: 2.8161657774959528 2.8172816038633077
175: 2.8161700963851115 2.8172816038633077
176: 2.816174386473263 2.8172816038633077
177: 2.816178588582896 2.8172816038633077
178: 2.81618276351812 2.8172816038633077
179: 2.8161868920651743 2.8172816038633077
180: 2.8161909749929244 2.8172816038633077
181: 2.816195013053336 2.8172816038633077
182: 2.8161990069819405 2.8172816038633077
183: 2.816202957498277 2.8172816038633077
184: 2.8162068653063295 2.8172816038633077
185: 2.8162107310949405 2.8172816038633077
186: 2.8162145555382185 2.8172816038633077
187: 2.8162183392959297 2.8172816038633077
188: 2.8162220890138764 2.8172816038633077
189: 2.8162257873242664 2.8172816038633077
190: 2.816229452846066 2.8172816038633077
191: 2.8162330801853463 2.8172816038633077
192: 2.8162366699356185 2.8172816038633077
193: 2.8162402226781564 2.8172816038633077
194: 2.816243738982309 2.8172816038633077
195: 2.816247219405807 2.8172816038633077
196: 2.8162506644950565 2.8172816038633077
197: 2.8162540747854243 2.8172816038633077
198: 2.8162574508015177 2.8172816038633077
199: 2.8162607930574497 2.8172816038633077
200: 2.8162641020571035 2.8172816038633077
201: 2.816267378294385 2.8172816038633077
202: 2.8162706222534664 2.8172816038633077
203: 2.8162738344090275 2.8172816038633077
Successfully optimized configuration of 16 tiles after 204 iterations.
average displacement: 2.817px
minimal displacement: 1.262px
maximal displacement: 9.725px
3: epsilon = 2.765444482118898
3: delta epsilon = -0.004419929494686503
Done.
```


4) Lens correction

Template
● anything

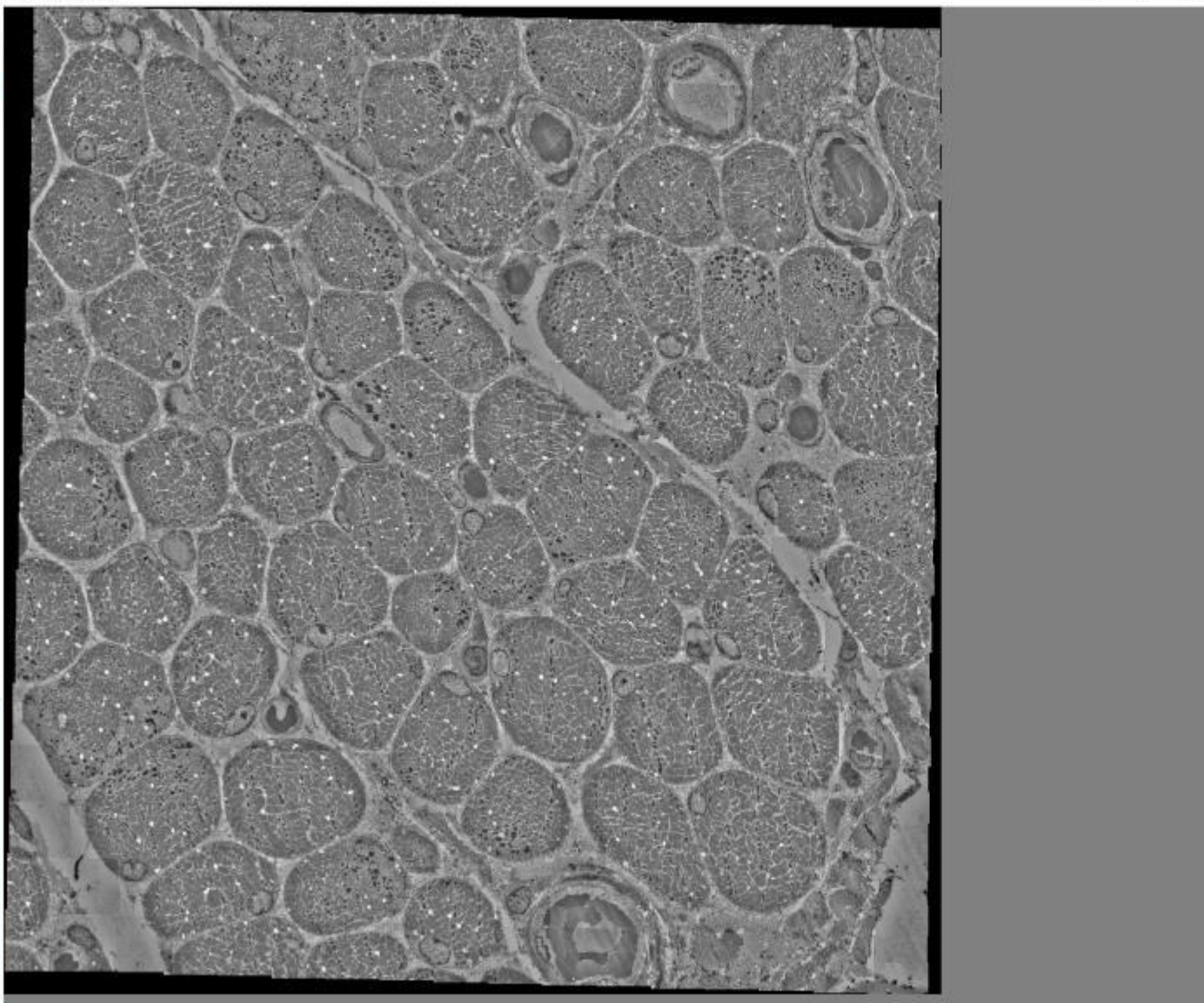
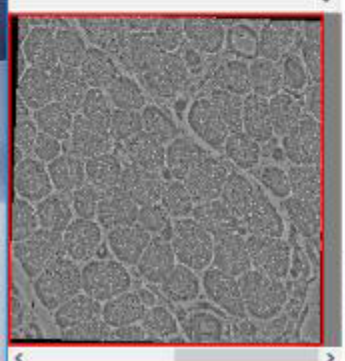
Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

2/2 z:0.0 pixels (2.6%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels

- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144
- 01_ROI80009.tif
- #161
- 01_ROI80010.tif
- #178
- 01_ROI80011.tif
- #195
- 01_ROI80012.tif
- #212
- 01_ROI80013.tif
- #229
- 01_ROI80014.tif
- #246
- 01_ROI80015.tif
- #263



(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=22512 pixel, y=13301 pixel, value=101 [Patch #218]

Log

File Edit Font

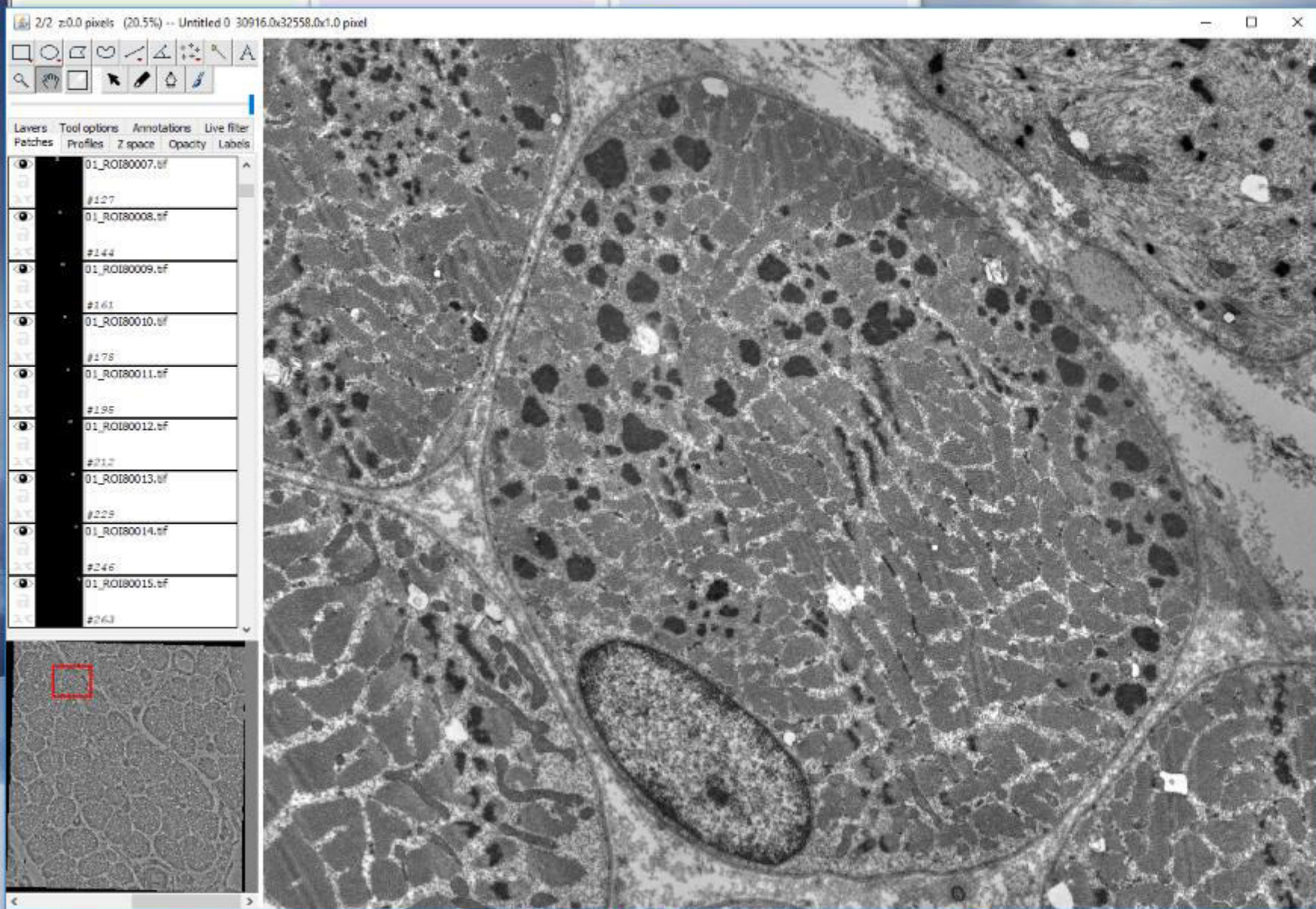
```
174: 2.8161657774959528 2.8172816038633077
175: 2.8161700963951115 2.8172816038633077
176: 2.816174366473263 2.8172816038633077
177: 2.816178588582896 2.8172816038633077
178: 2.81618276351812 2.8172816038633077
179: 2.8161868920651743 2.8172816038633077
180: 2.8161909749929244 2.8172816038633077
181: 2.816195013059336 2.8172816038633077
182: 2.8161990069819405 2.8172816038633077
183: 2.816202957498277 2.8172816038633077
184: 2.8162068653063295 2.8172816038633077
185: 2.8162107310349405 2.8172816038633077
186: 2.8162145555382185 2.8172816038633077
187: 2.8162183392959297 2.8172816038633077
188: 2.8162220830138764 2.8172816038633077
189: 2.8162257873242664 2.8172816038633077
190: 2.816229452846066 2.8172816038633077
191: 2.8162330801853463 2.8172816038633077
192: 2.8162366699356185 2.8172816038633077
193: 2.8162402226781564 2.8172816038633077
194: 2.816243738982309 2.8172816038633077
195: 2.816247219405807 2.8172816038633077
196: 2.8162506644950565 2.8172816038633077
197: 2.8162540747854243 2.8172816038633077
198: 2.8162574508015177 2.8172816038633077
199: 2.8162607930574497 2.8172816038633077
200: 2.8162641020571035 2.8172816038633077
201: 2.816267378294385 2.8172816038633077
202: 2.8162706222534664 2.8172816038633077
203: 2.8162738344090275 2.8172816038633077
Successfully optimized configuration of 16 tiles after 204 iterations.
average displacement: 2.817px
minimal displacement: 1.262px
maximal displacement: 9.725px
3: epsilon = 2.765444482118898
3: delta epsilon = -0.004419923494688503
Done.
Using 0 images as reference.
```


4) Lens correction

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]



(Fiji Is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=10292 pixel, y=3151 pixel, value=151 [Patch #94]

Log

File Edit Font

```
174: 2.8161657774959528 2.8172816038633077
175: 2.8161700963951115 2.8172816038633077
176: 2.816174366473263 2.8172816038633077
177: 2.816178588582896 2.8172816038633077
178: 2.81618276351812 2.8172816038633077
179: 2.8161868920651743 2.8172816038633077
180: 2.8161909749929244 2.8172816038633077
181: 2.816195013059336 2.8172816038633077
182: 2.8161990069819405 2.8172816038633077
183: 2.816202957498277 2.8172816038633077
184: 2.81620686653063295 2.8172816038633077
185: 2.8162107310349405 2.8172816038633077
186: 2.8162145555382185 2.8172816038633077
187: 2.8162183392959297 2.8172816038633077
188: 2.8162220830138764 2.8172816038633077
189: 2.8162257873242664 2.8172816038633077
190: 2.816229452846066 2.8172816038633077
191: 2.8162330801853463 2.8172816038633077
192: 2.8162366699356185 2.8172816038633077
193: 2.8162402226781564 2.8172816038633077
194: 2.816243738982309 2.8172816038633077
195: 2.816247219405807 2.8172816038633077
196: 2.8162506644950565 2.8172816038633077
197: 2.8162540747854243 2.8172816038633077
198: 2.8162574508015177 2.8172816038633077
199: 2.8162607930574497 2.8172816038633077
200: 2.8162641020571035 2.8172816038633077
201: 2.816267378234385 2.8172816038633077
202: 2.8162706222534664 2.8172816038633077
203: 2.8162738344090275 2.8172816038633077
Successfully optimized configuration of 16 tiles after 204 iterations.
average displacement: 2.817px
minimal displacement: 1.262px
maximal displacement: 9.725px
3: epsilon = 2.765444482118898
3: delta epsilon = -0.004419923494688503
Done.
Using 0 images as reference.
```


4) Lens correction

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=-0.0 [layer]

(Fiji Is Just) ImageJ

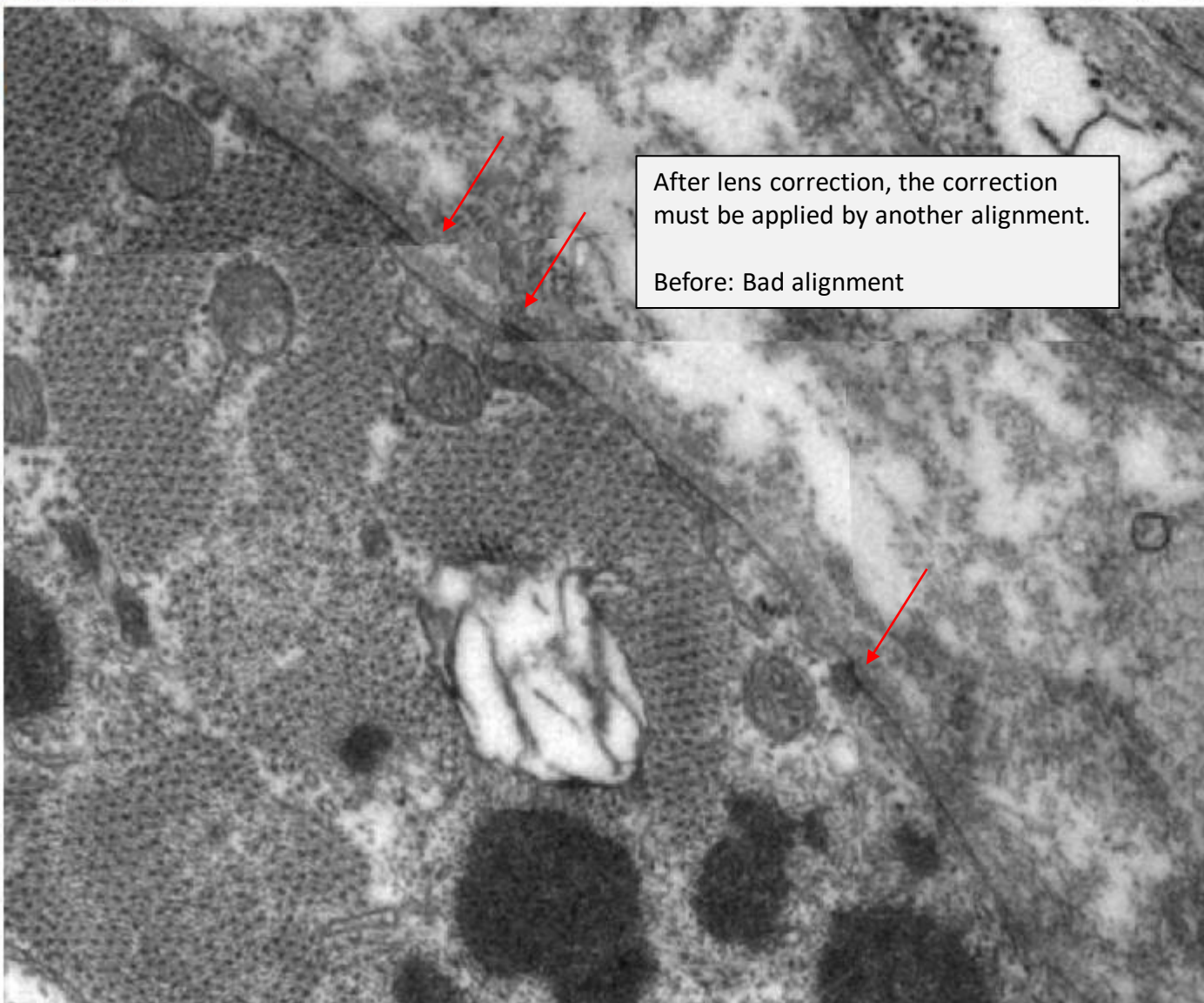
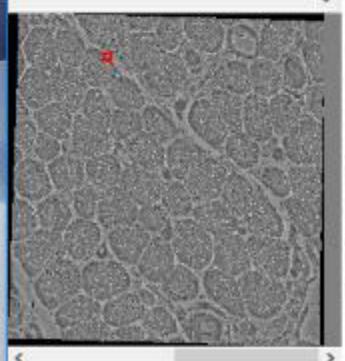
File Edit Image Process Analyze Plugins Window Help

x=9749 pixel, y=3863 pixel, value=197 [Patch #77]

2/2 z:0.0 pixels (143.3%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels

- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144
- 01_ROI80009.tif
- #161
- 01_ROI80010.tif
- #178
- 01_ROI80011.tif
- #195
- 01_ROI80012.tif
- #212
- 01_ROI80013.tif
- #229
- 01_ROI80014.tif
- #246
- 01_ROI80015.tif
- #263



Log

File Edit Font

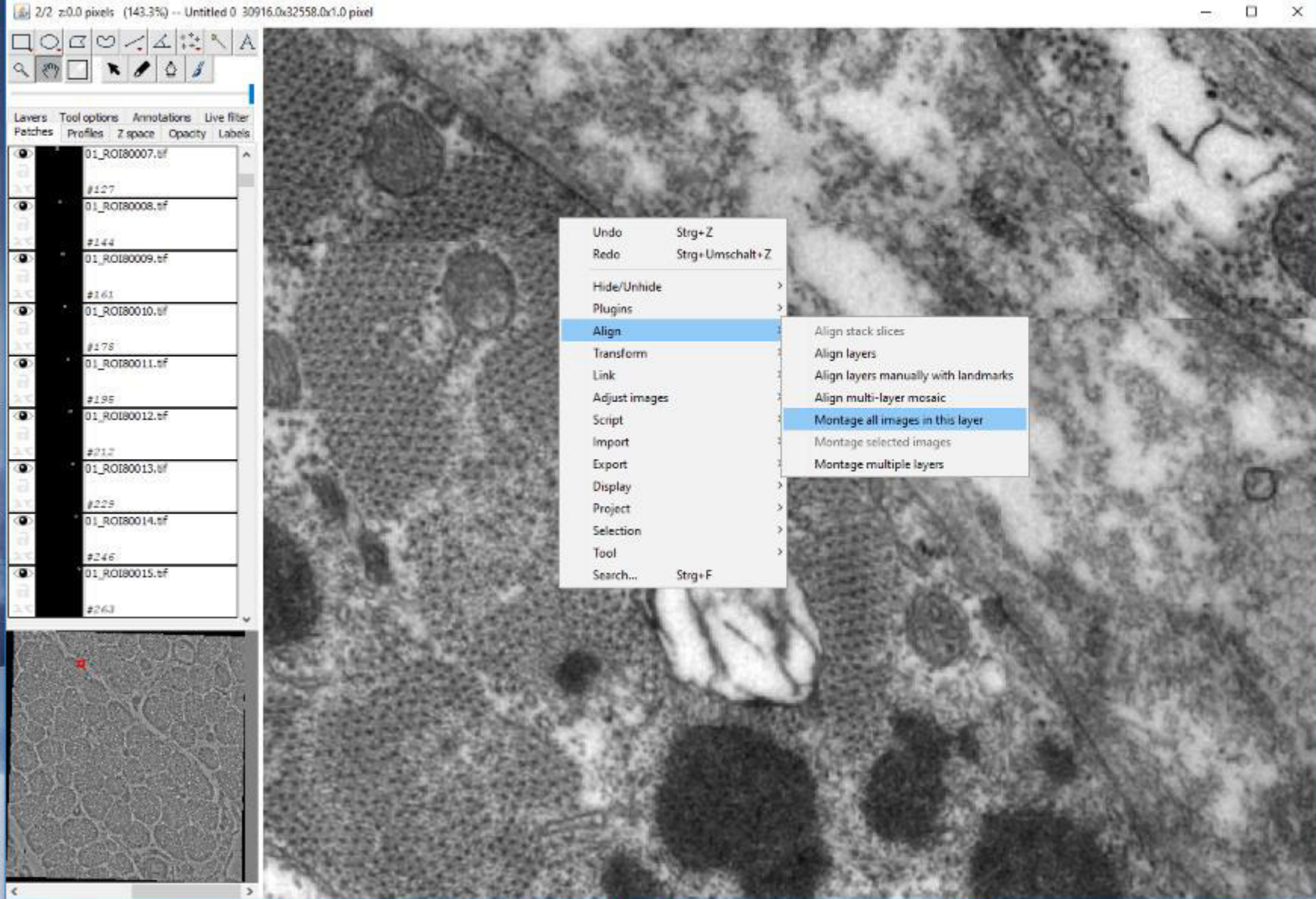
```
174: 2.8161657774959528 2.8172816038633077
175: 2.8161700963951115 2.8172816038633077
176: 2.816174366473263 2.8172816038633077
177: 2.816178588582896 2.8172816038633077
178: 2.81618276351812 2.8172816038633077
179: 2.8161868920651743 2.8172816038633077
180: 2.8161909749929244 2.8172816038633077
181: 2.816195013059336 2.8172816038633077
182: 2.8161990069819405 2.8172816038633077
183: 2.816202957498277 2.8172816038633077
184: 2.8162068663063295 2.8172816038633077
185: 2.8162107310349405 2.8172816038633077
186: 2.8162145555382185 2.8172816038633077
187: 2.8162183392959297 2.8172816038633077
188: 2.8162220830138764 2.8172816038633077
189: 2.8162257873242664 2.8172816038633077
190: 2.816229452846066 2.8172816038633077
191: 2.8162330801853463 2.8172816038633077
192: 2.8162366699356185 2.8172816038633077
193: 2.8162402226781564 2.8172816038633077
194: 2.816243738982309 2.8172816038633077
195: 2.816247219405807 2.8172816038633077
196: 2.8162506644950565 2.8172816038633077
197: 2.8162540747854243 2.8172816038633077
198: 2.8162574508015177 2.8172816038633077
199: 2.8162607930574497 2.8172816038633077
200: 2.8162641020571035 2.8172816038633077
201: 2.816267378234385 2.8172816038633077
202: 2.8162706222534664 2.8172816038633077
203: 2.8162738344090275 2.8172816038633077
Successfully optimized configuration of 16 tiles after 204 iterations.
average displacement: 2.817px
minimal displacement: 1.262px
maximal displacement: 9.725px
3: epsilon = 2.765444482118898
3: delta epsilon = -0.004419923494688503
Done.
Using 0 images as reference.
```


5) Alignment after lens correction

Template: anything

Project Objects: Untitled 0 [project]

Layers: Top Level [layer set], 1: z=0.0 [layer], 2: z=0.0 [layer]



(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=9502 pixel, y=3990 pixel, value=83 [Patch #77]

Log

File Edit Font

```
174: 2.8161657774959528 2.8172816038633077
175: 2.8161700963951115 2.8172816038633077
176: 2.816174366473263 2.8172816038633077
177: 2.816178588582896 2.8172816038633077
178: 2.81618276351812 2.8172816038633077
179: 2.8161868920651743 2.8172816038633077
180: 2.8161909749929244 2.8172816038633077
181: 2.816195013059336 2.8172816038633077
182: 2.816199069819405 2.8172816038633077
183: 2.816202957498277 2.8172816038633077
184: 2.8162068663063295 2.8172816038633077
185: 2.8162107310349405 2.8172816038633077
186: 2.8162145555382185 2.8172816038633077
187: 2.8162183392959297 2.8172816038633077
188: 2.8162220830138764 2.8172816038633077
189: 2.8162257873242664 2.8172816038633077
190: 2.816229452846066 2.8172816038633077
191: 2.8162330801853463 2.8172816038633077
192: 2.8162366699356185 2.8172816038633077
193: 2.8162402226781564 2.8172816038633077
194: 2.816243738982309 2.8172816038633077
195: 2.816247219405807 2.8172816038633077
196: 2.8162506644950565 2.8172816038633077
197: 2.8162540747854243 2.8172816038633077
198: 2.8162574508015177 2.8172816038633077
199: 2.8162607930574497 2.8172816038633077
200: 2.8162641020571035 2.8172816038633077
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Successfully optimized configuration of 16 tiles after 204 iterations.
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3: epsilon = 2.765444482118898
3: delta epsilon = -0.004419923494688503
Done.
Using 0 images as reference.
```


5) Alignment after lens correction

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

(Fiji Is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 2 seconds

2/2 z=0.0 pixels (143.3%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels

- 01_ROI80007.tif #127
- 01_ROI80008.tif #144
- 01_ROI80009.tif #161
- 01_ROI80010.tif #178
- 01_ROI80011.tif #195
- 01_ROI80012.tif #212
- 01_ROI80013.tif #229
- 01_ROI80014.tif #246
- 01_ROI80015.tif #263

Montage mode

mode : least squares (linear feature correspondences)

OK Cancel

Log

File Edit Font

```
175: 2.8161700963851115 2.8172816038633077
176: 2.816174366473263 2.8172816038633077
177: 2.816178588582896 2.8172816038633077
178: 2.81618276351812 2.8172816038633077
179: 2.8161868920651743 2.8172816038633077
180: 2.8161909749929244 2.8172816038633077
181: 2.816195013053336 2.8172816038633077
182: 2.8161990069819405 2.8172816038633077
183: 2.816202957498277 2.8172816038633077
184: 2.8162068653063295 2.8172816038633077
185: 2.8162107310949405 2.8172816038633077
186: 2.8162145555382185 2.8172816038633077
187: 2.8162183392959297 2.8172816038633077
188: 2.8162220830138764 2.8172816038633077
189: 2.8162257873242664 2.8172816038633077
190: 2.816229452846066 2.8172816038633077
191: 2.8162330801853463 2.8172816038633077
192: 2.8162366699356185 2.8172816038633077
193: 2.8162402226781564 2.8172816038633077
194: 2.816243738982309 2.8172816038633077
195: 2.816247219405807 2.8172816038633077
196: 2.8162506644950565 2.8172816038633077
197: 2.8162540747854243 2.8172816038633077
198: 2.8162574508015177 2.8172816038633077
199: 2.8162607930574497 2.8172816038633077
200: 2.8162641020571035 2.8172816038633077
201: 2.816267378294385 2.8172816038633077
202: 2.8162706222534664 2.8172816038633077
203: 2.8162738344090275 2.8172816038633077
Successfully optimized configuration of 16 tiles after 204 iterations:
average displacement: 2.817px
minimal displacement: 1.262px
maximal displacement: 9.725px
3: epsilon = 2.765444482118898
3: delta epsilon = -0.004419923494686503
Done.
Using 0 images as reference.
Using 0 images as reference.
```


5) Alignment after lens correction

Template: anything

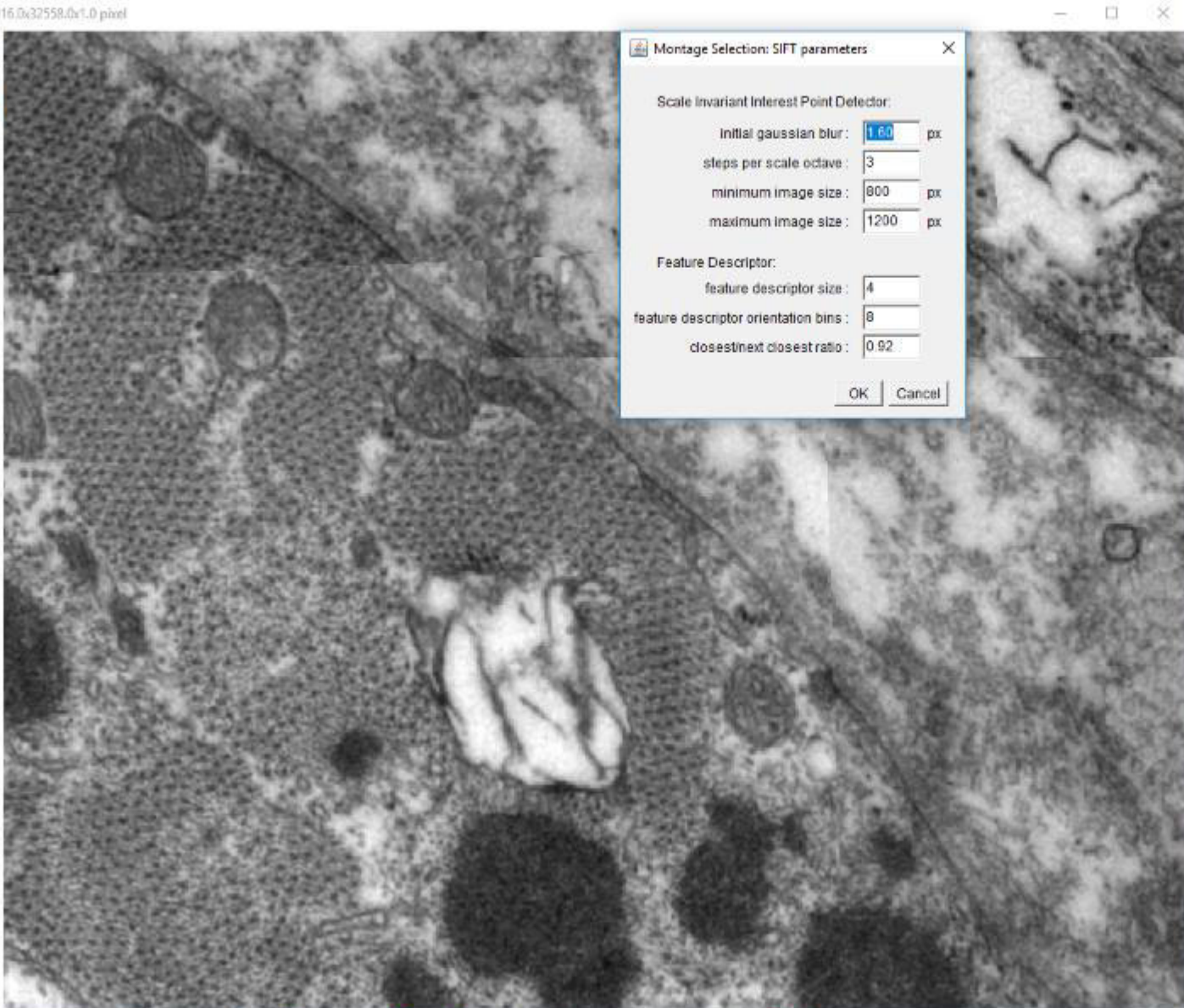
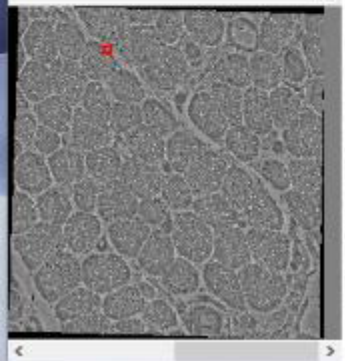
Project Objects: Untitled 0 [project]

Layers: Top Level [layer set], 1: z=0.0 [layer], 2: z=-0.0 [layer]

2/2 z=0.0 pixels (143.3%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers: Tool options, Annotations, Live filter, Patches, Profiles, Z space, Opacity, Labels

- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144
- 01_ROI80009.tif
- #161
- 01_ROI80010.tif
- #178
- 01_ROI80011.tif
- #195
- 01_ROI80012.tif
- #212
- 01_ROI80013.tif
- #229
- 01_ROI80014.tif
- #246
- 01_ROI80015.tif
- #263



Montage Selection: SIFT parameters

Scale Invariant Interest Point Detector:

- Initial gaussian blur: 1.60 px
- steps per scale octave: 3
- minimum image size: 800 px
- maximum image size: 1200 px

Feature Descriptor:

- feature descriptor size: 4
- feature descriptor orientation bins: 8
- closest/next closest ratio: 0.92

OK Cancel

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File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 4 seconds

Log

File Edit Font

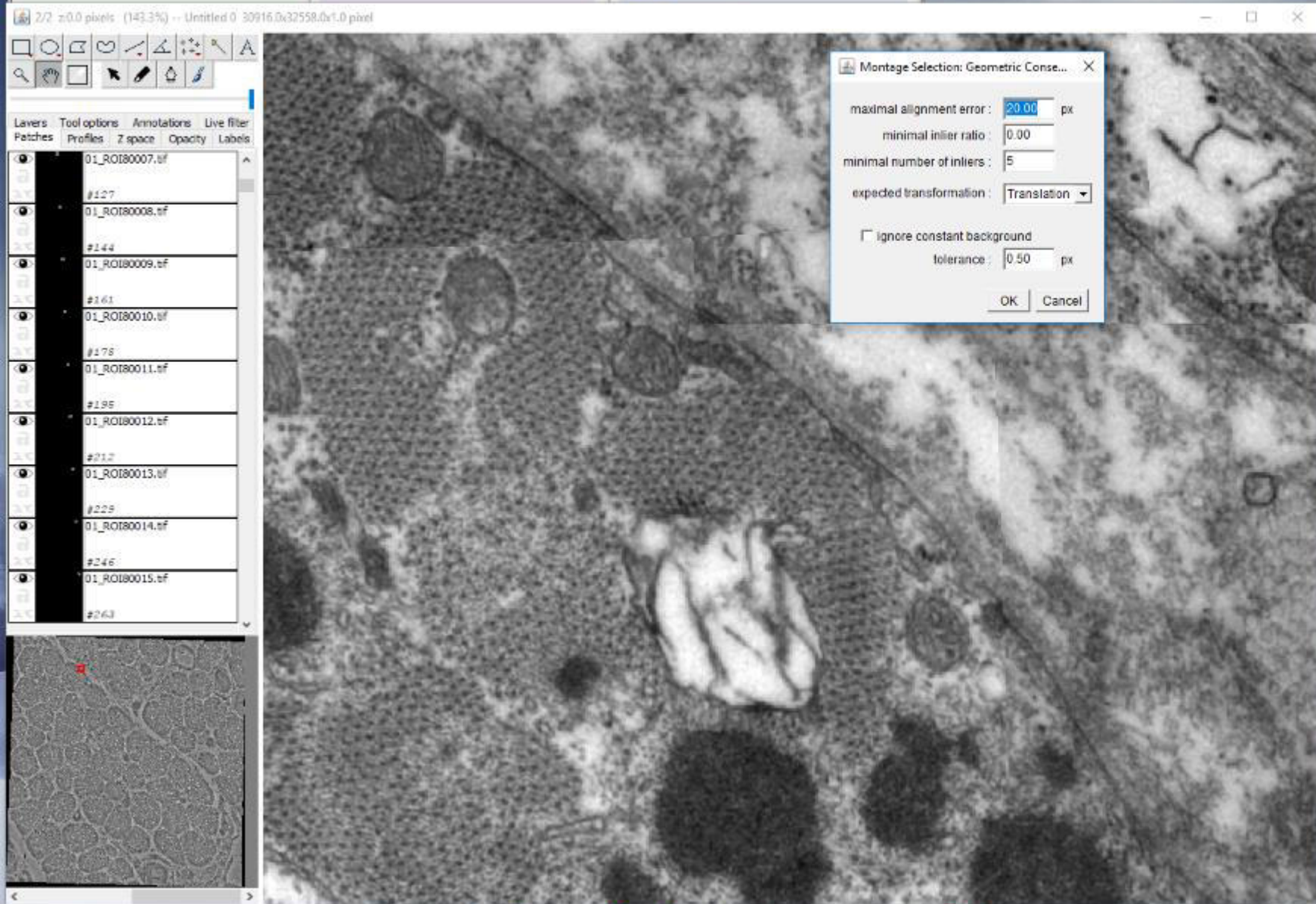
```
175: 2.8161700963851115 2.8172816038633077
176: 2.816174366473263 2.8172816038633077
177: 2.816178598582896 2.8172816038633077
178: 2.81618276351812 2.8172816038633077
179: 2.8161868920651743 2.8172816038633077
180: 2.8161909749929244 2.8172816038633077
181: 2.816195013053336 2.8172816038633077
182: 2.8161990069819405 2.8172816038633077
183: 2.816202957498277 2.8172816038633077
184: 2.8162068653063295 2.8172816038633077
185: 2.8162107310949405 2.8172816038633077
186: 2.816214555382185 2.8172816038633077
187: 2.8162183392959297 2.8172816038633077
188: 2.8162220930138764 2.8172816038633077
189: 2.8162257873242664 2.8172816038633077
190: 2.816229452846066 2.8172816038633077
191: 2.8162330801853463 2.8172816038633077
192: 2.8162366699356185 2.8172816038633077
193: 2.8162402226781564 2.8172816038633077
194: 2.816243738982309 2.8172816038633077
195: 2.816247219405807 2.8172816038633077
196: 2.8162506644950565 2.8172816038633077
197: 2.8162540747854243 2.8172816038633077
198: 2.8162574508015177 2.8172816038633077
199: 2.8162607930574497 2.8172816038633077
200: 2.8162641020571035 2.8172816038633077
201: 2.816267378294385 2.8172816038633077
202: 2.8162706222534664 2.8172816038633077
203: 2.8162738344090275 2.8172816038633077
Successfully optimized configuration of 16 tiles after 204 iterations:
average displacement: 2.817px
minimal displacement: 1.262px
maximal displacement: 9.725px
3: epsilon = 2.765444482118898
3: delta epsilon = -0.004419923494686503
Done.
Using 0 images as reference.
Using 0 images as reference.
```


5) Alignment after lens correction

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=-0.0 [layer]



(Fiji is Just) ImageJ
File Edit Image Process Analyze Plugins Window Help
Processing... Aligning images - 6 seconds

Log
File Edit Font

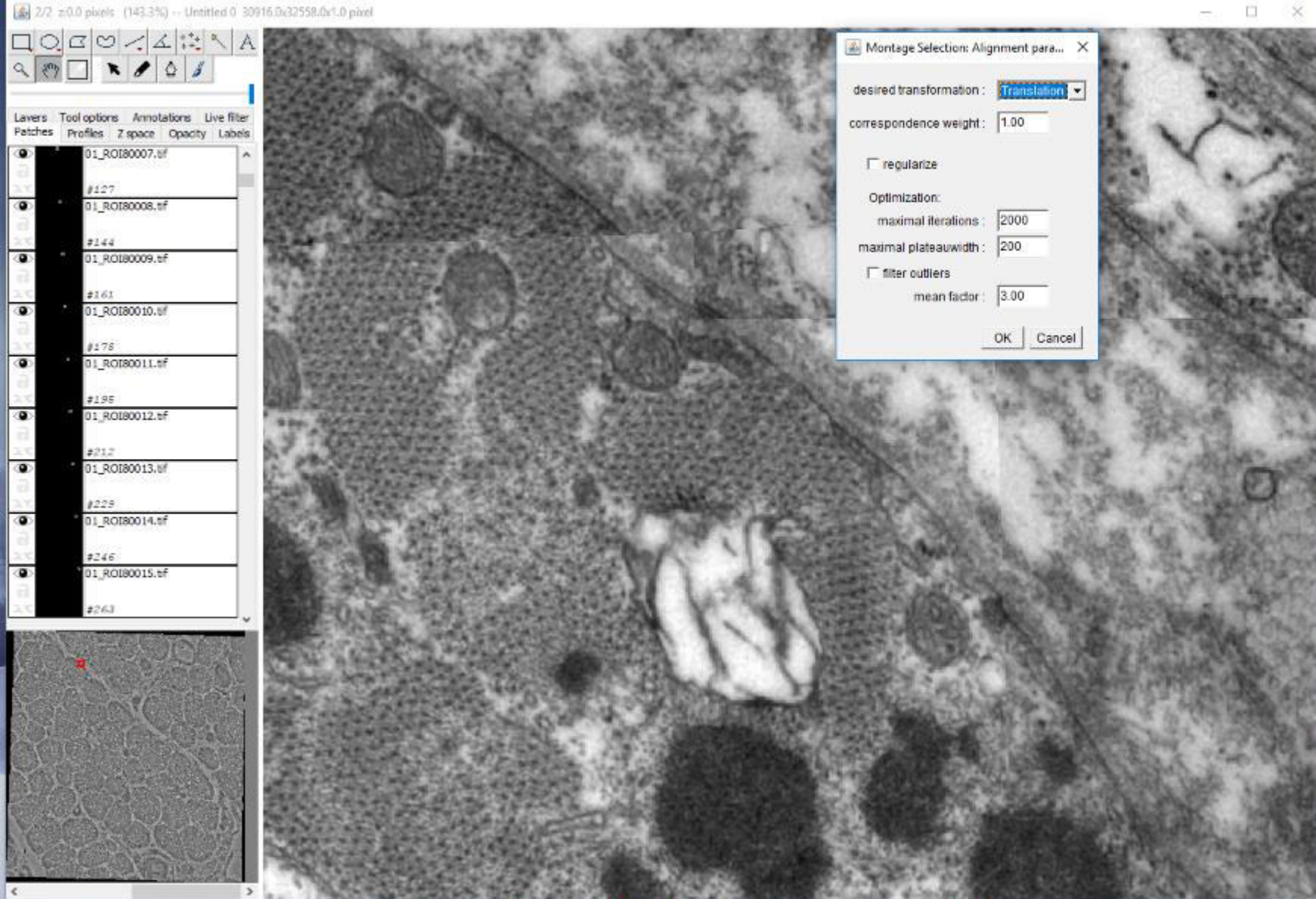
```
175: 2.8161700963851115 2.8172816038633077  
176: 2.816174366473263 2.8172816038633077  
177: 2.816178598592896 2.8172816038633077  
178: 2.81618276351812 2.8172816038633077  
179: 2.8161868920651743 2.8172816038633077  
180: 2.8161909749929244 2.8172816038633077  
181: 2.816195013053336 2.8172816038633077  
182: 2.8161990069819405 2.8172816038633077  
183: 2.816202957498277 2.8172816038633077  
184: 2.8162068653063295 2.8172816038633077  
185: 2.8162107310949405 2.8172816038633077  
186: 2.816214555382185 2.8172816038633077  
187: 2.8162183392959297 2.8172816038633077  
188: 2.8162220830138764 2.8172816038633077  
189: 2.8162257873242664 2.8172816038633077  
190: 2.816229452846066 2.8172816038633077  
191: 2.8162330801853463 2.8172816038633077  
192: 2.8162366699356185 2.8172816038633077  
193: 2.8162402226781564 2.8172816038633077  
194: 2.816243738982309 2.8172816038633077  
195: 2.816247219405807 2.8172816038633077  
196: 2.8162506644950565 2.8172816038633077  
197: 2.8162540747854243 2.8172816038633077  
198: 2.8162574508015177 2.8172816038633077  
199: 2.8162607930574497 2.8172816038633077  
200: 2.8162641020571035 2.8172816038633077  
201: 2.816267378294385 2.8172816038633077  
202: 2.8162706222534664 2.8172816038633077  
203: 2.8162738344090275 2.8172816038633077  
Successfully optimized configuration of 16 tiles after 204 iterations:  
average displacement: 2.817px  
minimal displacement: 1.262px  
maximal displacement: 9.725px  
3: epsilon = 2.765444482118898  
3: delta epsilon = -0.004419923494686503  
Done.  
Using 0 images as reference.  
Using 0 images as reference.
```


5) Alignment after lens correction

Template: anything

Project Objects: Untitled 0 [project]

Layers: Top Level [layer set], 1: z=0.0 [layer], 2: z=-0.0 [layer]



(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 8 seconds

Log

File Edit Font

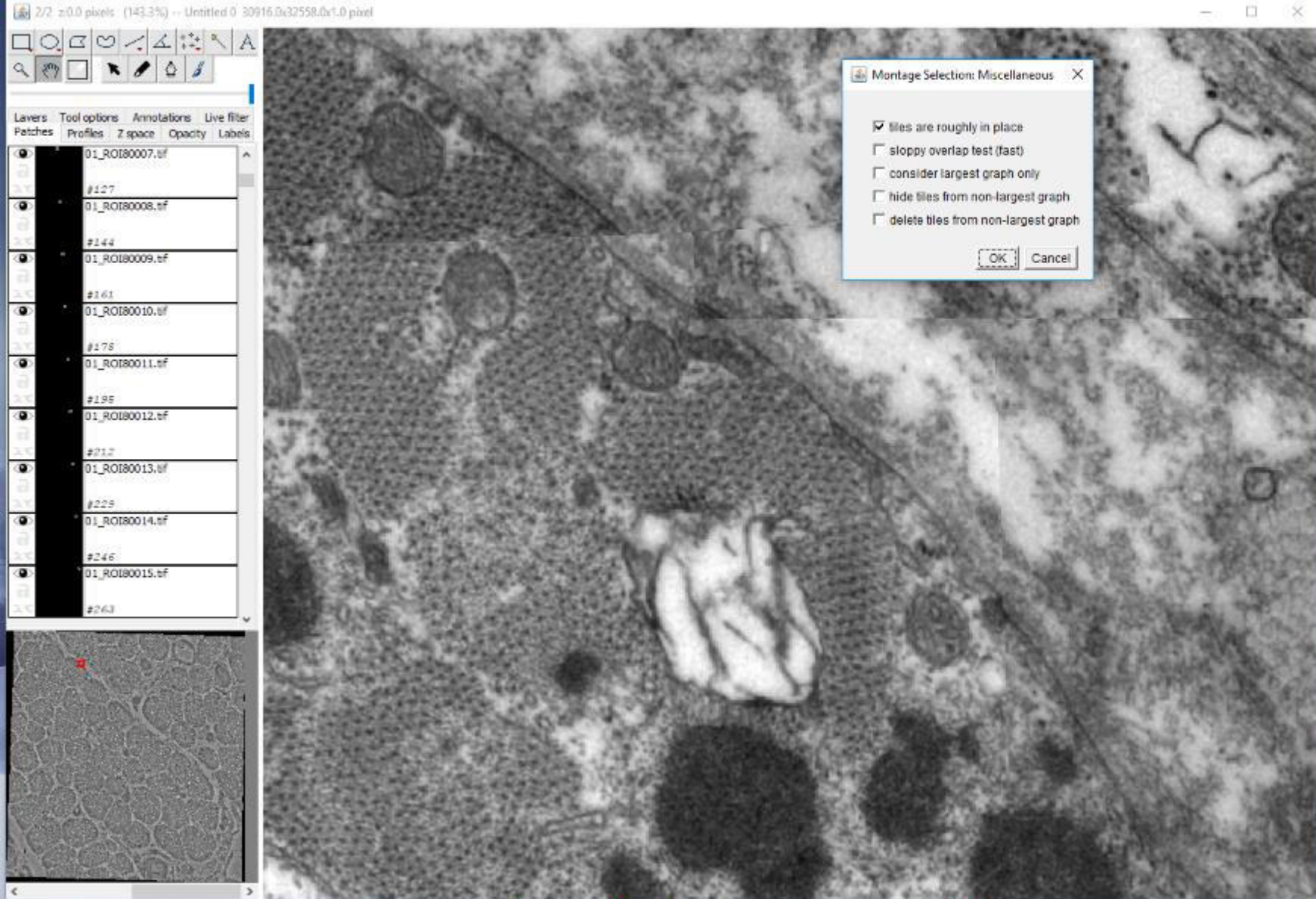
```
175: 2.8161700963851115 2.8172816038633077
176: 2.816174366473263 2.8172816038633077
177: 2.816178598592896 2.8172816038633077
178: 2.81618276351812 2.8172816038633077
179: 2.8161868920651743 2.8172816038633077
180: 2.8161909749929244 2.8172816038633077
181: 2.816195013053336 2.8172816038633077
182: 2.8161990069819405 2.8172816038633077
183: 2.816202957498277 2.8172816038633077
184: 2.8162068653063295 2.8172816038633077
185: 2.8162107310949405 2.8172816038633077
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190: 2.816229452846066 2.8172816038633077
191: 2.8162330801853463 2.8172816038633077
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194: 2.816243738982309 2.8172816038633077
195: 2.816247219405807 2.8172816038633077
196: 2.8162506644950565 2.8172816038633077
197: 2.8162540747854243 2.8172816038633077
198: 2.8162574508015177 2.8172816038633077
199: 2.8162607930574497 2.8172816038633077
200: 2.8162641020571035 2.8172816038633077
201: 2.816267378294385 2.8172816038633077
202: 2.8162706222534664 2.8172816038633077
203: 2.8162738344090275 2.8172816038633077
Successfully optimized configuration of 16 tiles after 204 iterations:
average displacement: 2.817px
minimal displacement: 1.262px
maximal displacement: 9.725px
3: epsilon = 2.765444482118898
3: delta epsilon = -0.004419923494686503
Done.
Using 0 images as reference.
Using 0 images as reference.
```


5) Alignment after lens correction

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]



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File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 11 seconds

Log

File Edit Font

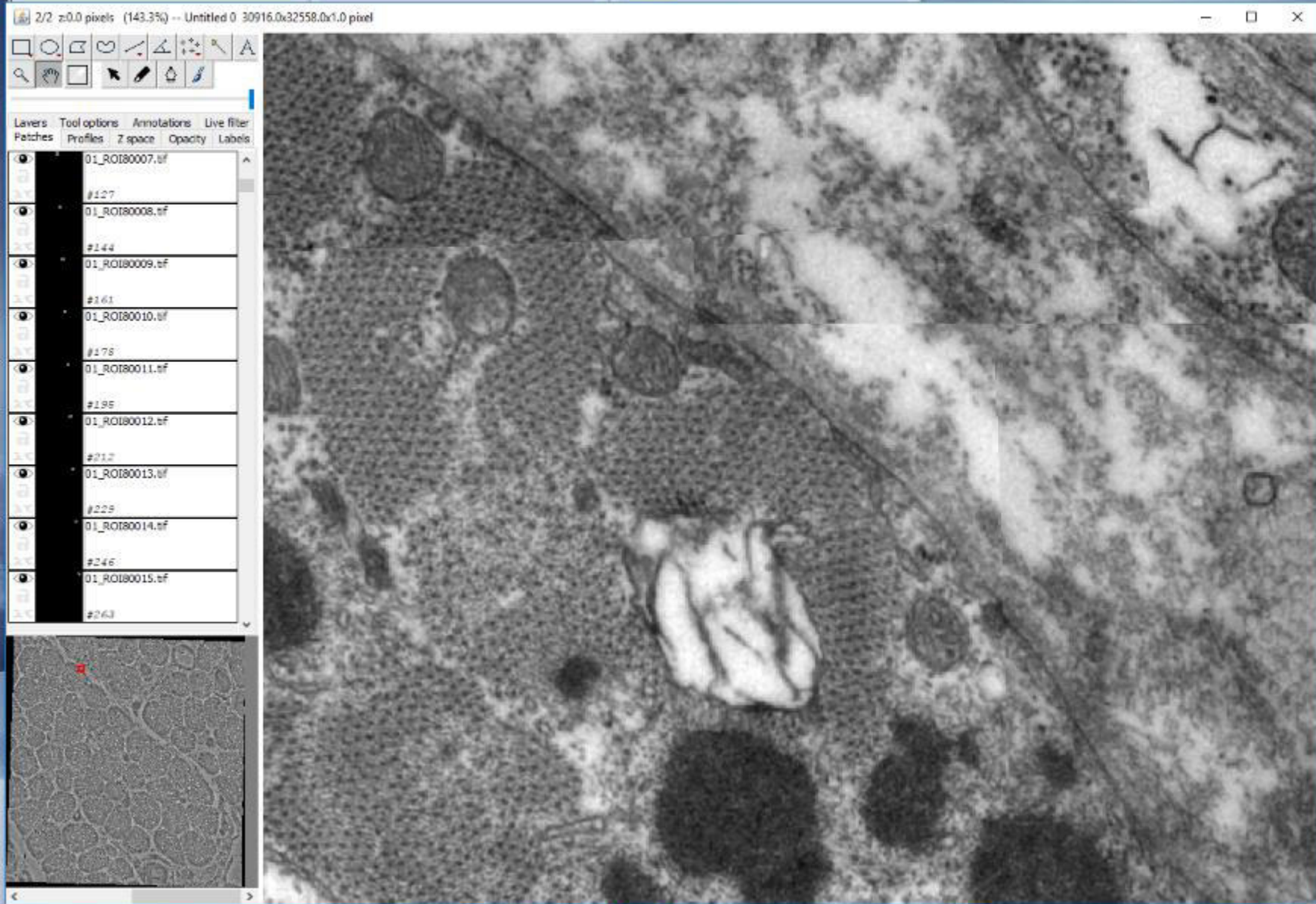
```
175: 2.8161700963851115 2.8172816038633077
176: 2.816174366473263 2.8172816038633077
177: 2.816178598582896 2.8172816038633077
178: 2.81618276351812 2.8172816038633077
179: 2.8161868920651743 2.8172816038633077
180: 2.8161909749929244 2.8172816038633077
181: 2.816195013053336 2.8172816038633077
182: 2.8161990069819405 2.8172816038633077
183: 2.816202957498277 2.8172816038633077
184: 2.8162068653063295 2.8172816038633077
185: 2.8162107310949405 2.8172816038633077
186: 2.8162145555382185 2.8172816038633077
187: 2.8162183392959297 2.8172816038633077
188: 2.8162220830138764 2.8172816038633077
189: 2.8162257873242664 2.8172816038633077
190: 2.816229452846066 2.8172816038633077
191: 2.8162330801853463 2.8172816038633077
192: 2.8162366699356185 2.8172816038633077
193: 2.8162402226781564 2.8172816038633077
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195: 2.816247219405807 2.8172816038633077
196: 2.8162506644950565 2.8172816038633077
197: 2.8162540747854243 2.8172816038633077
198: 2.8162574508015177 2.8172816038633077
199: 2.8162607930574497 2.8172816038633077
200: 2.8162641020571035 2.8172816038633077
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202: 2.8162706222534664 2.8172816038633077
203: 2.8162738344090275 2.8172816038633077
Successfully optimized configuration of 16 tiles after 204 iterations:
average displacement: 2.817px
minimal displacement: 1.262px
maximal displacement: 9.725px
3: epsilon = 2.765444482118898
3: delta epsilon = -0.004419923494686503
Done.
Using 0 images as reference.
Using 0 images as reference.
```


5) Alignment after lens correction

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]



(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 14 seconds

Log

File Edit Font

```
175: 2.8161700963851115 2.8172816038633077
176: 2.816174366473263 2.8172816038633077
177: 2.816178598592896 2.8172816038633077
178: 2.81618276351812 2.8172816038633077
179: 2.8161868920651743 2.8172816038633077
180: 2.8161909749929244 2.8172816038633077
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199: 2.8162607930574497 2.8172816038633077
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201: 2.816267378294385 2.8172816038633077
202: 2.8162706222534664 2.8172816038633077
203: 2.8162738344090275 2.8172816038633077
Successfully optimized configuration of 16 tiles after 204 iterations:
average displacement: 2.817px
minimal displacement: 1.262px
maximal displacement: 9.725px
3: epsilon = 2.765444482118898
3: delta epsilon = -0.004419923494686503
Done.
Using 0 images as reference.
Using 0 images as reference.
```


5) Alignment after lens correction

Template: anything

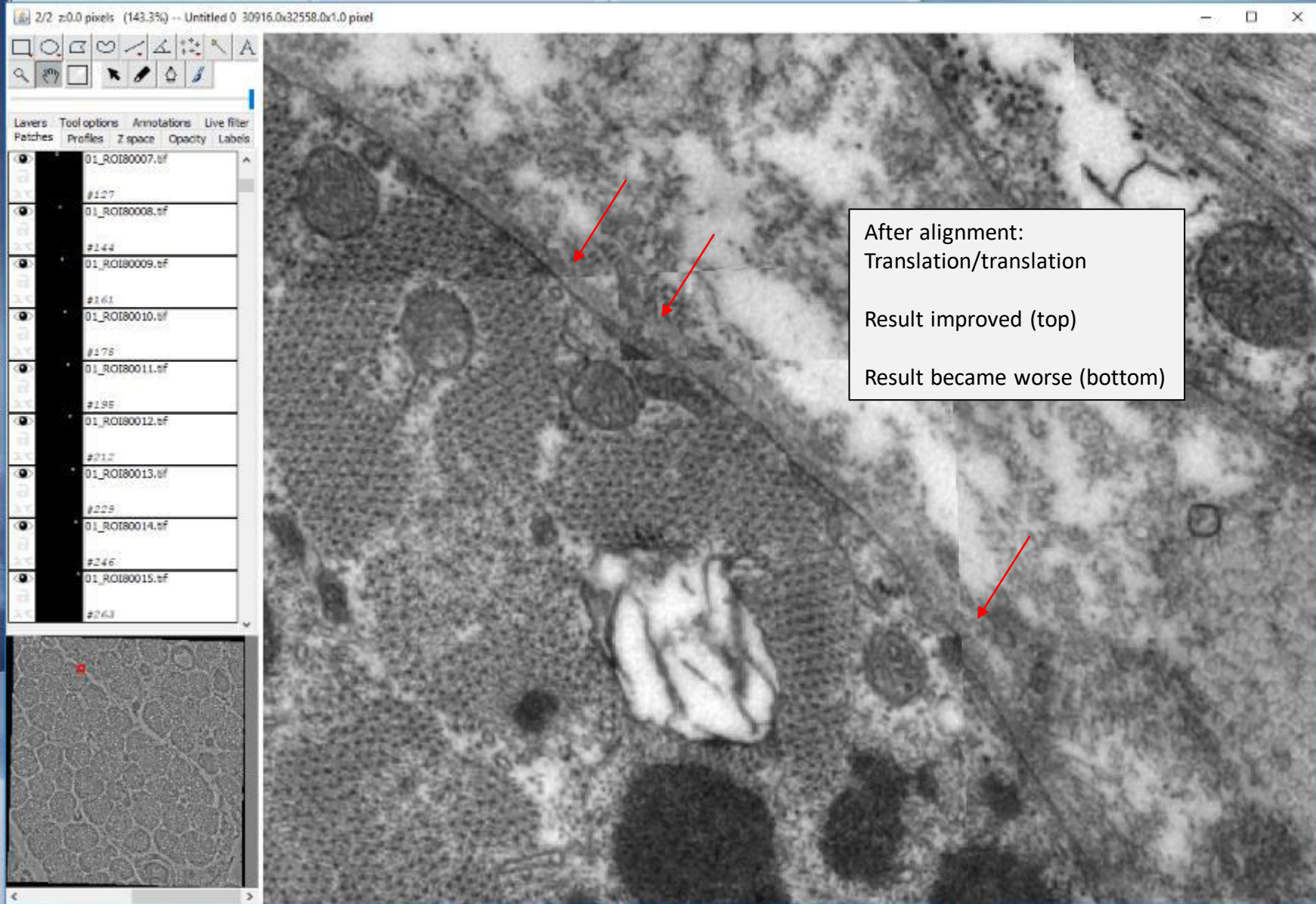
Project Objects: Untitled 0 [project]

Layers: Top Level [layer set], 1: z=0.0 [layer], 2: z=-0.0 [layer]

(Fiji Is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=9847 pixel, y=3860 pixel, value=132 [Patch #77]



Log

File Edit Font

```
357: 11 462760492778898 13 986539989528968
358: 11 46203893054901 13 986539989528968
359: 11 461322008355866 13 986539989528968
360: 11 460609124710308 13 986539989528968
361: 11 459900399469494 13 986539989528968
362: 11 459195149463572 13 986539989528968
363: 11 45849364769823 13 986539989528968
364: 11 45779592631838 13 986539989528968
365: 11 457102399184196 13 986539989528968
366: 11 456412444113461 13 986539989528968
367: 11 455726297559893 13 986539989528968
368: 11 455043999608391 13 986539989528968
369: 11 454365098555856 13 986539989528968
370: 11 453690083303913 13 986539989528968
371: 11 453018883127612 13 986539989528968
372: 11 4523512369712 13 986539989528968
373: 11 451687599585684 13 986539989528968
374: 11 451026495595633 13 986539989528968
375: 11 450369152969213 13 986539989528968
376: 11 449715375210603 13 986539989528968
377: 11 449064923295735 13 986539989528968
378: 11 44841839687345 13 986539989528968
379: 11 447775010229696 13 986539989528968
380: 11 447134853347615 13 986539989528968
381: 11 44649814115376 13 986539989528968
382: 11 445864778939038 13 986539989528968
383: 11 445234487455702 13 986539989528968
384: 11 444607293986959 13 986539989528968
385: 11 4439835946503 13 986539989528968
386: 11 443363440348817 13 986539989528968
387: 11 442746533619772 13 986539989528968
388: 11 442132574089664 13 986539989528968
389: 11 441521835438618 13 986539989528968
```

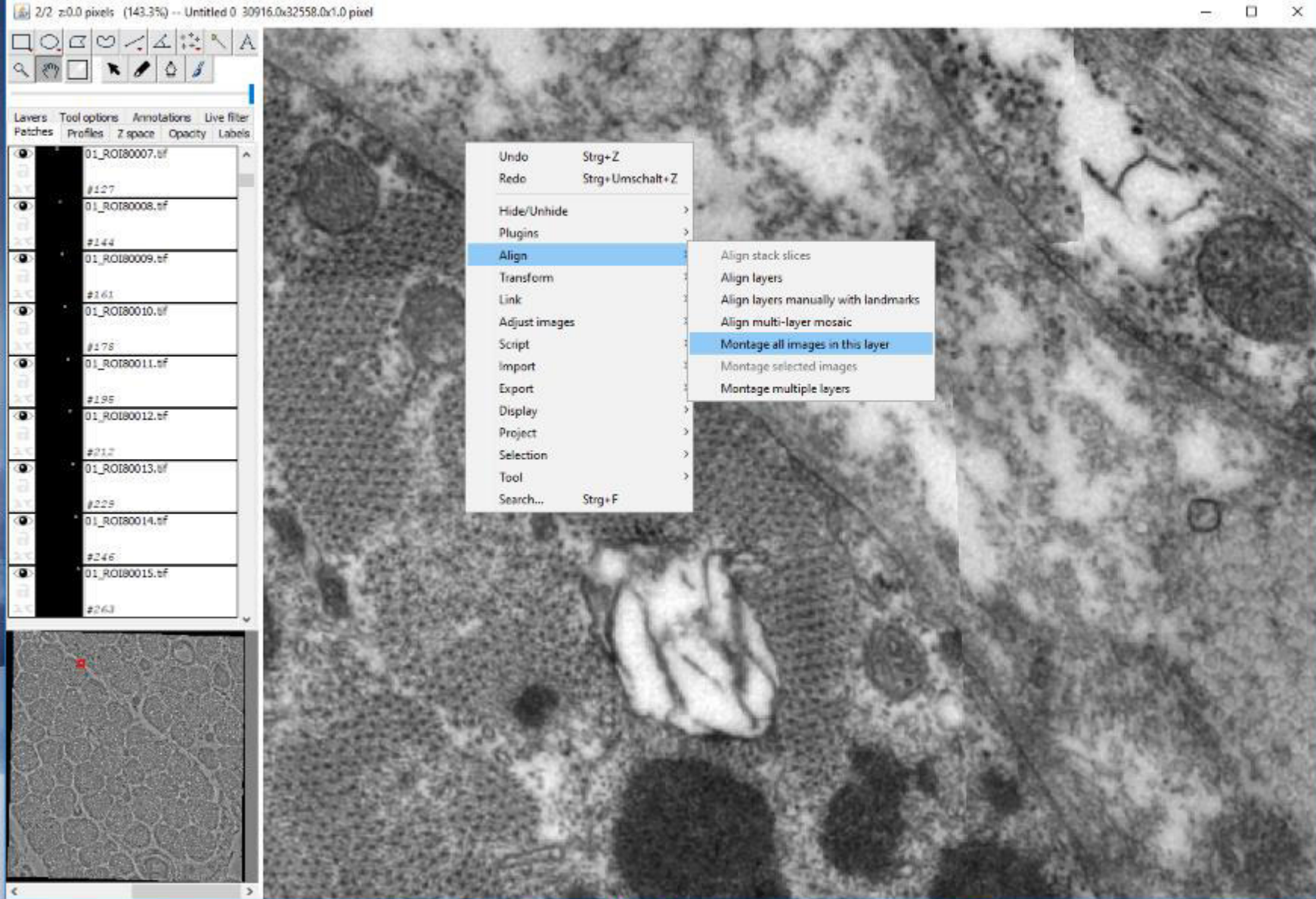
Successfully optimized configuration of 289 tiles after 390 iterations:
average displacement: 11.204px
minimal displacement: 2.038px
maximal displacement: 33.506px
Montage done.

5) Alignment after lens correction

Template: anything

Project Objects: Untitled 0 [project]

Layers: Top Level [layer set], 1: z=0.0 [layer], 2: z=0.0 [layer]



(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=9437 pixel, y=3937 pixel, value=131 [Patch #77]

Log

File Edit Font

```
357: 11 462760492778898 13 986539989528968
358: 11 46203893054901 13 986539989528968
359: 11 461322008355866 13 986539989528968
360: 11 460609124710308 13 986539989528968
361: 11 459900399469494 13 986539989528968
362: 11 459195149463572 13 986539989528968
363: 11 45849364769823 13 986539989528968
364: 11 45779592631838 13 986539989528968
365: 11 457102399184196 13 986539989528968
366: 11 456412444113461 13 986539989528968
367: 11 455726297559893 13 986539989528968
368: 11 455043999608391 13 986539989528968
369: 11 454365098555856 13 986539989528968
370: 11 453690083303913 13 986539989528968
371: 11 453018883127612 13 986539989528968
372: 11 4523512369712 13 986539989528968
373: 11 451687599585684 13 986539989528968
374: 11 451026495595633 13 986539989528968
375: 11 450369152969213 13 986539989528968
376: 11 449715375210603 13 986539989528968
377: 11 449064923295735 13 986539989528968
378: 11 44841839687345 13 986539989528968
379: 11 447775010229696 13 986539989528968
380: 11 447134853347615 13 986539989528968
381: 11 446498141115376 13 986539989528968
382: 11 445864778939038 13 986539989528968
383: 11 445234487455702 13 986539989528968
384: 11 444607293986959 13 986539989528968
385: 11 4439835946503 13 986539989528968
386: 11 443363440348817 13 986539989528968
387: 11 442746533619772 13 986539989528968
388: 11 442132574089664 13 986539989528968
389: 11 441521835438618 13 986539989528968
Successfully optimized configuration of 289 tiles after 390 iterations:
average displacement: 11.204px
minimal displacement: 2.038px
maximal displacement: 33.506px
Montage done.
```


5) Alignment after lens correction

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=-0.0 [layer]

(Fiji Is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 1 seconds

2/2 z=0.0 pixels (143.3%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers Tool options Annotations Live filter Patches Profiles Z space Opacity Labels

- 01_ROI80007.tif #127
- 01_ROI80008.tif #144
- 01_ROI80009.tif #161
- 01_ROI80010.tif #178
- 01_ROI80011.tif #195
- 01_ROI80012.tif #212
- 01_ROI80013.tif #229
- 01_ROI80014.tif #246
- 01_ROI80015.tif #263

Montage mode

mode : least squares (linear feature correspondences)

OK Cancel

Log

File Edit Font

```
358: 11 46203893054901 13.986539989528968
359: 11 461322008355966 13.986539989528968
360: 11 460609124710308 13.986539989528968
361: 11 459900339469494 13.986539989528968
362: 11 459195149463572 13.986539989528968
363: 11 45849364769823 13.986539989528968
364: 11 45779592631838 13.986539989528968
365: 11 457102399184196 13.986539989528968
366: 11 456412444113461 13.986539989528968
367: 11 455726297559893 13.986539989528968
368: 11 455043939608391 13.986539989528968
369: 11 454365098555856 13.986539989528968
370: 11 453690083303913 13.986539989528968
371: 11 453018983127612 13.986539989528968
372: 11 4523512369712 13.986539989528968
373: 11 451687599585684 13.986539989528968
374: 11 451026495595633 13.986539989528968
375: 11 450369152969213 13.986539989528968
376: 11 449715375210603 13.986539989528968
377: 11 449064923239735 13.986539989528968
378: 11 44841839687345 13.986539989528968
379: 11 447775010229696 13.986539989528968
380: 11 447134853347615 13.986539989528968
381: 11 44649814115376 13.986539989528968
382: 11 445864778993038 13.986539989528968
383: 11 445234487455702 13.986539989528968
384: 11 444607293986959 13.986539989528968
385: 11 4439835946503 13.986539989528968
386: 11 443363440348817 13.986539989528968
387: 11 442746533619772 13.986539989528968
388: 11 442132574089664 13.986539989528968
389: 11 441521835438618 13.986539989528968
```

Successfully optimized configuration of 289 tiles after 390 iterations:
average displacement: 11.204px
minimal displacement: 2.039px
maximal displacement: 33.506px
Montage done.
Using 0 images as reference.

5) Alignment after lens correction

Template: anything

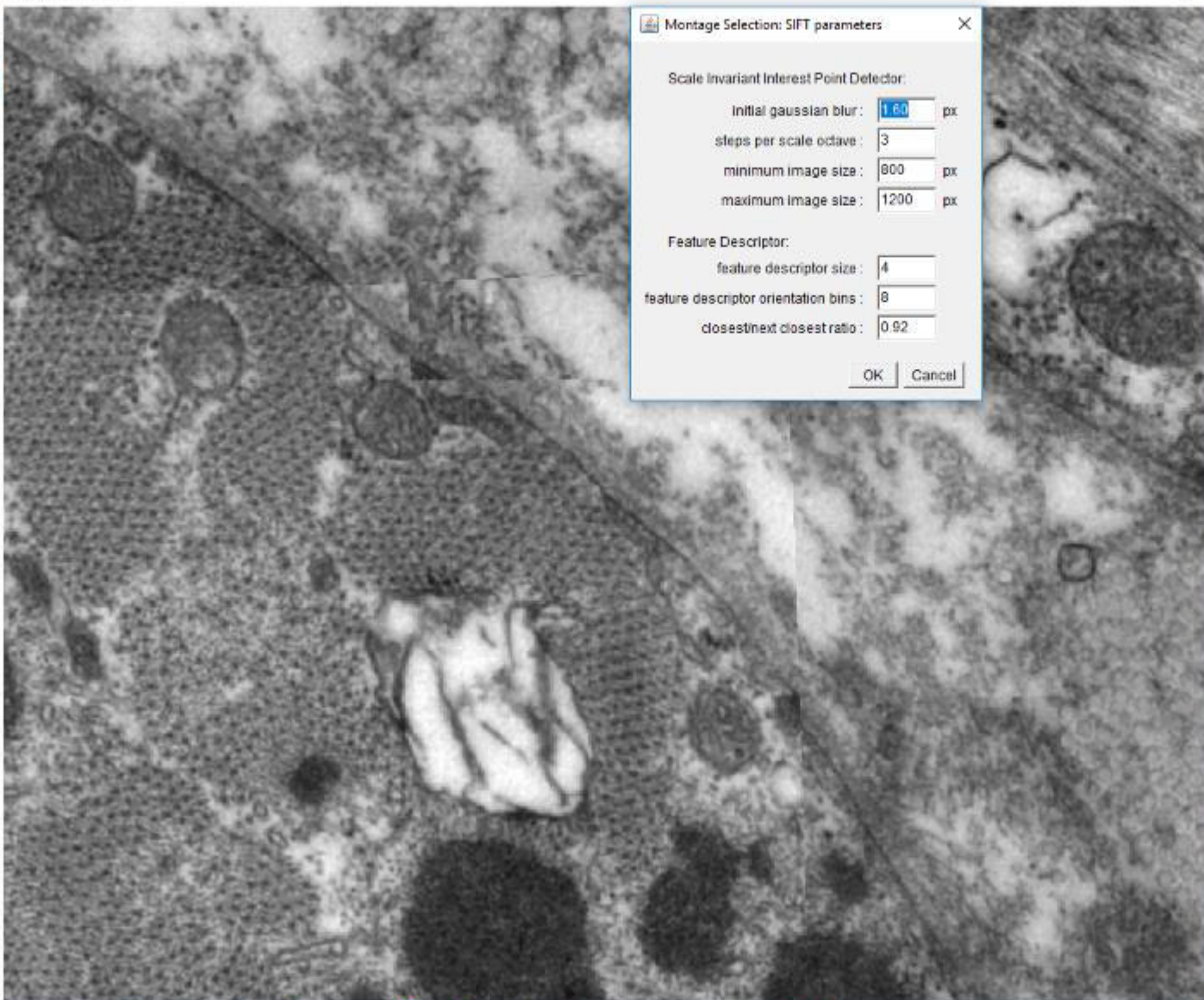
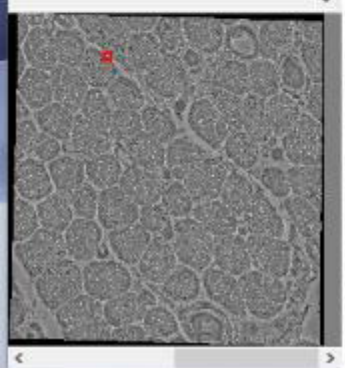
Project Objects: Untitled 0 [project]

Layers: Top Level [layer set], 1: z=0.0 [layer], 2: z=-0.0 [layer]

2/2 z=0.0 pixels (143.3%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers: Tool options, Annotations, Live filter, Patches, Profiles, Z space, Opacity, Labels

- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144
- 01_ROI80009.tif
- #161
- 01_ROI80010.tif
- #178
- 01_ROI80011.tif
- #195
- 01_ROI80012.tif
- #212
- 01_ROI80013.tif
- #229
- 01_ROI80014.tif
- #246
- 01_ROI80015.tif
- #263



Montage Selection: SIFT parameters

Scale Invariant Interest Point Detector:

- Initial gaussian blur: 1.60 px
- steps per scale octave: 3
- minimum image size: 800 px
- maximum image size: 1200 px

Feature Descriptor:

- feature descriptor size: 4
- feature descriptor orientation bins: 8
- closest/next closest ratio: 0.92

OK Cancel

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 3 seconds

Log

File Edit Font

```
358: 11 46203893054901 13.986539989528968
359: 11 461322008355966 13.986539989528968
360: 11 460609124710308 13.986539989528968
361: 11 459900339469494 13.986539989528968
362: 11 459195149463572 13.986539989528968
363: 11 45849364769823 13.986539989528968
364: 11 45779592631838 13.986539989528968
365: 11 457102399184196 13.986539989528968
366: 11 456412444113461 13.986539989528968
367: 11 455726297559893 13.986539989528968
368: 11 455043939608391 13.986539989528968
369: 11 454365098555856 13.986539989528968
370: 11 453690083303913 13.986539989528968
371: 11 453018983127612 13.986539989528968
372: 11 4523512369712 13.986539989528968
373: 11 451687599585684 13.986539989528968
374: 11 451026495595633 13.986539989528968
375: 11 450369152969213 13.986539989528968
376: 11 449715375210603 13.986539989528968
377: 11 449064923239735 13.986539989528968
378: 11 44841839687345 13.986539989528968
379: 11 447775010229696 13.986539989528968
380: 11 447134853347615 13.986539989528968
381: 11 44649814115376 13.986539989528968
382: 11 445864778993038 13.986539989528968
383: 11 445234487455702 13.986539989528968
384: 11 444607293986959 13.986539989528968
385: 11 4439835946503 13.986539989528968
386: 11 443363440348817 13.986539989528968
387: 11 442746533619772 13.986539989528968
388: 11 442132574089664 13.986539989528968
389: 11 441521835438618 13.986539989528968
```

Successfully optimized configuration of 289 tiles after 390 iterations:

- average displacement: 11.204px
- minimal displacement: 2.039px
- maximal displacement: 33.506px

Montage done.

Using 0 images as reference.

5) Alignment after lens correction

Template: anything

Project Objects: Untitled 0 [project]

Layers: Top Level [layer set], 1: z=0.0 [layer], 2: z=0.0 [layer]

(Fiji Is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 6 seconds

2/2 z=0.0 pixels (143.3%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Montage Selection: Geometric Conse...
maximal alignment error: 20.00 px
minimal inlier ratio: 0.00
minimal number of inliers: 5
expecded transformation: Translation
 ignore constant background
tolerance: 0.50 px
OK Cancel

Layers: Tool options Annotations Live filter Patches Profiles Z space Opacity Labels

- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144
- 01_ROI80009.tif
- #161
- 01_ROI80010.tif
- #178
- 01_ROI80011.tif
- #195
- 01_ROI80012.tif
- #212
- 01_ROI80013.tif
- #229
- 01_ROI80014.tif
- #246
- 01_ROI80015.tif
- #263

Log

File Edit Font

```
358: 11 46203893054901 13.986539989528968
359: 11 461322008355966 13.986539989528968
360: 11 460609124710308 13.986539989528968
361: 11 459900339469494 13.986539989528968
362: 11 459195149463572 13.986539989528968
363: 11 45849364769823 13.986539989528968
364: 11 45779592631838 13.986539989528968
365: 11 457102399184196 13.986539989528968
366: 11 456412444113461 13.986539989528968
367: 11 455726297559893 13.986539989528968
368: 11 455043939608391 13.986539989528968
369: 11 454365098555856 13.986539989528968
370: 11 453690083303913 13.986539989528968
371: 11 453018983127612 13.986539989528968
372: 11 4523512369712 13.986539989528968
373: 11 451687599585684 13.986539989528968
374: 11 451026495595633 13.986539989528968
375: 11 450369152969213 13.986539989528968
376: 11 449715375210603 13.986539989528968
377: 11 449064923239735 13.986539989528968
378: 11 44841839687345 13.986539989528968
379: 11 447775010229696 13.986539989528968
380: 11 447134853347615 13.986539989528968
381: 11 44649814115376 13.986539989528968
382: 11 445864778993038 13.986539989528968
383: 11 445234487455702 13.986539989528968
384: 11 444607293986959 13.986539989528968
385: 11 4439835946503 13.986539989528968
386: 11 443363440348817 13.986539989528968
387: 11 442746533619772 13.986539989528968
388: 11 442132574089664 13.986539989528968
389: 11 441521835438618 13.986539989528968
```

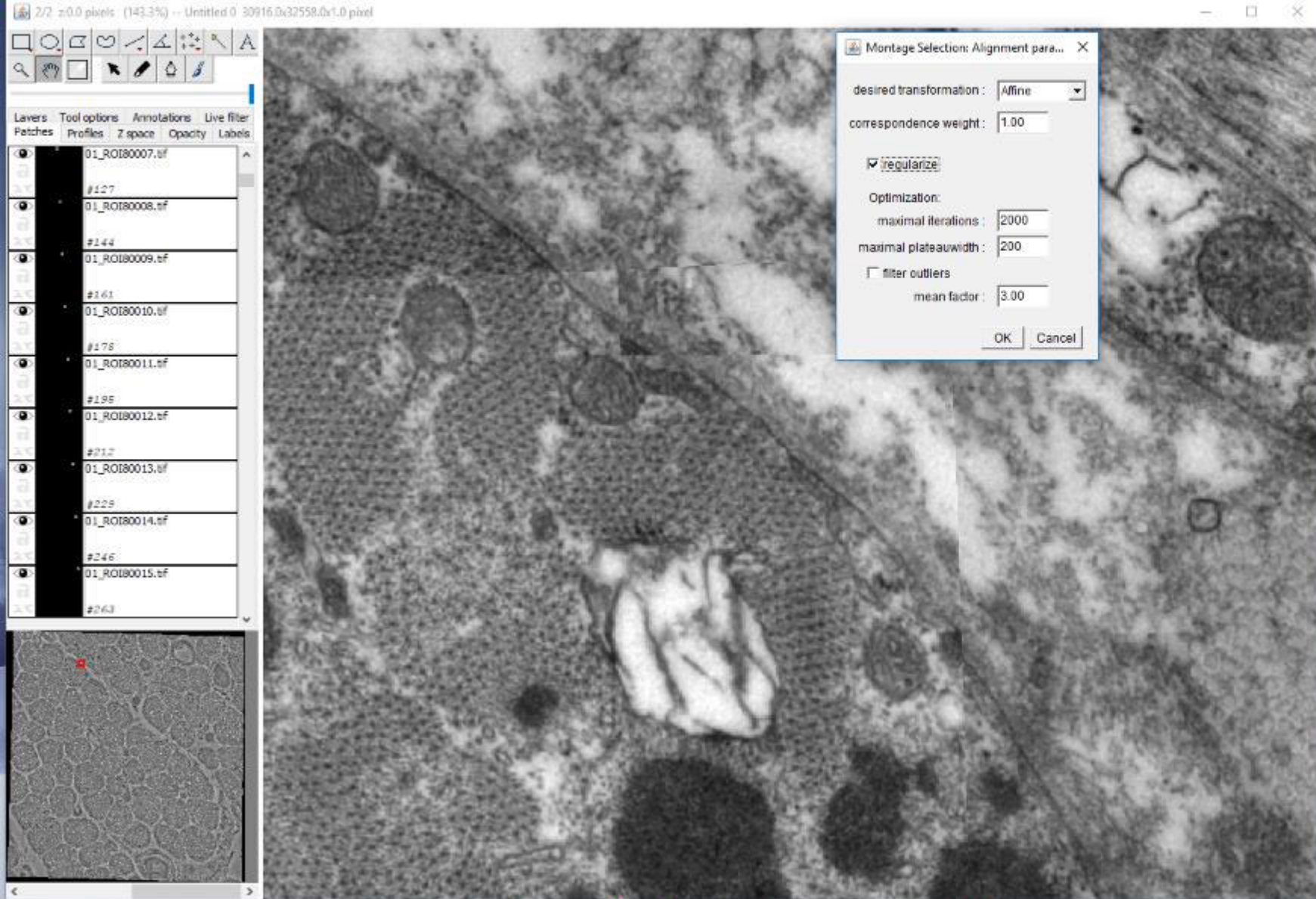
Successfully optimized configuration of 289 tiles after 390 iterations:
average displacement: 11.204px
minimal displacement: 2.039px
maximal displacement: 33.506px
Montage done.
Using 0 images as reference.

5) Alignment after lens correction

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]



(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 12 seconds

Log

File Edit Font

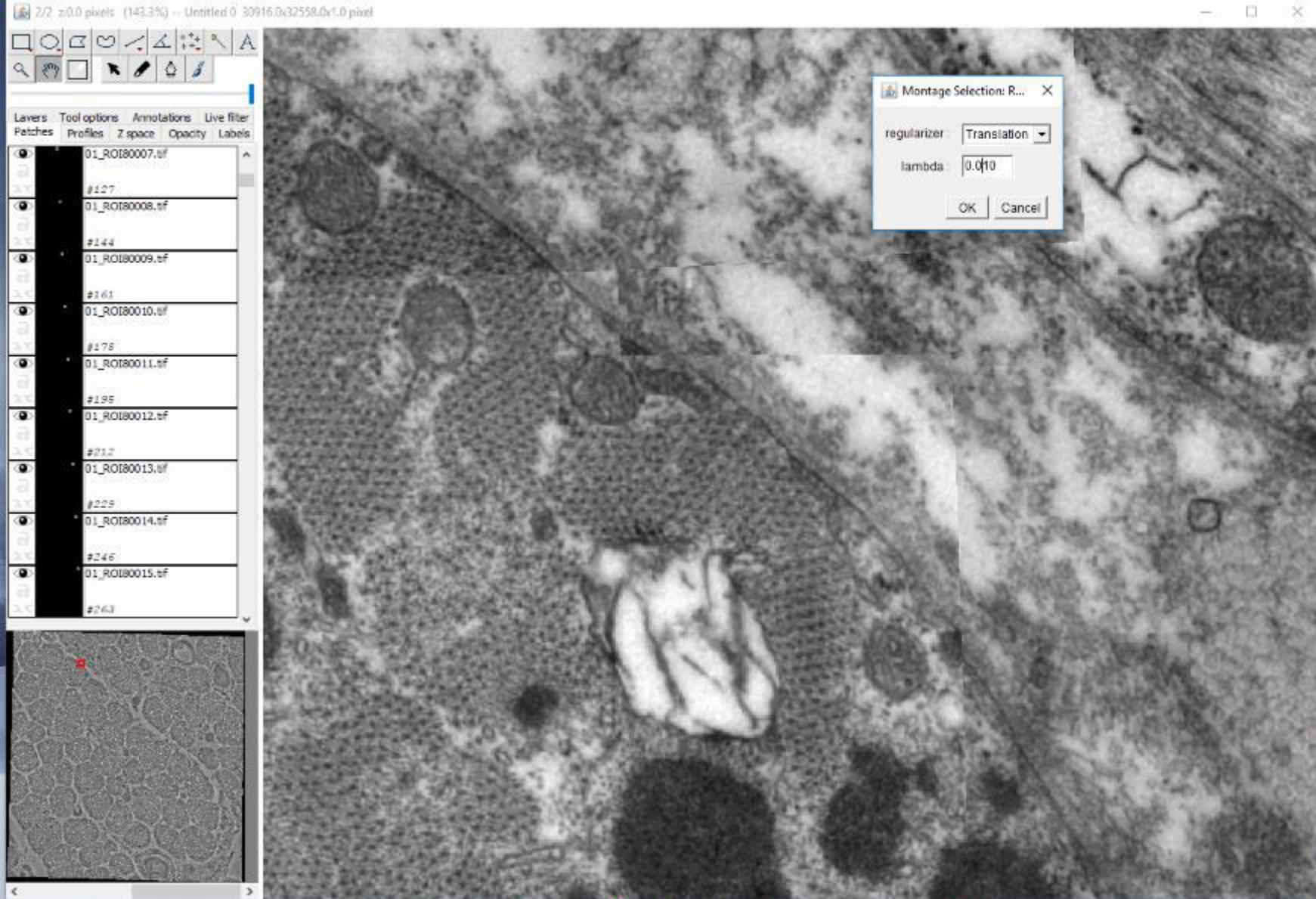
```
358: 11 46203893054901 13.986539989528968
359: 11 461322008355966 13.986539989528968
360: 11 460609124710308 13.986539989528968
361: 11 459900339469494 13.986539989528968
362: 11 459195149463572 13.986539989528968
363: 11 45849364769823 13.986539989528968
364: 11 45779592631838 13.986539989528968
365: 11 457102399184196 13.986539989528968
366: 11 456412444113461 13.986539989528968
367: 11 455726297559893 13.986539989528968
368: 11 455043939608391 13.986539989528968
369: 11 454365098555856 13.986539989528968
370: 11 453690083303913 13.986539989528968
371: 11 453018983127612 13.986539989528968
372: 11 4523512369712 13.986539989528968
373: 11 451687599585684 13.986539989528968
374: 11 451026495595633 13.986539989528968
375: 11 450369152969213 13.986539989528968
376: 11 449715375210603 13.986539989528968
377: 11 449064923239735 13.986539989528968
378: 11 44841839687345 13.986539989528968
379: 11 447775010229696 13.986539989528968
380: 11 447134853347615 13.986539989528968
381: 11 44649814115376 13.986539989528968
382: 11 445864778993038 13.986539989528968
383: 11 445234487455702 13.986539989528968
384: 11 444607293986959 13.986539989528968
385: 11 4439835946503 13.986539989528968
386: 11 443363440348817 13.986539989528968
387: 11 442746533619772 13.986539989528968
388: 11 442132574089664 13.986539989528968
389: 11 441521835438618 13.986539989528968
Successfully optimized configuration of 289 tiles after 390 iterations:
average displacement: 11.204px
minimal displacement: 2.039px
maximal displacement: 33.506px
Montage done.
Using 0 images as reference.
```


5) Alignment after lens correction

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=-0.0 [layer]



(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 17 seconds

Log

File Edit Font

```
358: 11 46203893054901 13.986539989528968
359: 11 461322008355966 13.986539989528968
360: 11 460609124710308 13.986539989528968
361: 11 459900339469494 13.986539989528968
362: 11 459195149463572 13.986539989528968
363: 11 45849364769823 13.986539989528968
364: 11 45779592631838 13.986539989528968
365: 11 457102399184196 13.986539989528968
366: 11 456412444113461 13.986539989528968
367: 11 455726297559893 13.986539989528968
368: 11 455043939608391 13.986539989528968
369: 11 454365098555856 13.986539989528968
370: 11 453690083303913 13.986539989528968
371: 11 453018983127612 13.986539989528968
372: 11 4523512369712 13.986539989528968
373: 11 451687599585684 13.986539989528968
374: 11 451026495595633 13.986539989528968
375: 11 450369152969213 13.986539989528968
376: 11 449715375210603 13.986539989528968
377: 11 449064923239735 13.986539989528968
378: 11 44841839687345 13.986539989528968
379: 11 447775010229696 13.986539989528968
380: 11 447134853347615 13.986539989528968
381: 11 44649814115376 13.986539989528968
382: 11 445864778993038 13.986539989528968
383: 11 445234487455702 13.986539989528968
384: 11 444607293986959 13.986539989528968
385: 11 4439835946503 13.986539989528968
386: 11 443363440348817 13.986539989528968
387: 11 442746533619772 13.986539989528968
388: 11 442132574089664 13.986539989528968
389: 11 441521835438618 13.986539989528968
```

Successfully optimized configuration of 289 tiles after 390 iterations:
average displacement: 11.204px
minimal displacement: 2.039px
maximal displacement: 33.506px
Montage done.
Using 0 images as reference.

5) Alignment after lens correction

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

(Fiji Is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Aligning images - 20 seconds

2/2 z=0.0 pixels (143.3%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers
Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels

- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144
- 01_ROI80009.tif
- #161
- 01_ROI80010.tif
- #178
- 01_ROI80011.tif
- #195
- 01_ROI80012.tif
- #212
- 01_ROI80013.tif
- #229
- 01_ROI80014.tif
- #246
- 01_ROI80015.tif
- #263

Montage Selection: Miscellaneous

- files are roughly in place
- sloppy overlap test (fast)
- consider largest graph only
- hide tiles from non-largest graph
- delete tiles from non-largest graph

OK Cancel

Log

File Edit Font

```
358: 11 46203893054901 13.986539989528968
359: 11 461322008355966 13.986539989528968
360: 11 460609124710308 13.986539989528968
361: 11 459900339469494 13.986539989528968
362: 11 459195149463572 13.986539989528968
363: 11 45849364769823 13.986539989528968
364: 11 45779592631838 13.986539989528968
365: 11 457102399184196 13.986539989528968
366: 11 456412444113461 13.986539989528968
367: 11 455726297559893 13.986539989528968
368: 11 455043939608391 13.986539989528968
369: 11 454365098555856 13.986539989528968
370: 11 453690083303913 13.986539989528968
371: 11 453018983127612 13.986539989528968
372: 11 4523512369712 13.986539989528968
373: 11 451687599585684 13.986539989528968
374: 11 451026495595633 13.986539989528968
375: 11 450369152969213 13.986539989528968
376: 11 449715375210603 13.986539989528968
377: 11 449064923239735 13.986539989528968
378: 11 44841839687345 13.986539989528968
379: 11 447775010229696 13.986539989528968
380: 11 447134853347615 13.986539989528968
381: 11 44649814115376 13.986539989528968
382: 11 445864778993038 13.986539989528968
383: 11 445234487455702 13.986539989528968
384: 11 444607293986959 13.986539989528968
385: 11 4439835946503 13.986539989528968
386: 11 443363440348817 13.986539989528968
387: 11 442746533619772 13.986539989528968
388: 11 442132574089664 13.986539989528968
389: 11 441521835438618 13.986539989528968
Successfully optimized configuration of 289 tiles after 390 iterations:
average displacement: 11.204px
minimal displacement: 2.039px
maximal displacement: 33.506px
Montage done.
Using 0 images as reference.
```


5) Alignment after lens correction

Template: anything

Project Objects: Untitled 0 [project]

Layers: Top Level [layer set], 1: z=0.0 [layer], 2: z=0.0 [layer]

(Fiji Is Just) ImageJ

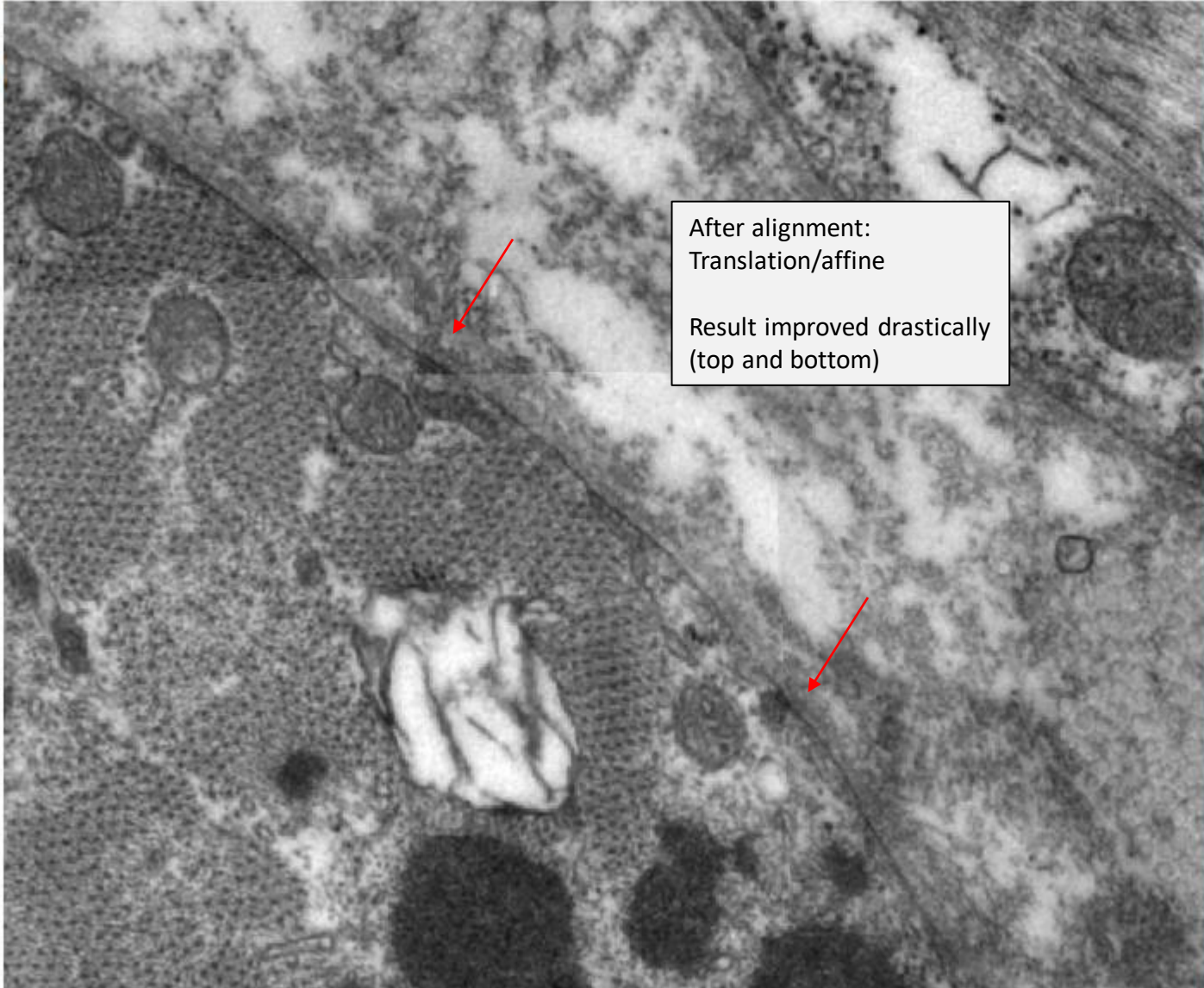
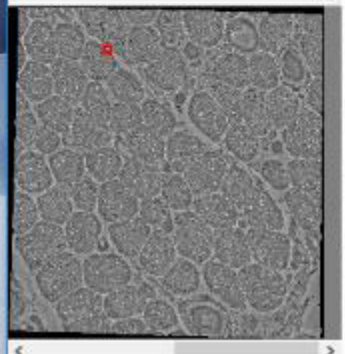
File Edit Image Process Analyze Plugins Window Help

Creating bucket 30720,30720,196,1838

2/2 z:0.0 pixels (143.3%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers: Patches, Profiles, Z space, Opacity, Labels

- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144
- 01_ROI80009.tif
- #161
- 01_ROI80010.tif
- #178
- 01_ROI80011.tif
- #195
- 01_ROI80012.tif
- #212
- 01_ROI80013.tif
- #229
- 01_ROI80014.tif
- #246
- 01_ROI80015.tif
- #263



After alignment:
Translation/affine
Result improved drastically
(top and bottom)

Log

File Edit Font

```
413: 1.3525600172547187 2.7149232919544035
414: 1.3524631230773159 2.7149232919544035
415: 1.3523664932720942 2.7149232919544035
416: 1.3522701420616434 2.7149232919544035
417: 1.3521741426488776 2.7149232919544035
418: 1.3520783073482017 2.7149232919544035
419: 1.3519827440433319 2.7149232919544035
420: 1.3518874484908612 2.7149232919544035
421: 1.3517924489849276 2.7149232919544035
422: 1.3516978011119767 2.7149232919544035
423: 1.3516033099928804 2.7149232919544035
424: 1.3515091176771065 2.7149232919544035
425: 1.3514151365775081 2.7149232919544035
426: 1.3513213734854859 2.7149232919544035
427: 1.3512278893691132 2.7149232919544035
428: 1.3511346589328293 2.7149232919544035
429: 1.3510417430868573 2.7149232919544035
430: 1.3509490163428344 2.7149232919544035
431: 1.350856531996225 2.7149232919544035
432: 1.3507643423576992 2.7149232919544035
433: 1.3506723118072421 2.7149232919544035
434: 1.3505806018786128 2.7149232919544035
435: 1.3504890876861482 2.7149232919544035
436: 1.3503978508127772 2.7149232919544035
437: 1.350306868777373 2.7149232919544035
438: 1.350216083775371 2.7149232919544035
439: 1.3501255446925509 2.7149232919544035
440: 1.3500353532169262 2.7149232919544035
441: 1.3499453268200714 2.7149232919544035
442: 1.3498555444034754 2.7149232919544035
443: 1.349765968810303 2.7149232919544035
444: 1.3496766028338512 2.7149232919544035
445: 1.3495874463951323 2.7149232919544035
Successfully optimized configuration of 289 tiles after 446 iterations:
average displacement: 1.310px
minimal displacement: 0.973px
maximal displacement: 1.979px
Montage done.
```


6) Remove filter

Template
● anything

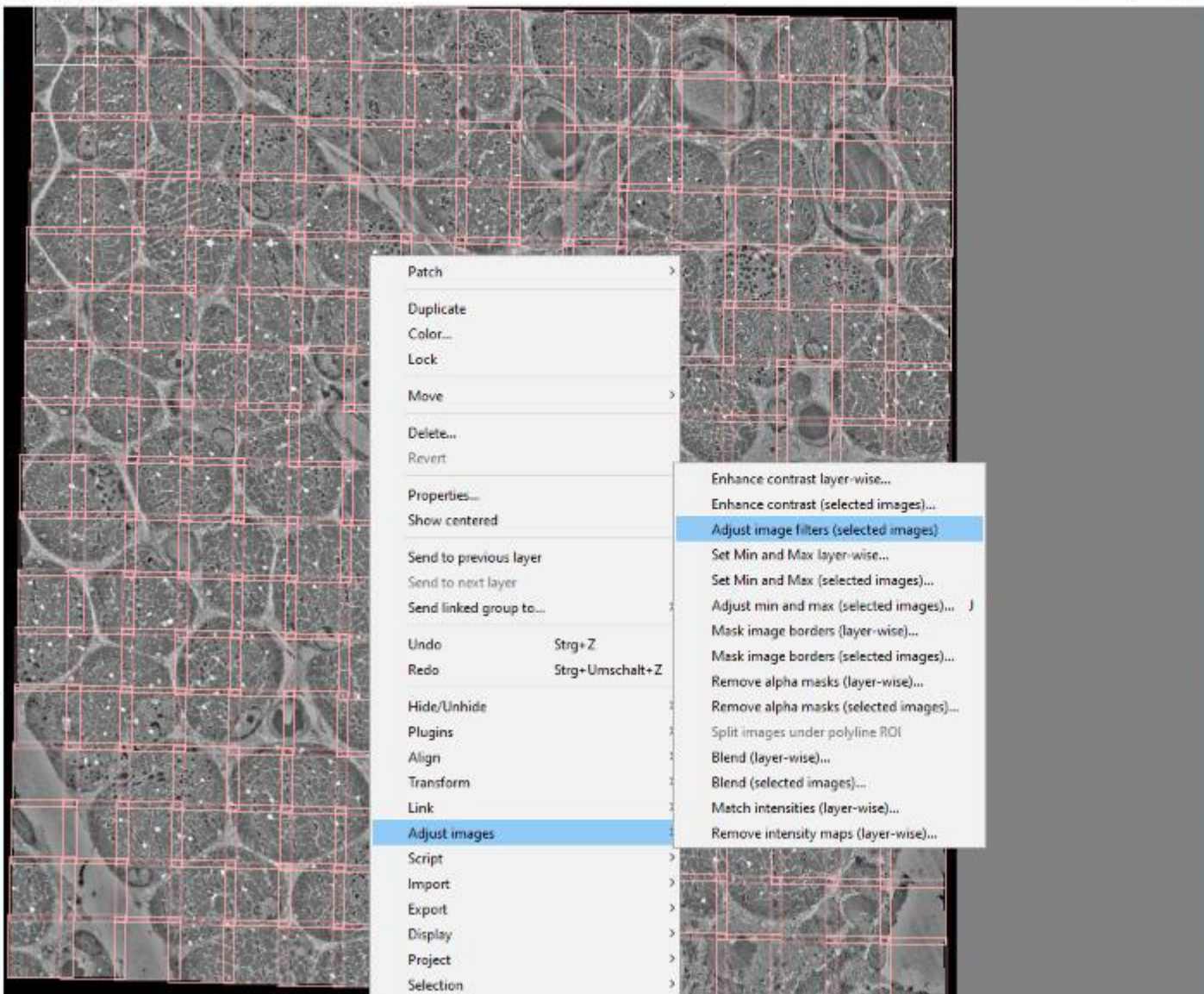
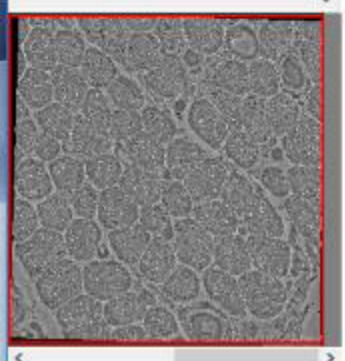
Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

2/2 z:0.0 pixels (2.7%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels

- 01_ROI80000.tif
- #8
- 01_ROI80001.tif
- #25
- 01_ROI80002.tif
- #47
- 01_ROI80003.tif
- #59
- 01_ROI80004.tif
- #76
- 01_ROI80005.tif
- #93
- 01_ROI80006.tif
- #110
- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144



Patch

- Duplicate
- Color...
- Lock
- Move
- Delete...
- Revert
- Properties...
- Show centered
- Send to previous layer
- Send to next layer
- Send linked group to...
- Undo Strg+Z
- Redo Strg+Umschalt+Z
- Hide/Unhide
- Plugins
- Align
- Transform
- Link
- Adjust images
- Script
- Import
- Export
- Display
- Project
- Selection
- Tool
- Search... Strg+F

Enhance contrast layer-wise...

Enhance contrast (selected images)...

Adjust image filters (selected images)

Set Min and Max layer-wise...

Set Min and Max (selected images)...

Adjust min and max (selected images)...

Mask image borders (layer-wise)...

Mask image borders (selected images)...

Remove alpha masks (layer-wise)...

Remove alpha masks (selected images)...

Split images under polyline ROI

Blend (layer-wise)...

Blend (selected images)...

Match intensities (layer-wise)...

Remove intensity maps (layer-wise)...

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=11856 pixel, y=8771 pixel, value=199 [Patch #114]

Log

File Edit Font

```
413: 1.3525600172547187 2.7149232919544035
414: 1.3524631230773159 2.7149232919544035
415: 1.3523664932720942 2.7149232919544035
416: 1.3522701420616434 2.7149232919544035
417: 1.3521741428488776 2.7149232919544035
418: 1.3520783073482017 2.7149232919544035
419: 1.3519827440433319 2.7149232919544035
420: 1.3518874484908612 2.7149232919544035
421: 1.3517924489849276 2.7149232919544035
422: 1.3516978011119767 2.7149232919544035
423: 1.3516033099928804 2.7149232919544035
424: 1.3515091176771055 2.7149232919544035
425: 1.3514151365775081 2.7149232919544035
426: 1.3513213734854859 2.7149232919544035
427: 1.3512278893691132 2.7149232919544035
428: 1.3511346589328293 2.7149232919544035
429: 1.3510417430868573 2.7149232919544035
430: 1.3509490163428344 2.7149232919544035
431: 1.350856531995225 2.7149232919544035
432: 1.3507643423576932 2.7149232919544035
433: 1.3506723118072421 2.7149232919544035
434: 1.3505806018786128 2.7149232919544035
435: 1.3504890876861482 2.7149232919544035
436: 1.3503978508127772 2.7149232919544035
437: 1.350306868777373 2.7149232919544035
438: 1.350216083775371 2.7149232919544035
439: 1.3501255446925509 2.7149232919544035
440: 1.3500353532169262 2.7149232919544035
441: 1.3499453268200714 2.7149232919544035
442: 1.3498555444034754 2.7149232919544035
443: 1.349765968810303 2.7149232919544035
444: 1.3496766028338512 2.7149232919544035
445: 1.3495874463951323 2.7149232919544035
Successfully optimized configuration of 289 tiles after 446 iterations:
average displacement: 1.310px
minimal displacement: 0.973px
maximal displacement: 1.979px
Montage done.
```

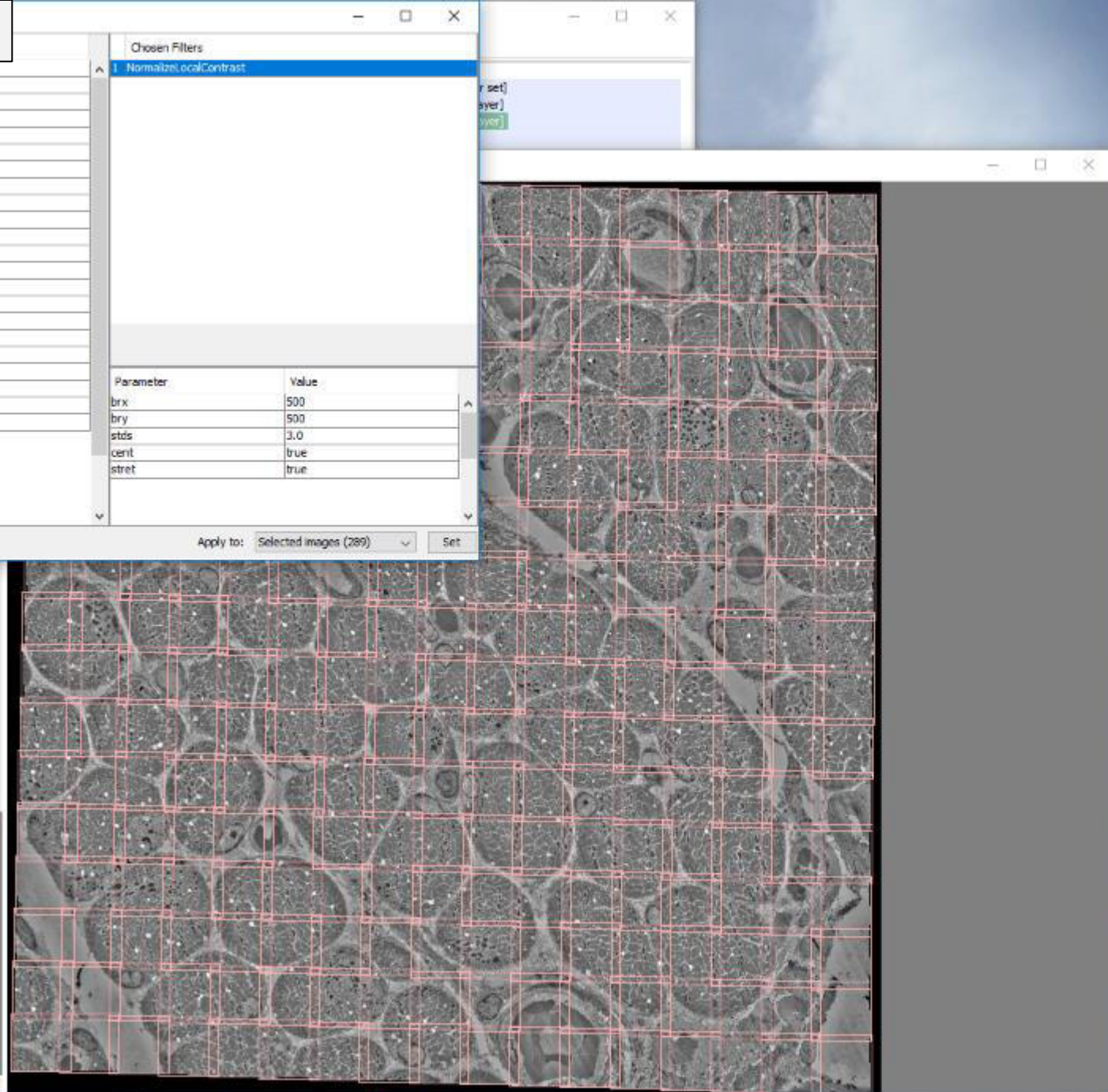

6) Remove filter

Chosen Filters

- CLAHE
- NormalizeLocalContrast
- EqualizeHistogram
- EnhanceContrast
- ResetMinAndMax
- DefaultMinAndMax
- GaussianBlur
- Invert
- Normalize
- RankFilter
- RobustNormalizeLocalContrast
- ValueToNoise
- SubtractBackground
- CorrectBackground
- LUTRed
- LUTGreen
- LUTBlue
- LUTMagenta
- LUTCyan
- LUTYellow
- LUTOrange
- LUTCustom

Parameter	Value
brx	500
bry	500
stds	3.0
cent	true
stret	true

Apply to: Selected Images (289) Set



(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=17597 pixel, y=6944 pixel, value=113 [Patch #164]

Log

File Edit Font

```
413: 1.3525600172547187 2.7149232919544035
414: 1.3524631230773159 2.7149232919544035
415: 1.3523664932720942 2.7149232919544035
416: 1.3522701420616434 2.7149232919544035
417: 1.3521741426488776 2.7149232919544035
418: 1.3520783073482017 2.7149232919544035
419: 1.3519827440433319 2.7149232919544035
420: 1.3518874484908612 2.7149232919544035
421: 1.3517924489849276 2.7149232919544035
422: 1.3516978011119767 2.7149232919544035
423: 1.3516033099928804 2.7149232919544035
424: 1.3515091176771065 2.7149232919544035
425: 1.3514151365775081 2.7149232919544035
426: 1.3513213734854859 2.7149232919544035
427: 1.3512278893691132 2.7149232919544035
428: 1.3511346589328293 2.7149232919544035
429: 1.3510417430868573 2.7149232919544035
430: 1.3509490163428344 2.7149232919544035
431: 1.350856531996225 2.7149232919544035
432: 1.3507643423576992 2.7149232919544035
433: 1.3506723118072421 2.7149232919544035
434: 1.3505806018786128 2.7149232919544035
435: 1.3504890876861482 2.7149232919544035
436: 1.3503978508127772 2.7149232919544035
437: 1.350306868777373 2.7149232919544035
438: 1.350216083775371 2.7149232919544035
439: 1.3501255446925509 2.7149232919544035
440: 1.3500353532169262 2.7149232919544035
441: 1.3499453268200714 2.7149232919544035
442: 1.3498555444034754 2.7149232919544035
443: 1.349765968810303 2.7149232919544035
444: 1.3496766028338512 2.7149232919544035
445: 1.3495874463951323 2.7149232919544035
Successfully optimized configuration of 289 tiles after 446 iterations:
average displacement: 1.310px
minimal displacement: 0.973px
maximal displacement: 1.979px
Montage done.
```

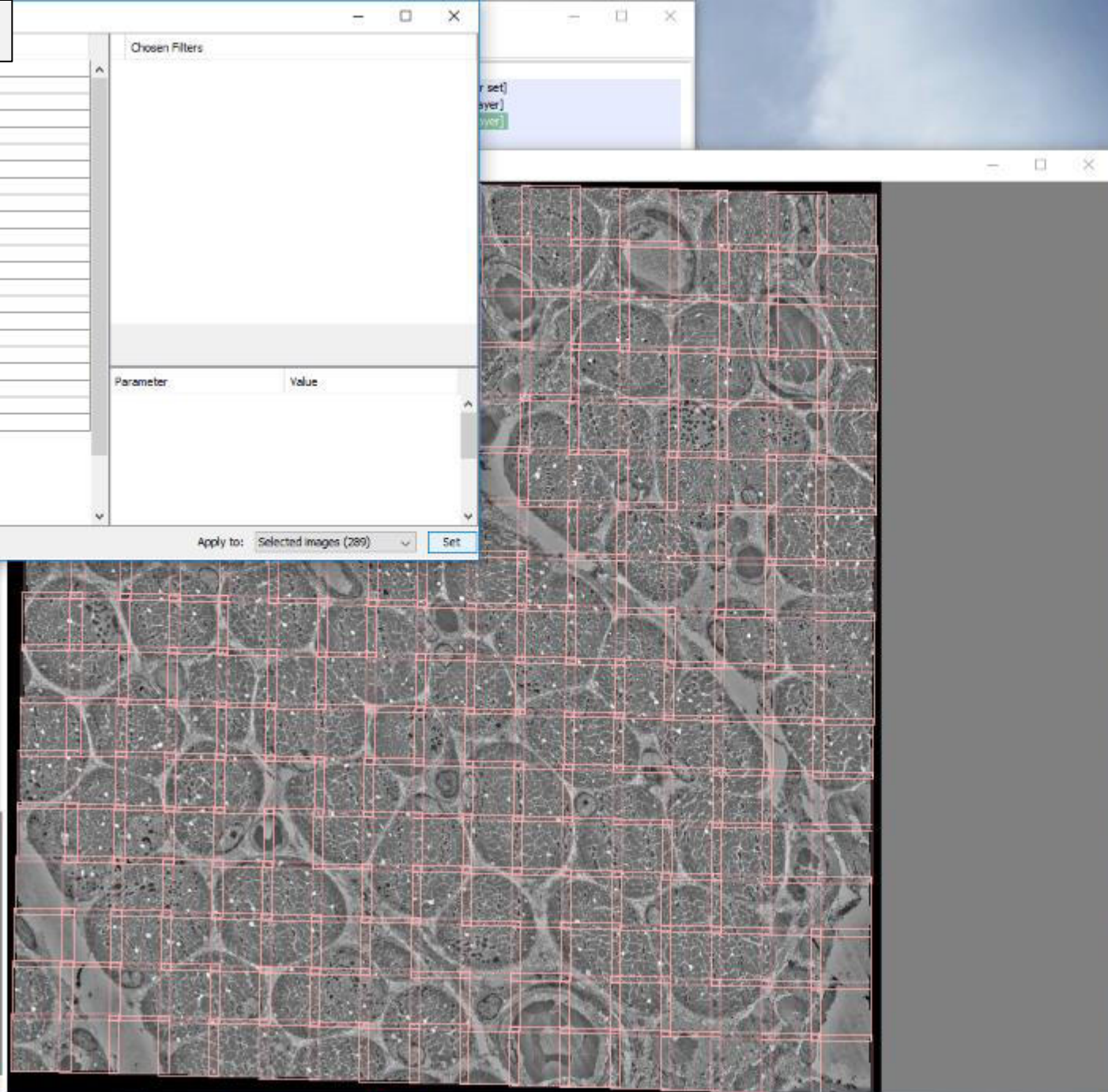

6) Remove filter

Chosen Filters

- CLAHE
- NormalizeLocalContrast
- EqualizeHistogram
- EnhanceContrast
- ResetMinAndMax
- DefaultMinAndMax
- GaussianBlur
- Invert
- Normalize
- RankFilter
- RobustNormalizeLocalContrast
- ValueToNoise
- SubtractBackground
- CorrectBackground
- LUTRed
- LUTGreen
- LUTBlue
- LUTMagenta
- LUTCyan
- LUTYellow
- LUTOrange
- LUTCustom

Parameter Value

Apply to: Selected Images (289) Set



(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=16330 pixel, y=13916 pixel, value=139 [Patch #151]

Log

File Edit Font

```
413: 1.3525600172547187 2.7149232919544035
414: 1.3524631230773159 2.7149232919544035
415: 1.3523664932720942 2.7149232919544035
416: 1.3522701420616434 2.7149232919544035
417: 1.3521741426488776 2.7149232919544035
418: 1.3520783073482017 2.7149232919544035
419: 1.3519827440433319 2.7149232919544035
420: 1.3518874484908612 2.7149232919544035
421: 1.3517924489849276 2.7149232919544035
422: 1.3516978011119767 2.7149232919544035
423: 1.3516033099928804 2.7149232919544035
424: 1.3515091176771065 2.7149232919544035
425: 1.3514151365775081 2.7149232919544035
426: 1.3513213734854859 2.7149232919544035
427: 1.3512278893691132 2.7149232919544035
428: 1.3511346589328293 2.7149232919544035
429: 1.3510417430868573 2.7149232919544035
430: 1.3509490163428344 2.7149232919544035
431: 1.350856531996225 2.7149232919544035
432: 1.3507643423576932 2.7149232919544035
433: 1.3506723118072421 2.7149232919544035
434: 1.3505806018786128 2.7149232919544035
435: 1.3504890876861482 2.7149232919544035
436: 1.3503978508127772 2.7149232919544035
437: 1.350306868777373 2.7149232919544035
438: 1.350216083775371 2.7149232919544035
439: 1.3501255446925509 2.7149232919544035
440: 1.3500353532169262 2.7149232919544035
441: 1.3499453268200714 2.7149232919544035
442: 1.3498555444034754 2.7149232919544035
443: 1.349765968810303 2.7149232919544035
444: 1.3496766028338512 2.7149232919544035
445: 1.3495874463951323 2.7149232919544035
Successfully optimized configuration of 289 tiles after 446 iterations:
average displacement: 1.310px
minimal displacement: 0.973px
maximal displacement: 1.979px
Montage done.
```

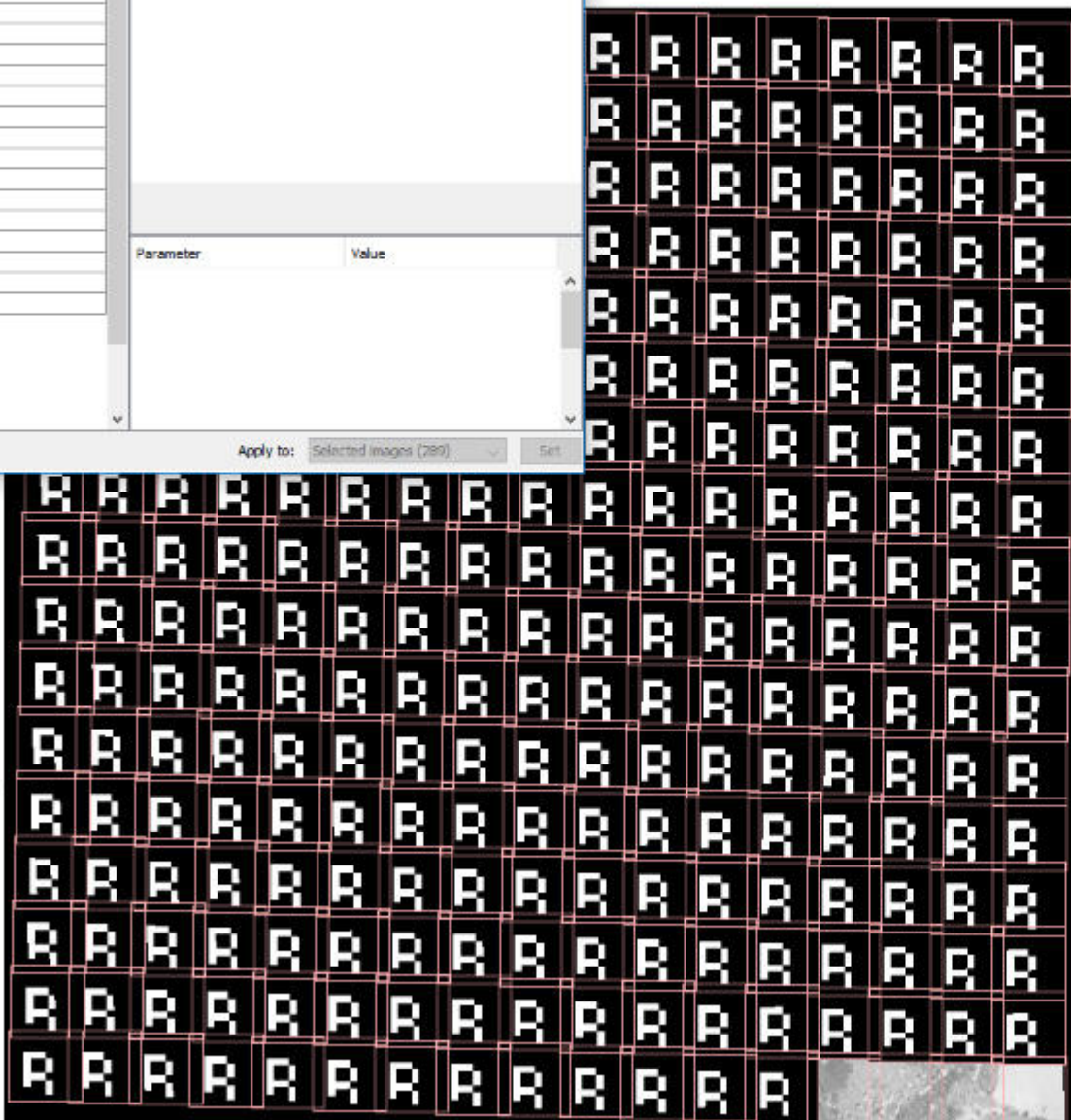

6) Remove filter

Chosen Filters

- CLAHE
- NormalizeLocalContrast
- EqualizeHistogram
- EnhanceContrast
- ResetMinAndMax
- DefaultMinAndMax
- GaussianBlur
- Invert
- Normalize
- RankFilter
- RobustNormalizeLocalContrast
- ValueToNoise
- SubtractBackground
- CorrectBackground
- LUTRed
- LUTGreen
- LUTBlue
- LUTMagenta
- LUTCyan
- LUTYellow
- LUTOrange
- LUTCustom

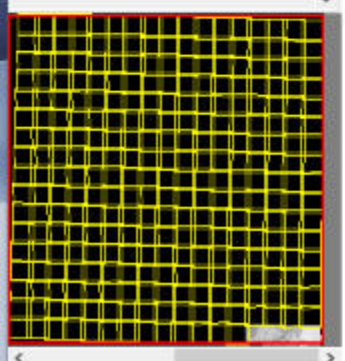
Parameter Value

Apply to: Selected images (289) Set



ROI Manager

- #76
D1_ROI80005.tif
- #93
D1_ROI80006.tif
- #110
D1_ROI80007.tif
- #127
D1_ROI80008.tif
- #144



(Fiji Is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

(Fiji Is Just) ImageJ 2.0.0-rc-54/1.51h; Java 1.8.0_66 [64-bit]

Log

File Edit Font

```
413: 1.3525600172547187 2.7149232919544035
414: 1.3524631230773159 2.7149232919544035
415: 1.3523664932720942 2.7149232919544035
416: 1.3522701420616434 2.7149232919544035
417: 1.3521741426488776 2.7149232919544035
418: 1.3520783073482017 2.7149232919544035
419: 1.3519827440433319 2.7149232919544035
420: 1.3518874484908612 2.7149232919544035
421: 1.3517924439849276 2.7149232919544035
422: 1.3516978011119767 2.7149232919544035
423: 1.3516033099928804 2.7149232919544035
424: 1.3515091176771065 2.7149232919544035
425: 1.3514151365775081 2.7149232919544035
426: 1.3513213734854859 2.7149232919544035
427: 1.3512278893691132 2.7149232919544035
428: 1.3511346589328233 2.7149232919544035
429: 1.3510417430868573 2.7149232919544035
430: 1.3509490163428344 2.7149232919544035
431: 1.350856531995225 2.7149232919544035
432: 1.3507643423576932 2.7149232919544035
433: 1.3506723118072421 2.7149232919544035
434: 1.3505806018786128 2.7149232919544035
435: 1.3504890876861482 2.7149232919544035
436: 1.3503978508127772 2.7149232919544035
437: 1.350306868777373 2.7149232919544035
438: 1.350216083775371 2.7149232919544035
439: 1.3501255446925509 2.7149232919544035
440: 1.3500353532169262 2.7149232919544035
441: 1.3499453268200714 2.7149232919544035
442: 1.3498555444034754 2.7149232919544035
443: 1.349765968810303 2.7149232919544035
444: 1.3496766028338512 2.7149232919544035
445: 1.3495874463951323 2.7149232919544035
Successfully optimized configuration of 289 tiles after 446 iterations:
average displacement: 1.310px
minimal displacement: 0.973px
maximal displacement: 1.979px
Montage done.
```


6) Remove filter

Template
● anything

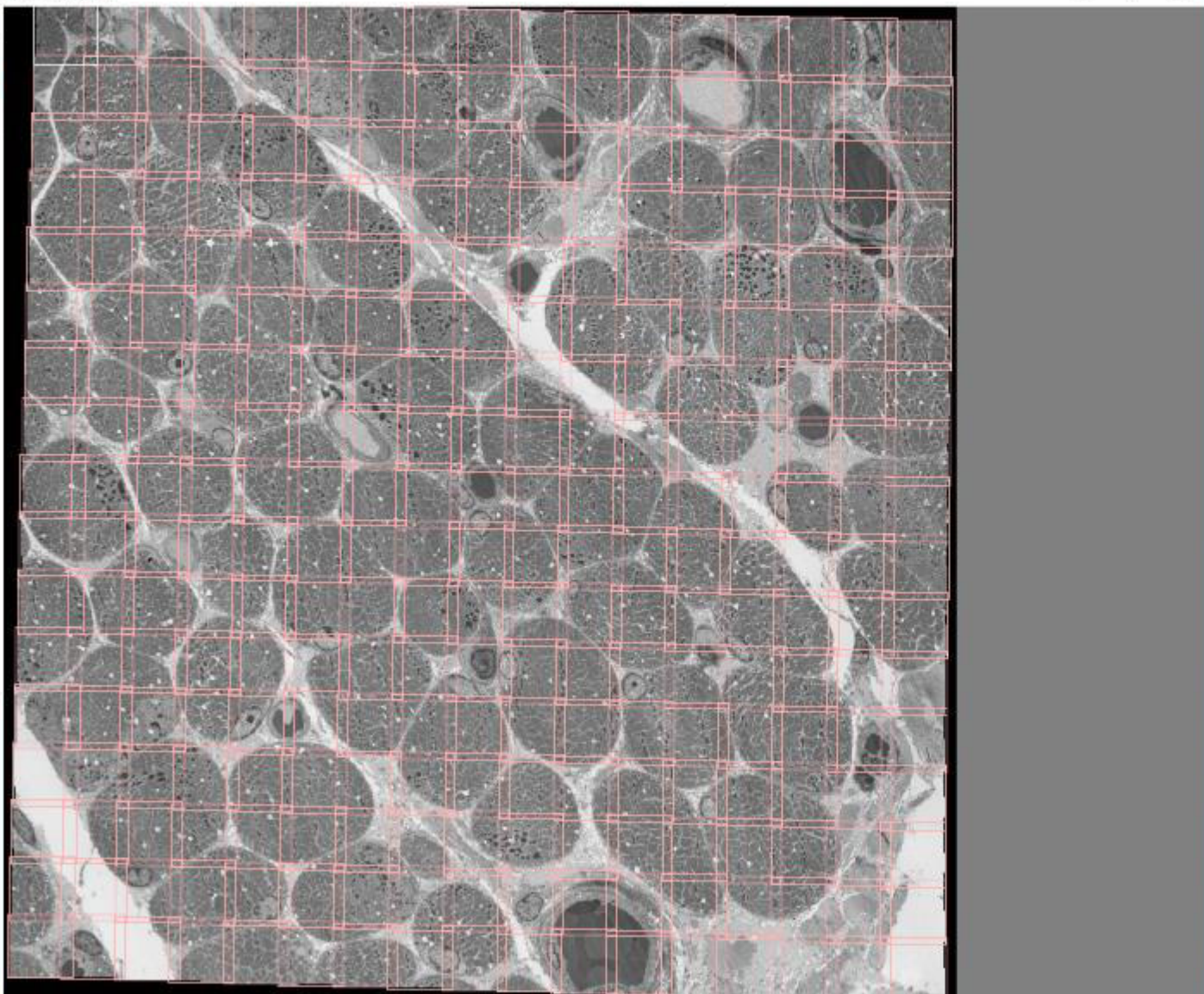
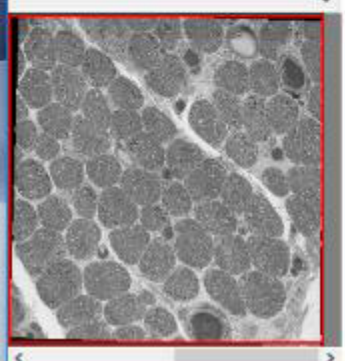
Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

2/2 z=0.0 pixels (2.7%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels

- 01_ROI80000.tif
- #8
- 01_ROI80001.tif
- #25
- 01_ROI80002.tif
- #47
- 01_ROI80003.tif
- #59
- 01_ROI80004.tif
- #76
- 01_ROI80005.tif
- #93
- 01_ROI80006.tif
- #110
- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144



(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=30460 pixel, y=420 pixel

Log

File Edit Font

```
413: 1.3525600172547187 2.7149232919544035
414: 1.3524631230773159 2.7149232919544035
415: 1.3523664932720942 2.7149232919544035
416: 1.3522701420616494 2.7149232919544035
417: 1.3521741428488776 2.7149232919544035
418: 1.3520783073482017 2.7149232919544035
419: 1.3519827440433319 2.7149232919544035
420: 1.3518874484908612 2.7149232919544035
421: 1.3517924489849276 2.7149232919544035
422: 1.3516978011119767 2.7149232919544035
423: 1.3516033099928804 2.7149232919544035
424: 1.3515091176771065 2.7149232919544035
425: 1.3514151365775081 2.7149232919544035
426: 1.3513213734854859 2.7149232919544035
427: 1.3512278893691132 2.7149232919544035
428: 1.3511346589328293 2.7149232919544035
429: 1.3510417430868573 2.7149232919544035
430: 1.3509490163428344 2.7149232919544035
431: 1.350856531996225 2.7149232919544035
432: 1.3507643423576992 2.7149232919544035
433: 1.3506723118072421 2.7149232919544035
434: 1.3505806018786128 2.7149232919544035
435: 1.3504890876861482 2.7149232919544035
436: 1.3503978508127772 2.7149232919544035
437: 1.350306868777373 2.7149232919544035
438: 1.350216083775371 2.7149232919544035
439: 1.3501255446925509 2.7149232919544035
440: 1.3500353532169262 2.7149232919544035
441: 1.3499453268200714 2.7149232919544035
442: 1.3498555444034754 2.7149232919544035
443: 1.349765968810303 2.7149232919544035
444: 1.3496766028338512 2.7149232919544035
445: 1.3495874463951323 2.7149232919544035
Successfully optimized configuration of 289 tiles after 446 iterations:
average displacement: 1.310px
minimal displacement: 0.973px
maximal displacement: 1.979px
Montage done.
```


6) Remove filter

Template
● anything

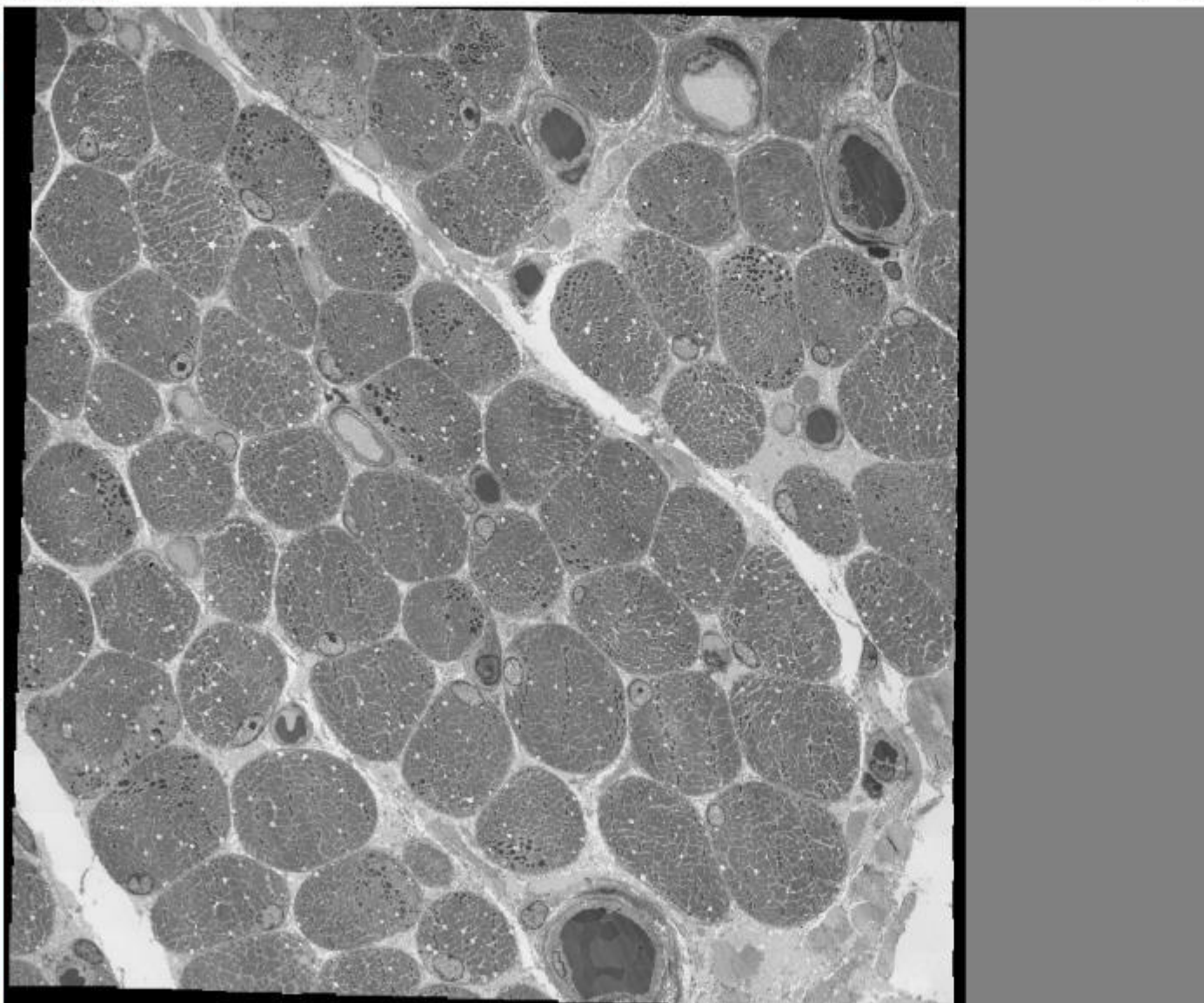
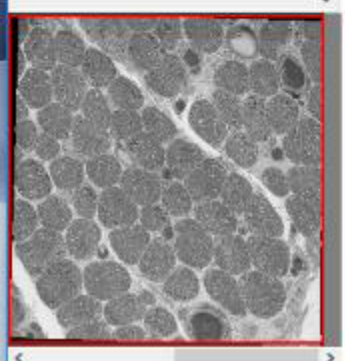
Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

2/2 z=0.0 pixels (2.7%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers Patches Tool options Annotations Live filter Profiles Z space Opacity Labels

- 01_ROI80000.tif
- #8
- 01_ROI80001.tif
- #25
- 01_ROI80002.tif
- #42
- 01_ROI80003.tif
- #59
- 01_ROI80004.tif
- #76
- 01_ROI80005.tif
- #93
- 01_ROI80006.tif
- #110
- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144



(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=30460 pixel, y=420 pixel

Log

File Edit Font

```
413: 1.3525600172547187 2.7149232919544035
414: 1.3524631230773159 2.7149232919544035
415: 1.3523664932720942 2.7149232919544035
416: 1.3522701420616434 2.7149232919544035
417: 1.3521741426488776 2.7149232919544035
418: 1.3520783073482017 2.7149232919544035
419: 1.3519827440433319 2.7149232919544035
420: 1.3518874484908612 2.7149232919544035
421: 1.3517924439849276 2.7149232919544035
422: 1.3516978011119767 2.7149232919544035
423: 1.3516033099928804 2.7149232919544035
424: 1.3515091176771055 2.7149232919544035
425: 1.3514151365775081 2.7149232919544035
426: 1.3513213734854859 2.7149232919544035
427: 1.3512278893691132 2.7149232919544035
428: 1.3511346589328293 2.7149232919544035
429: 1.3510417430868573 2.7149232919544035
430: 1.3509490163428344 2.7149232919544035
431: 1.350856531995225 2.7149232919544035
432: 1.3507643423576932 2.7149232919544035
433: 1.3506723118072421 2.7149232919544035
434: 1.3505806018786128 2.7149232919544035
435: 1.3504890876861482 2.7149232919544035
436: 1.3503978508127772 2.7149232919544035
437: 1.350306868777373 2.7149232919544035
438: 1.350216083775371 2.7149232919544035
439: 1.3501255446925509 2.7149232919544035
440: 1.3500353532169262 2.7149232919544035
441: 1.3499453268200714 2.7149232919544035
442: 1.3498555444034754 2.7149232919544035
443: 1.349765968810303 2.7149232919544035
444: 1.3496766028338512 2.7149232919544035
445: 1.3495874463951323 2.7149232919544035
Successfully optimized configuration of 289 tiles after 446 iterations:
average displacement: 1.310px
minimal displacement: 0.973px
maximal displacement: 1.979px
Montage done.
```


7) Match intensities

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

(Fiji Is Just) ImageJ

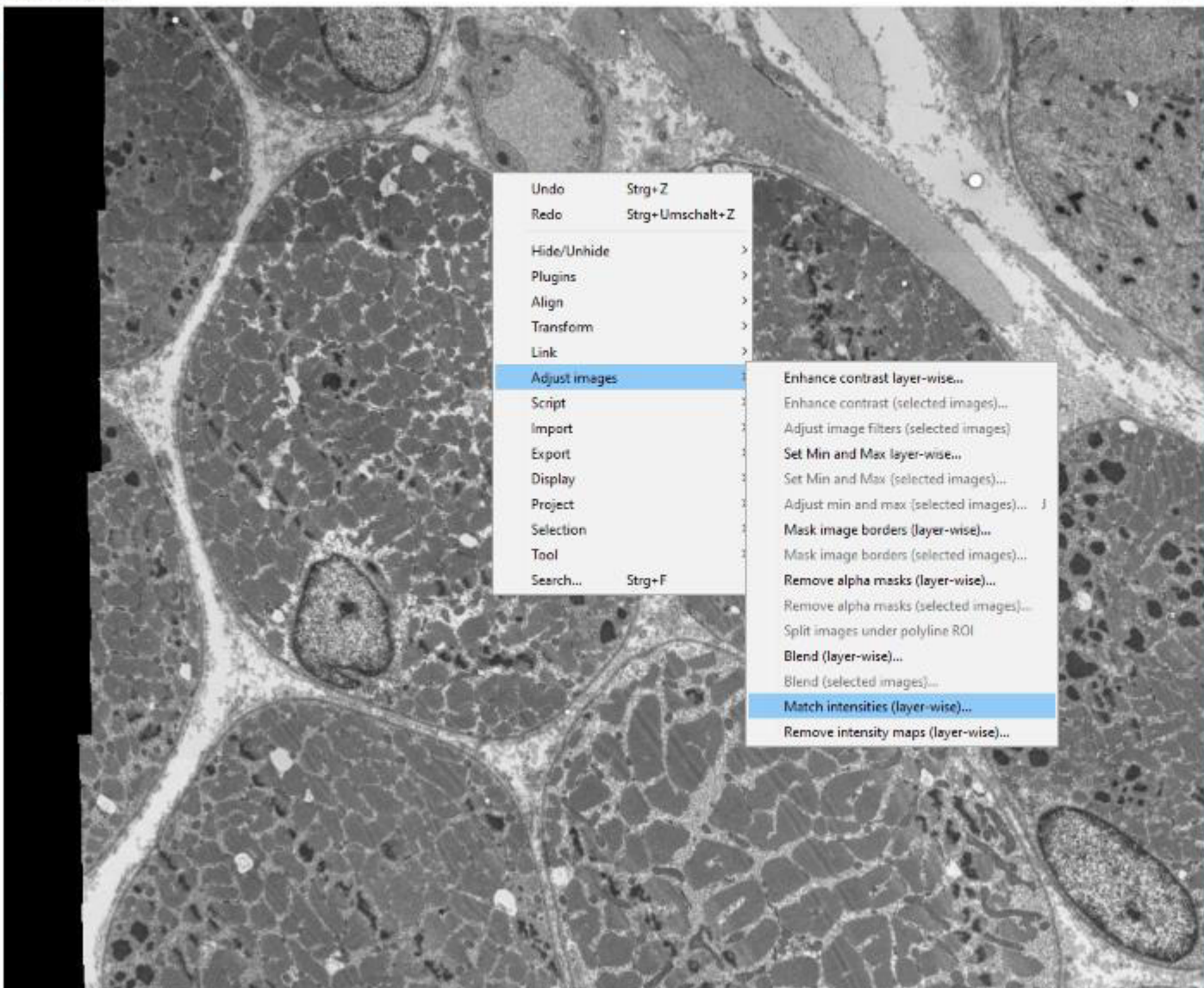
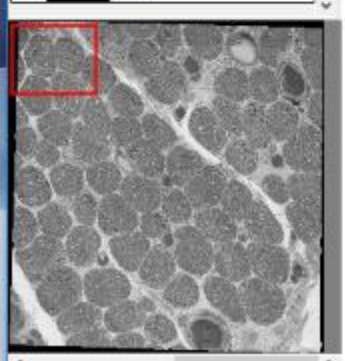
File Edit Image Process Analyze Plugins Window Help

x=3749 pixel, y=1608 pixel, value=154 [Patch #25]

2/2 z:0.0 pixels (12.4%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers Patches Tool options Annotations Live filter Profiles Z space Opacity Labels

- 01_ROI80000.tif
- #8
- 01_ROI80001.tif
- #25
- 01_ROI80002.tif
- #42
- 01_ROI80003.tif
- #59
- 01_ROI80004.tif
- #76
- 01_ROI80005.tif
- #93
- 01_ROI80006.tif
- #110
- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144



- Undo Strg+Z
- Redo Strg+Umschalt+Z
- Hide/Unhide >
- Plugins >
- Align >
- Transform >
- Link >
- Adjust images**
- Script
- Import
- Export
- Display
- Project
- Selection
- Tool
- Search... Strg+F

- Enhance contrast layer-wise...
- Enhance contrast (selected images)...
- Adjust image filters (selected images)
- Set Min and Max layer-wise...
- Set Min and Max (selected images)...
- Adjust min and max (selected images)...
- Mask image borders (layer-wise)...
- Mask image borders (selected images)...
- Remove alpha masks (layer-wise)...
- Remove alpha masks (selected images)...
- Split images under polyline ROI
- Blend (layer-wise)...
- Blend (selected images)...
- Match intensities (layer-wise)...**
- Remove intensity maps (layer-wise)...

Log

File Edit Font

```
413: 1.3525600172547187 2.7149232919544035
414: 1.3524631230773159 2.7149232919544035
415: 1.3523664932720942 2.7149232919544035
416: 1.3522701420616434 2.7149232919544035
417: 1.3521741426488776 2.7149232919544035
418: 1.3520783073482017 2.7149232919544035
419: 1.3519827440433319 2.7149232919544035
420: 1.3518874484908612 2.7149232919544035
421: 1.3517924489849276 2.7149232919544035
422: 1.3516978011119767 2.7149232919544035
423: 1.3516033099928804 2.7149232919544035
424: 1.3515091176771065 2.7149232919544035
425: 1.3514151365775081 2.7149232919544035
426: 1.3513213734854859 2.7149232919544035
427: 1.3512278893691132 2.7149232919544035
428: 1.3511346589328293 2.7149232919544035
429: 1.3510417430868573 2.7149232919544035
430: 1.3509490163428344 2.7149232919544035
431: 1.350856531995225 2.7149232919544035
432: 1.3507643423576992 2.7149232919544035
433: 1.3506723118072421 2.7149232919544035
434: 1.3505806018786128 2.7149232919544035
435: 1.3504890876861482 2.7149232919544035
436: 1.3503978508127772 2.7149232919544035
437: 1.350306868777373 2.7149232919544035
438: 1.350216083775371 2.7149232919544035
439: 1.3501255446925509 2.7149232919544035
440: 1.3500353532169262 2.7149232919544035
441: 1.3499453268200714 2.7149232919544035
442: 1.3498555444034754 2.7149232919544035
443: 1.349765968810303 2.7149232919544035
444: 1.3496766028338512 2.7149232919544035
445: 1.3495874463951323 2.7149232919544035
Successfully optimized configuration of 289 tiles after 446 iterations:
average displacement: 1.310px
minimal displacement: 0.973px
maximal displacement: 1.979px
Montage done.
```


7) Match intensities

Template
● anything

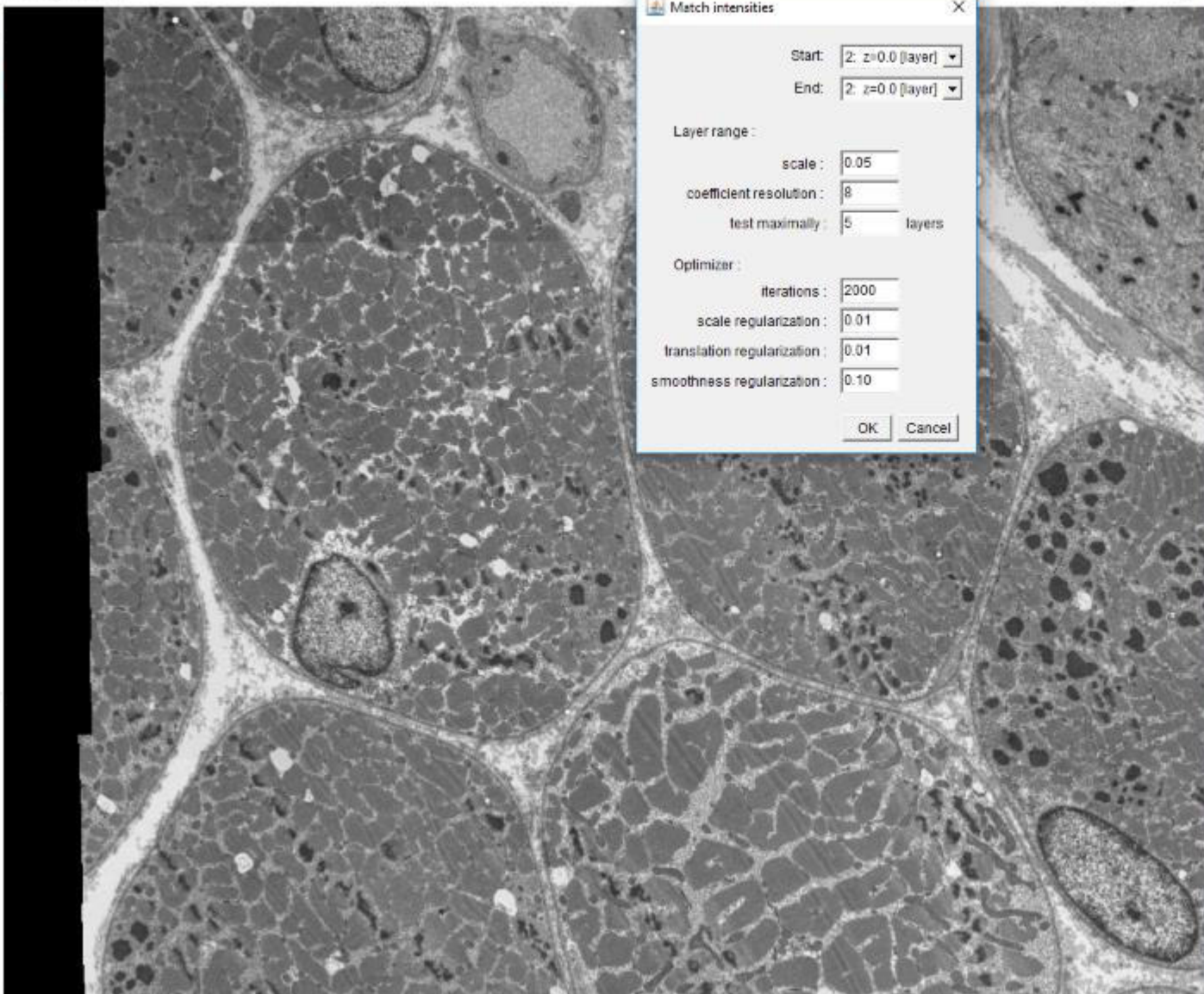
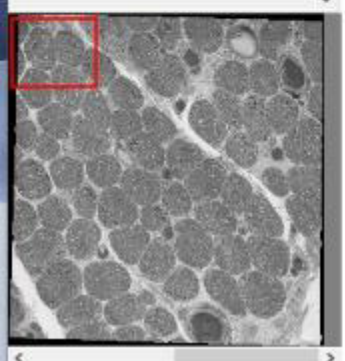
Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

2/2 z=0.0 pixels (12.4%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers
Patches
Profiles
Z space
Opacity
Labels

- 01_ROI80000.tif
- #8
- 01_ROI80001.tif
- #25
- 01_ROI80002.tif
- #42
- 01_ROI80003.tif
- #59
- 01_ROI80004.tif
- #76
- 01_ROI80005.tif
- #93
- 01_ROI80006.tif
- #110
- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144



Match intensities

Start: 2: z=0.0 [layer]
End: 2: z=0.0 [layer]

Layer range:

scale: 0.05
coefficient resolution: 8
test maximally: 5 layers

Optimizer:

iterations: 2000
scale regularization: 0.01
translation regularization: 0.01
smoothness regularization: 0.10

OK Cancel

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Match intensities - 6 seconds

Log

File Edit Font

```
413: 1.3525600172547187 2.7149232919544035
414: 1.3524631230773159 2.7149232919544035
415: 1.3523664932720942 2.7149232919544035
416: 1.3522701420616434 2.7149232919544035
417: 1.3521741426488776 2.7149232919544035
418: 1.3520783073482017 2.7149232919544035
419: 1.3519827440433319 2.7149232919544035
420: 1.3518874484908612 2.7149232919544035
421: 1.3517924489849276 2.7149232919544035
422: 1.3516978011119767 2.7149232919544035
423: 1.3516033099928804 2.7149232919544035
424: 1.3515091176771065 2.7149232919544035
425: 1.3514151365775081 2.7149232919544035
426: 1.3513213734854859 2.7149232919544035
427: 1.3512278893691132 2.7149232919544035
428: 1.3511346589328293 2.7149232919544035
429: 1.3510417430868573 2.7149232919544035
430: 1.3509490163428344 2.7149232919544035
431: 1.350856531996225 2.7149232919544035
432: 1.3507643423576992 2.7149232919544035
433: 1.3506723118072421 2.7149232919544035
434: 1.3505806018786128 2.7149232919544035
435: 1.3504890876861482 2.7149232919544035
436: 1.3503978508127772 2.7149232919544035
437: 1.350306868777373 2.7149232919544035
438: 1.350216083775371 2.7149232919544035
439: 1.3501255446925509 2.7149232919544035
440: 1.3500353532169262 2.7149232919544035
441: 1.3499453268200714 2.7149232919544035
442: 1.3498555444034754 2.7149232919544035
443: 1.349765968810303 2.7149232919544035
444: 1.3496766028338512 2.7149232919544035
445: 1.3495874463951323 2.7149232919544035
Successfully optimized configuration of 289 tiles after 446 iterations:
average displacement: 1.310px
minimal displacement: 0.973px
maximal displacement: 1.979px
Montage done.
```


7) Match intensities

Template
● anything

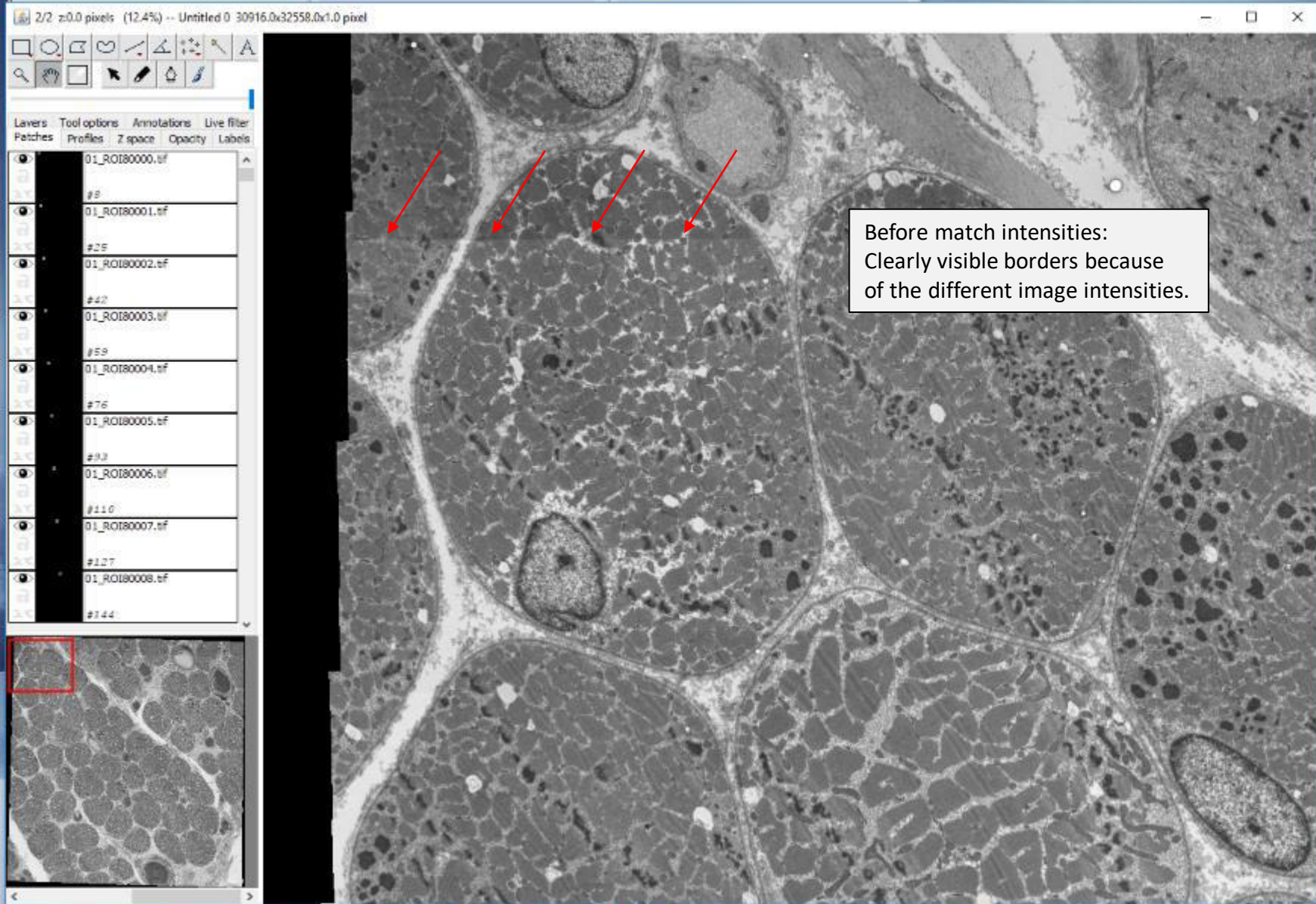
Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Match intensities - 10 seconds



Log

File Edit Font

at java.awt.EventQueueDispatchThread.run(E...

7) Match intensities

Template
● anything

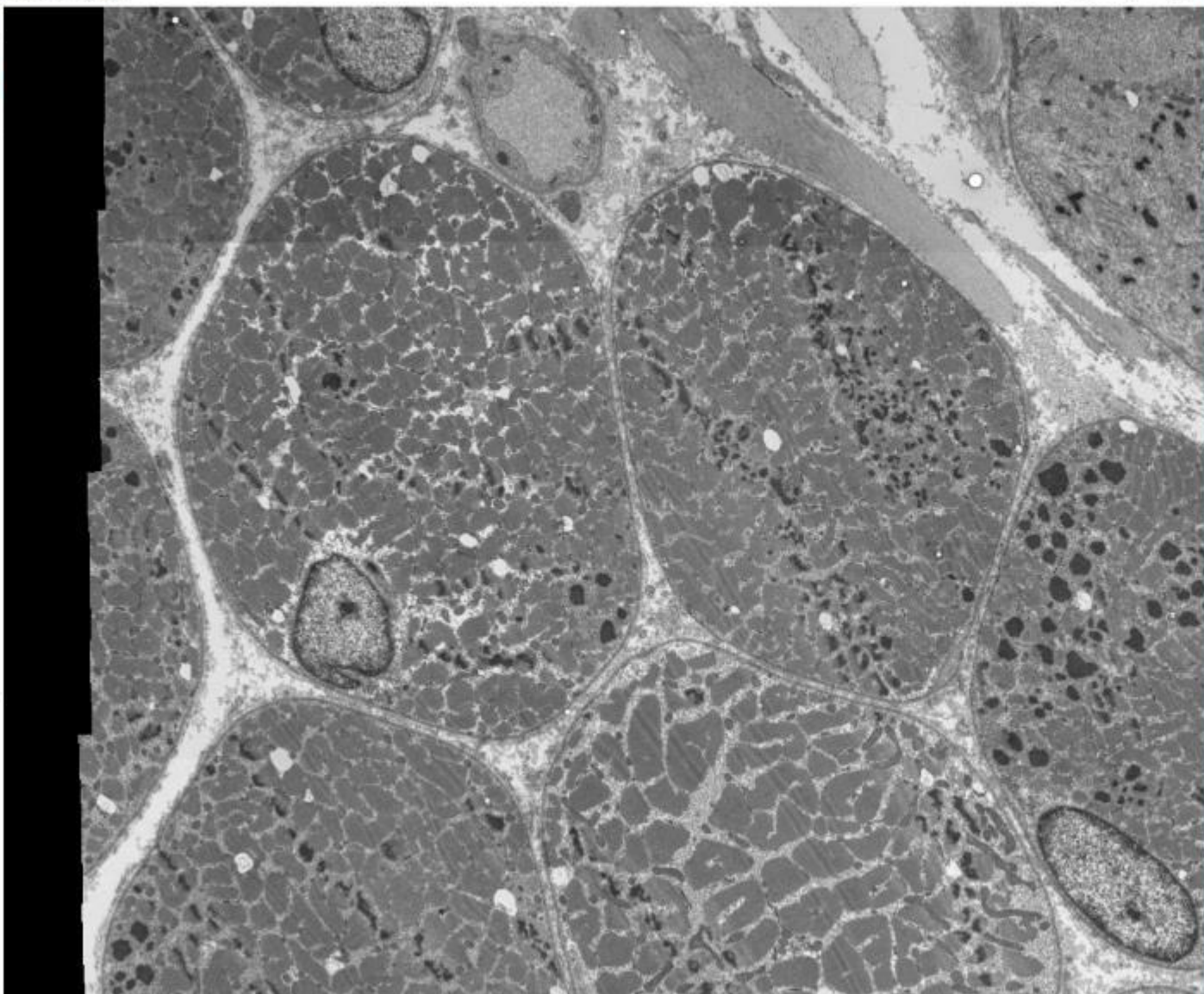
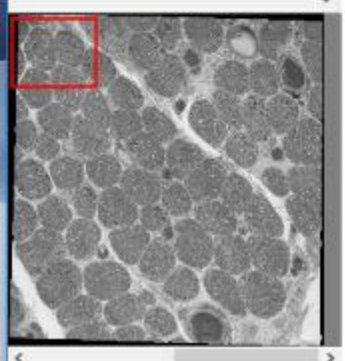
Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

2/2 z:0.0 pixels (12.4%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels

- 01_ROI80000.tif
- #8
- 01_ROI80001.tif
- #25
- 01_ROI80002.tif
- #42
- 01_ROI80003.tif
- #59
- 01_ROI80004.tif
- #76
- 01_ROI80005.tif
- #93
- 01_ROI80006.tif
- #110
- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144



(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Match intensities - 17 seconds

Log

File Edit Font

```
Connected patch 127, coefficient 48 + patch 110, coefficient 54 by 2 samples.
Connected patch 127, coefficient 48 + patch 110, coefficient 55 by 2 samples.
Connected patch 127, coefficient 48 + patch 110, coefficient 63 by 2 samples.
Connected patch 127, coefficient 49 + patch 110, coefficient 55 by 2 samples.
Connected patch 127, coefficient 56 + patch 110, coefficient 63 by 2 samples.
Connected patch 127, coefficient 57 + patch 110, coefficient 63 by 2 samples.
0: 0.0021200118722425935 0.0021200118722425935
1: 0.0021444341158291065 0.002168856359415619
2: 0.0021620851607040913 0.002197387250454061
3: 0.002175898635003479 0.002217339057901642
4: 0.002187137107781691 0.00223209099889454
5: 0.002196671814942757 0.002244345350748084
6: 0.002204992257211112 0.0022549149108212433
7: 0.002212376369844246 0.0022640651582761877
8: 0.002219049072501447 0.002272430693759054
9: 0.002225095709969403 0.002279515447181008
10: 0.0022305975869947544 0.0022856163572482708
11: 0.0022356231904000715 0.0022909048278585606
Connecting coefficient tiles in the same patch .....
Optimizing ...
12: 0.002240258563090023 0.0022958830353694403
13: 0.0022445341778668595 0.0023001171699657363
14: 0.0022484930362714262 0.002303917053935356
15: 0.002252154777886671 0.0023070809021153425
16: 0.002255543712868329 0.0023097666725748617
17: 0.0022586825419419043 0.0023120426361926735
18: 0.0022615996114823205 0.002314106863209807
19: 0.0022643068564403754 0.0023157445106434175
20: 0.002266829987474848 0.002317292608164305
21: 0.0022691787972329053 0.002318503802152105
22: 0.002271364053977304 0.002319439702354083
23: 0.0022734019923249115 0.00232027457431989
24: 0.002275299097560404 0.0023208296232122166
25: 0.0022770683796363 0.002321300431533693
26: 0.002278720220446686 0.0023216680815167107
27: 0.0022802581397712907 0.002321781961535623
28: 0.002281695604361868 0.002321944612898046
29: 0.0022830371195889146 0.002321944612898046
```


7) Match intensities

Template
● anything

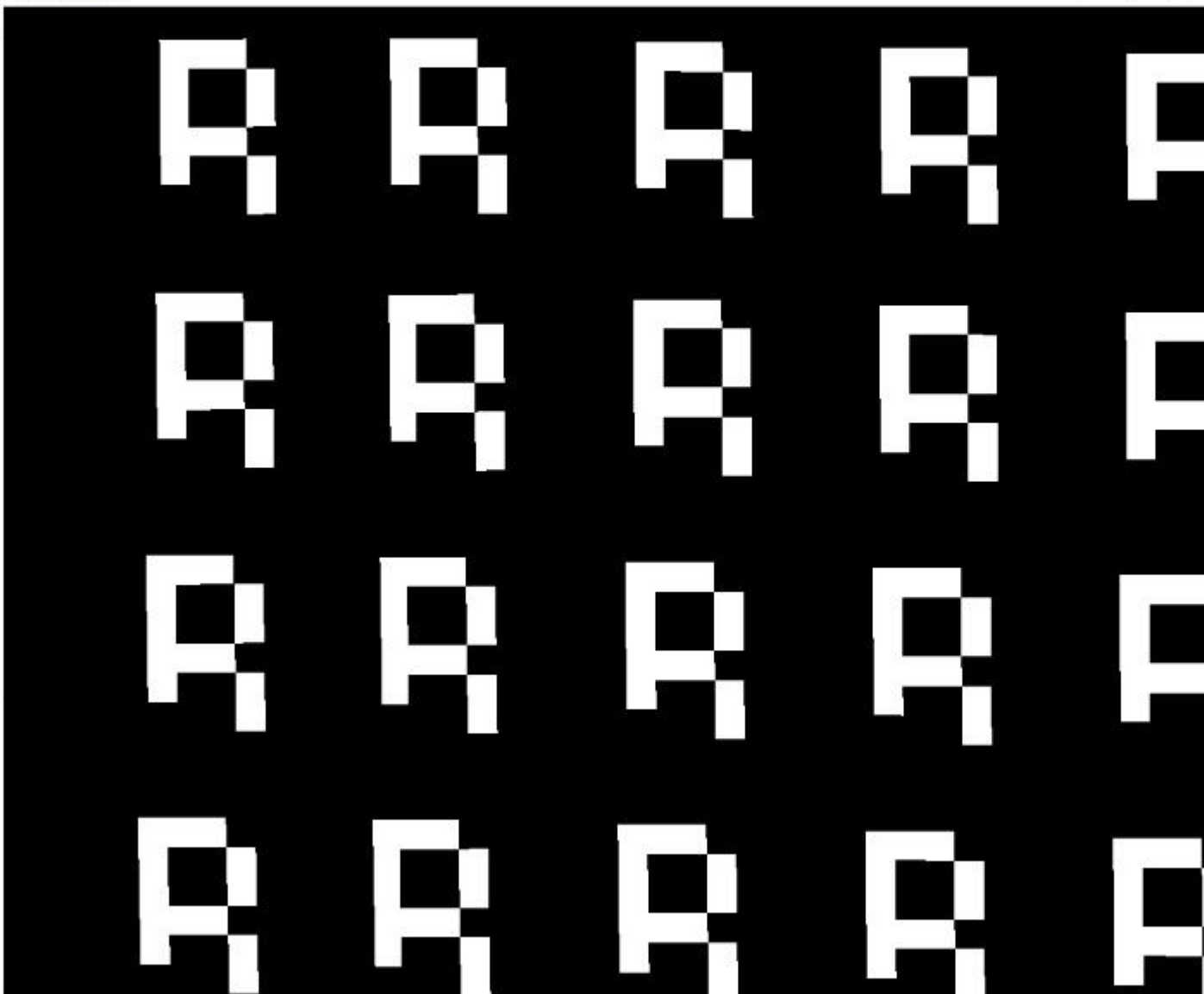
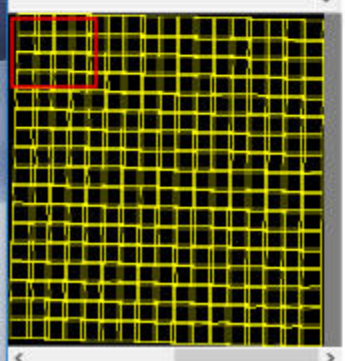
Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

2/2 z=0.0 pixels (12.4%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers
Patches Profiles Z space Opacity Labels

- 01_ROI80000.tif
- #8
- 01_ROI80001.tif
- #25
- 01_ROI80002.tif
- #42
- 01_ROI80003.tif
- #59
- 01_ROI80004.tif
- #76
- 01_ROI80005.tif
- #93
- 01_ROI80006.tif
- #110
- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144



(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... Match intensities - 4' 17"

Log

File Edit Font

```
1962: 0.0022895726423264938 0.002321944612898046
1963: 0.0022895721511497296 0.002321944612898046
1964: 0.0022895716604728906 0.002321944612898046
1965: 0.0022895711702952144 0.002321944612898046
1966: 0.0022895706806159394 0.002321944612898046
1967: 0.0022895701914343062 0.002321944612898046
1968: 0.002289569702749566 0.002321944612898046
1969: 0.002289569214560933 0.002321944612898046
1970: 0.0022895687268676807 0.002321944612898046
1971: 0.002289568239669047 0.002321944612898046
1972: 0.0022895677529642788 0.002321944612898046
1973: 0.002289567266752626 0.002321944612898046
1974: 0.002289566781033339 0.002321944612898046
1975: 0.002289566295805671 0.002321944612898046
1976: 0.002289565811068876 0.002321944612898046
1977: 0.002289565326822209 0.002321944612898046
1978: 0.002289564843064927 0.002321944612898046
1979: 0.002289564359796289 0.002321944612898046
1980: 0.0022895638770155545 0.002321944612898046
1981: 0.0022895633947219857 0.002321944612898046
1982: 0.0022895629129148446 0.002321944612898046
1983: 0.002289562431593396 0.002321944612898046
1984: 0.0022895619507569067 0.002321944612898046
1985: 0.002289561470404643 0.002321944612898046
1986: 0.0022895609905358746 0.002321944612898046
1987: 0.002289560511149871 0.002321944612898046
1988: 0.002289560032245905 0.002321944612898046
1989: 0.00228955955382325 0.002321944612898046
1990: 0.0022895590758811794 0.002321944612898046
1991: 0.0022895585984189708 0.002321944612898046
1992: 0.0022895581214359014 0.002321944612898046
1993: 0.002289557644493125 0.002321944612898046
1994: 0.002289557168904298 0.002321944612898046
1995: 0.0022895566933543265 0.002321944612898046
1996: 0.0022895562182806196 0.002321944612898046
1997: 0.002289555743882462 0.002321944612898046
1998: 0.0022895552695591397 0.002321944612898046
1999: 0.002289554795909341 0.002321944612898046
```

7) Match intensities

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

(Fiji Is Just) ImageJ

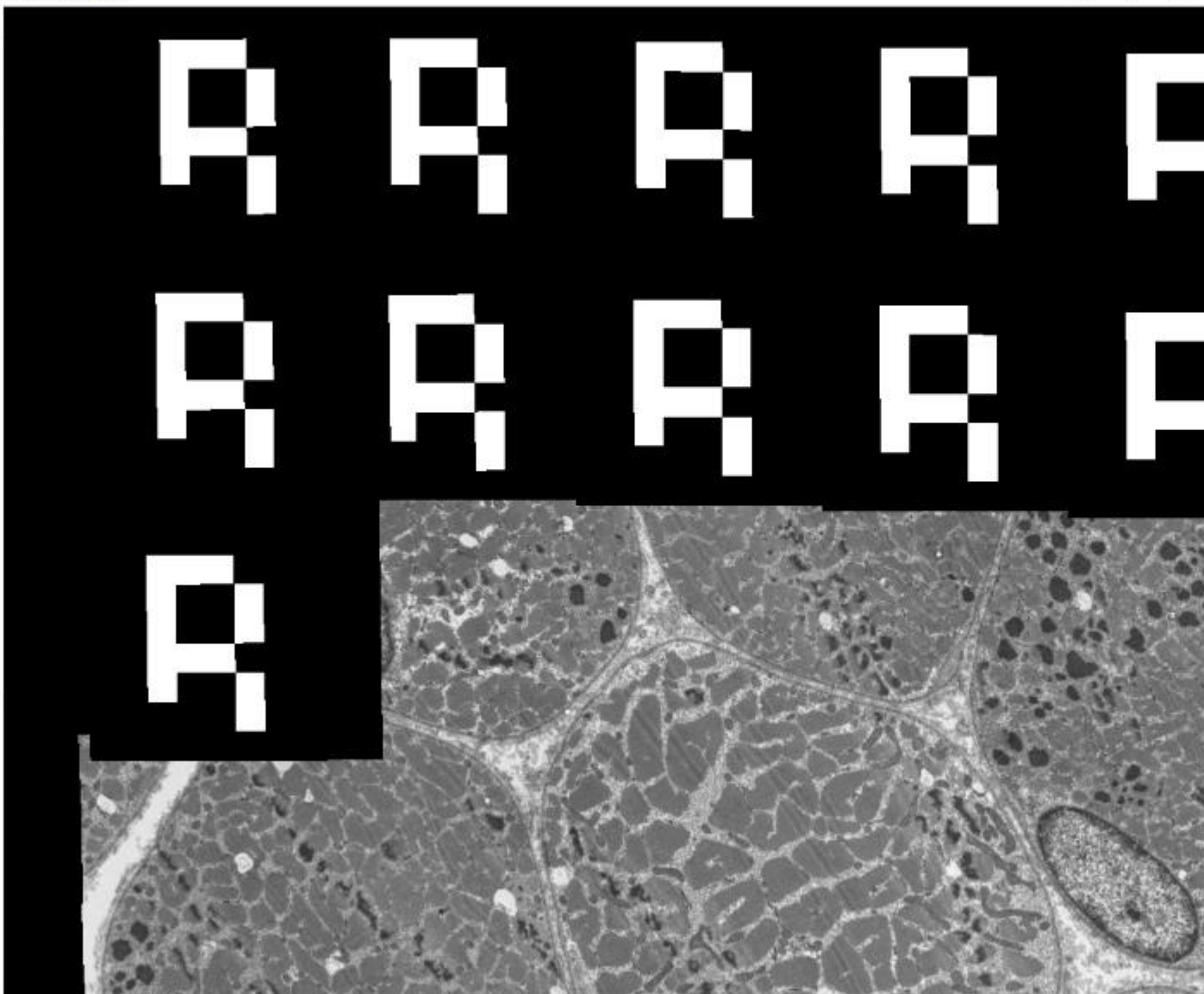
File Edit Image Process Analyze Plugins Window Help

Reading: 2/2

2/2 z:0.0 pixels (12.4%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels

- 01_ROI80000.tif
- #8
- 01_ROI80001.tif
- #25
- 01_ROI80002.tif
- #42
- 01_ROI80003.tif
- #59
- 01_ROI80004.tif
- #76
- 01_ROI80005.tif
- #93
- 01_ROI80006.tif
- #110
- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144



Log

File Edit Font

```
1962. 0.0022895726423264938 0.002321944612898046
1963. 0.0022895721511497296 0.002321944612898046
1964. 0.0022895716604728906 0.002321944612898046
1965. 0.0022895711702952144 0.002321944612898046
1966. 0.0022895706806159394 0.002321944612898046
1967. 0.0022895701914343062 0.002321944612898046
1968. 0.002289569702749556 0.002321944612898046
1969. 0.002289569214560933 0.002321944612898046
1970. 0.0022895687268676807 0.002321944612898046
1971. 0.002289568239669047 0.002321944612898046
1972. 0.0022895677529642788 0.002321944612898046
1973. 0.002289567266752626 0.002321944612898046
1974. 0.002289566781033339 0.002321944612898046
1975. 0.002289566295805671 0.002321944612898046
1976. 0.002289565811068876 0.002321944612898046
1977. 0.002289565326822209 0.002321944612898046
1978. 0.002289564843064927 0.002321944612898046
1979. 0.002289564359796289 0.002321944612898046
1980. 0.0022895638770155545 0.002321944612898046
1981. 0.0022895633947219857 0.002321944612898046
1982. 0.0022895629129148446 0.002321944612898046
1983. 0.002289562431593396 0.002321944612898046
1984. 0.0022895619507569067 0.002321944612898046
1985. 0.002289561470404643 0.002321944612898046
1986. 0.0022895609905358746 0.002321944612898046
1987. 0.002289560511149871 0.002321944612898046
1988. 0.002289560032245905 0.002321944612898046
1989. 0.00228955955382325 0.002321944612898046
1990. 0.0022895590758811794 0.002321944612898046
1991. 0.0022895585984189708 0.002321944612898046
1992. 0.0022895581214359014 0.002321944612898046
1993. 0.00228955764493125 0.002321944612898046
1994. 0.002289557168904298 0.002321944612898046
1995. 0.0022895566933543265 0.002321944612898046
1996. 0.0022895562182806196 0.002321944612898046
1997. 0.002289555743882462 0.002321944612898046
1998. 0.0022895552695591397 0.002321944612898046
1999. 0.002289554795909341 0.002321944612898046
```


7) Match intensities

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

(Fiji Is Just) ImageJ

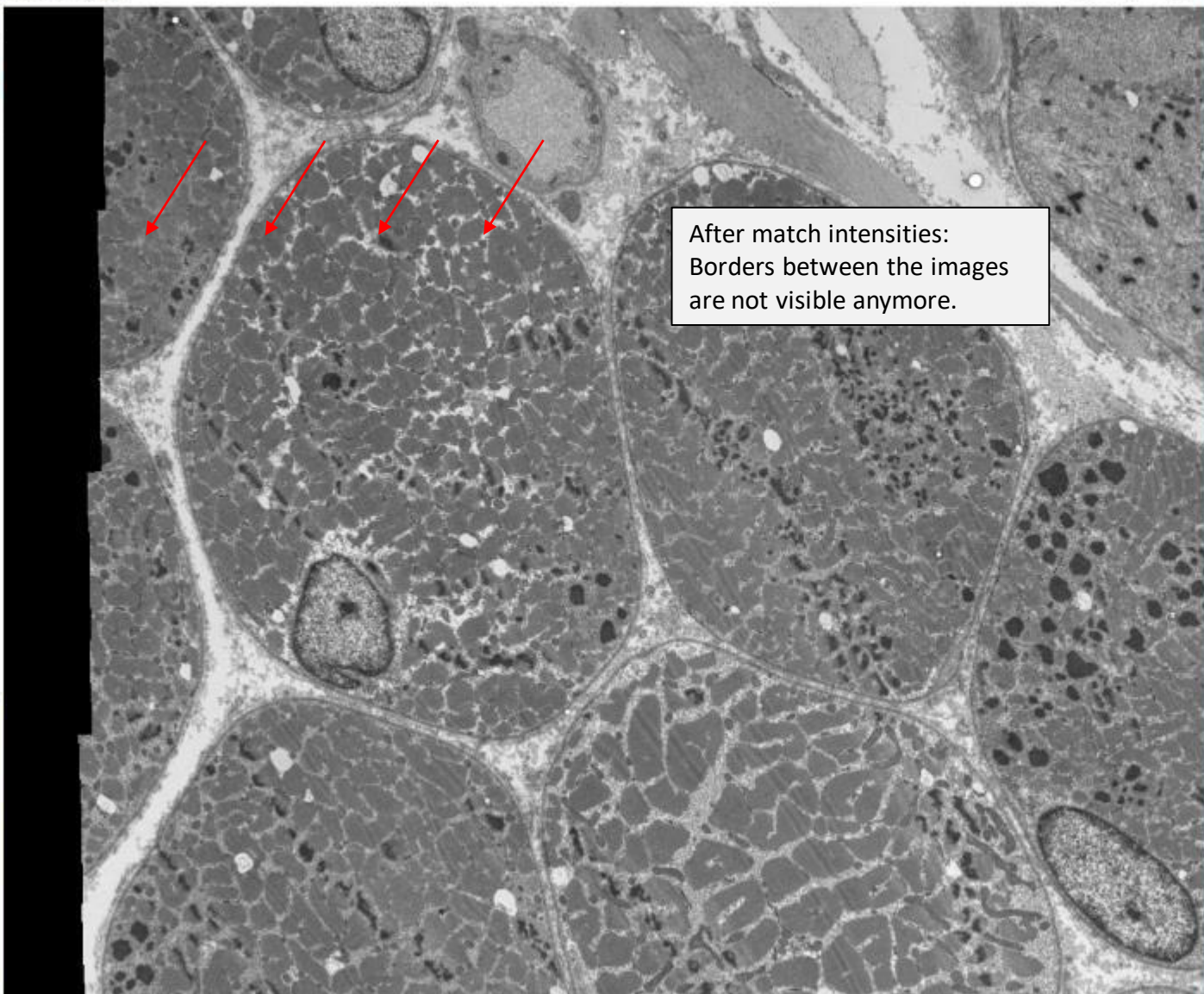
File Edit Image Process Analyze Plugins Window Help

Done Match intensities (590.61s approx.)

2/2 z=0.0 pixels (12.4%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels

- 01_ROI80000.tif
- #8
- 01_ROI80001.tif
- #25
- 01_ROI80002.tif
- #42
- 01_ROI80003.tif
- #59
- 01_ROI80004.tif
- #76
- 01_ROI80005.tif
- #93
- 01_ROI80006.tif
- #110
- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144



After match intensities:
Borders between the images
are not visible anymore.

Log

File Edit Font

```
1963. 0.0022895721511497296 0.002321944612898046
1964. 0.0022895716604728906 0.002321944612898046
1965. 0.0022895711702952144 0.002321944612898046
1966. 0.0022895706806159394 0.002321944612898046
1967. 0.0022895701914343062 0.002321944612898046
1968. 0.002289569702749556 0.002321944612898046
1969. 0.002289569214560933 0.002321944612898046
1970. 0.0022895687268676807 0.002321944612898046
1971. 0.002289568239669047 0.002321944612898046
1972. 0.0022895677529642788 0.002321944612898046
1973. 0.002289567266752626 0.002321944612898046
1974. 0.002289566781033399 0.002321944612898046
1975. 0.002289566295805671 0.002321944612898046
1976. 0.002289565811068876 0.002321944612898046
1977. 0.002289565326822209 0.002321944612898046
1978. 0.002289564843064927 0.002321944612898046
1979. 0.002289564359796289 0.002321944612898046
1980. 0.0022895638770155545 0.002321944612898046
1981. 0.0022895633947219857 0.002321944612898046
1982. 0.0022895629129148446 0.002321944612898046
1983. 0.002289562431593396 0.002321944612898046
1984. 0.0022895619507569067 0.002321944612898046
1985. 0.002289561470404643 0.002321944612898046
1986. 0.0022895609905358746 0.002321944612898046
1987. 0.002289560511149871 0.002321944612898046
1988. 0.002289560032245905 0.002321944612898046
1989. 0.00228955955382325 0.002321944612898046
1990. 0.00228955907558811794 0.002321944612898046
1991. 0.0022895585984189708 0.002321944612898046
1992. 0.0022895581214359014 0.002321944612898046
1993. 0.00228955764493125 0.002321944612898046
1994. 0.002289557168904298 0.002321944612898046
1995. 0.0022895566933543265 0.002321944612898046
1996. 0.0022895562182806196 0.002321944612898046
1997. 0.002289555743682462 0.002321944612898046
1998. 0.0022895552695591397 0.002321944612898046
1999. 0.002289554795909341 0.002321944612898046
Matching intensities done.
```


8) Rotate dataset

Template
● anything

Project Objects
● Untitled 0 [project]

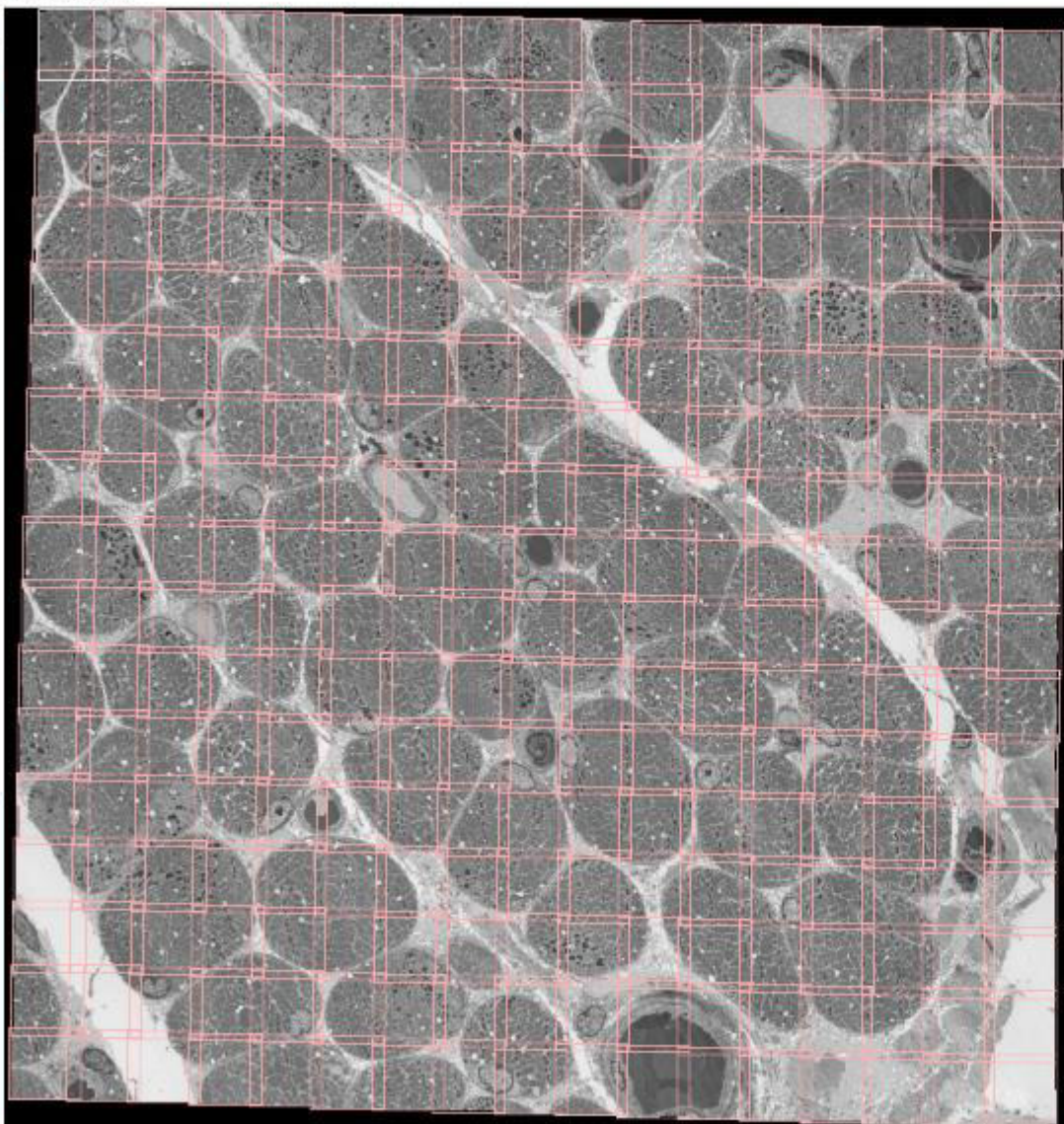
Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

2/2 z:0.0 pixels (2.6%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Tools: pan, zoom, rotate, crop, etc.

Layers: Tool options, Annotations, Live filter, Patches, Profiles, Z space, Opacity, Labels

- 01_ROI80000.tif
- #8
- 01_ROI80001.tif
- #25
- 01_ROI80002.tif
- #47
- 01_ROI80003.tif
- #59
- 01_ROI80004.tif
- #76
- 01_ROI80005.tif
- #93
- 01_ROI80006.tif
- #110
- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144



(Fiji is Just) ImageJ
File Edit Image Process Analyze Plugins Window Help

x=16056 pixel, y=4128 pixel, value=109 [Patch #145]

Log
File Edit Font

```
1963. 0.0022895721511497296 0.002321944612898046
1964. 0.0022895716604728906 0.002321944612898046
1965. 0.0022895711702952144 0.002321944612898046
1966. 0.0022895706806159394 0.002321944612898046
1967. 0.0022895701914343062 0.002321944612898046
1968. 0.002289569702749556 0.002321944612898046
1969. 0.002289569214560933 0.002321944612898046
1970. 0.0022895687268676807 0.002321944612898046
1971. 0.002289568239669047 0.002321944612898046
1972. 0.0022895677529642788 0.002321944612898046
1973. 0.002289567266752626 0.002321944612898046
1974. 0.002289566781033399 0.002321944612898046
1975. 0.002289566295805671 0.002321944612898046
1976. 0.002289565811068876 0.002321944612898046
1977. 0.002289565326822209 0.002321944612898046
1978. 0.002289564843064927 0.002321944612898046
1979. 0.002289564359796289 0.002321944612898046
1980. 0.0022895638770155545 0.002321944612898046
1981. 0.0022895633947219857 0.002321944612898046
1982. 0.0022895629129148446 0.002321944612898046
1983. 0.002289562431593396 0.002321944612898046
1984. 0.0022895619507569067 0.002321944612898046
1985. 0.002289561470404643 0.002321944612898046
1986. 0.0022895609905358746 0.002321944612898046
1987. 0.002289560511149871 0.002321944612898046
1988. 0.002289560032245905 0.002321944612898046
1989. 0.00228955955382325 0.002321944612898046
1990. 0.0022895590758811794 0.002321944612898046
1991. 0.0022895585984189708 0.002321944612898046
1992. 0.0022895581214359014 0.002321944612898046
1993. 0.00228955764493125 0.002321944612898046
1994. 0.002289557168904298 0.002321944612898046
1995. 0.0022895566933543265 0.002321944612898046
1996. 0.0022895562182806196 0.002321944612898046
1997. 0.002289555743682462 0.002321944612898046
1998. 0.0022895552695591397 0.002321944612898046
1999. 0.002289554795909941 0.002321944612898046
Matching intensities done.
```


8) Rotate dataset

Template
● anything

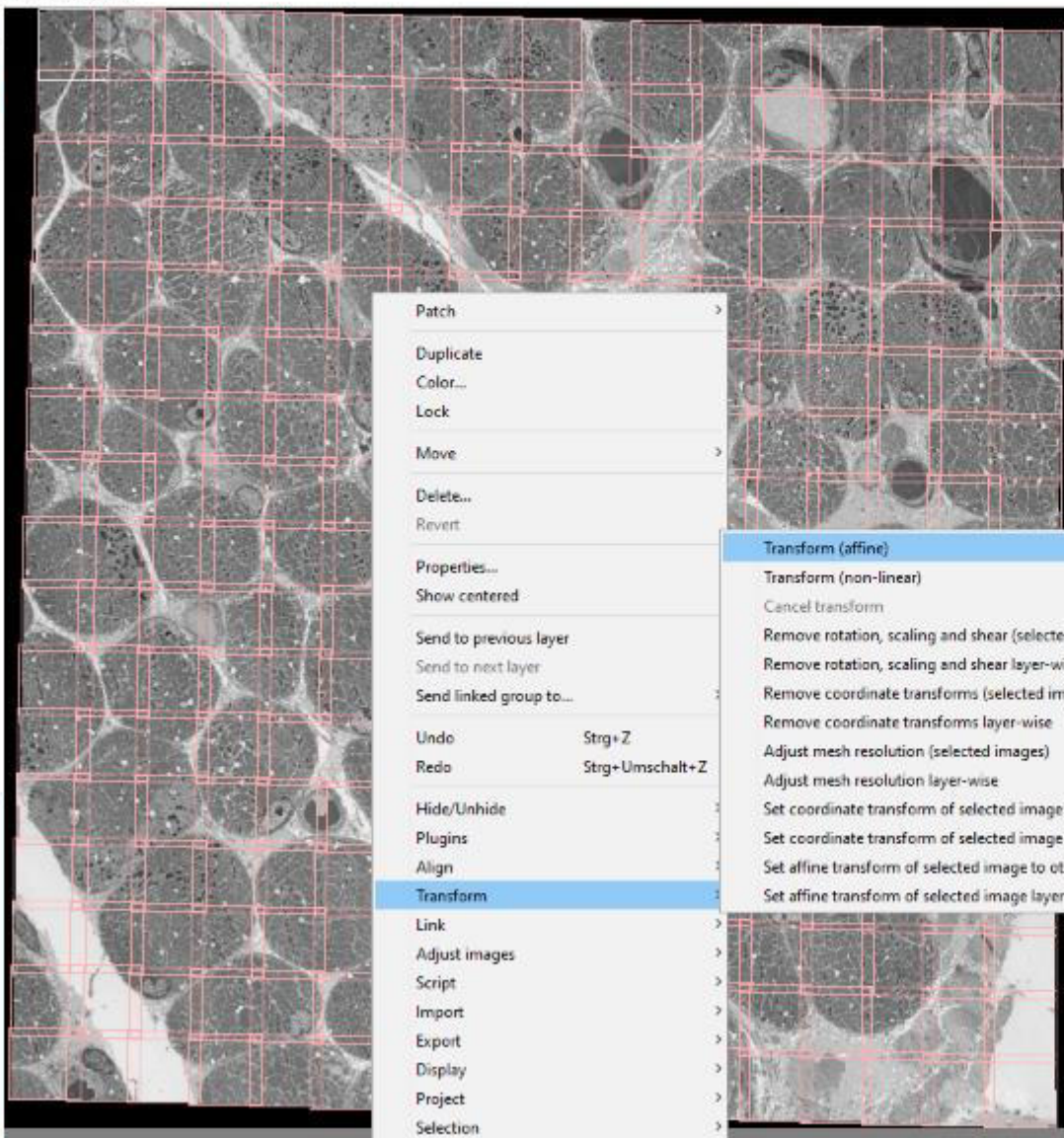
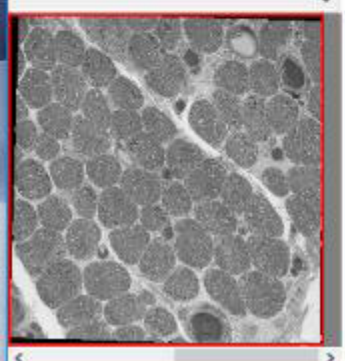
Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

2/2 z=0.0 pixels (2.6%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels

- 01_ROI80000.tif
- #8
- 01_ROI80001.tif
- #25
- 01_ROI80002.tif
- #47
- 01_ROI80003.tif
- #59
- 01_ROI80004.tif
- #76
- 01_ROI80005.tif
- #93
- 01_ROI80006.tif
- #110
- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144



- Patch
- Duplicate
- Color...
- Lock
- Move
- Delete...
- Revert
- Properties...
- Show centered
- Send to previous layer
- Send to next layer
- Send linked group to...
- Undo Strg+Z
- Redo Strg+Umschalt+Z
- Hide/Unhide
- Plugins
- Align
- Transform
- Link
- Adjust images
- Script
- Import
- Export
- Display
- Project
- Selection
- Tool
- Search... Strg+F

- Transform (affine) T
- Transform (non-linear) Umschalt+T
- Cancel transform ESC
- Remove rotation, scaling and shear (selected images)
- Remove rotation, scaling and shear layer-wise
- Remove coordinate transforms (selected images)
- Remove coordinate transforms layer-wise
- Adjust mesh resolution (selected images)
- Adjust mesh resolution layer-wise
- Set coordinate transform of selected image to other selected images
- Set coordinate transform of selected image layer-wise
- Set affine transform of selected image to other selected images
- Set affine transform of selected image layer-wise

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=17050 pixel, y=6219 pixel, value=196 [Patch #165]

Log

File Edit Font

```
1963. 0.0022895721511497296 0.002321944612898046
1964. 0.0022895716604728906 0.002321944612898046
1965. 0.0022895711702952144 0.002321944612898046
1966. 0.0022895706806159394 0.002321944612898046
1967. 0.0022895701914343062 0.002321944612898046
1968. 0.002289569702749556 0.002321944612898046
1969. 0.002289569214560933 0.002321944612898046
1970. 0.0022895687268676807 0.002321944612898046
1971. 0.002289568239669047 0.002321944612898046
1972. 0.0022895677529642788 0.002321944612898046
1973. 0.002289567266752626 0.002321944612898046
1974. 0.002289566781033399 0.002321944612898046
1975. 0.002289566295805671 0.002321944612898046
1976. 0.002289565811068876 0.002321944612898046
1977. 0.002289565326822209 0.002321944612898046
1978. 0.002289564843064927 0.002321944612898046
1979. 0.002289564359796289 0.002321944612898046
1980. 0.0022895638770155545 0.002321944612898046
1981. 0.0022895633947219857 0.002321944612898046
1982. 0.0022895629129148446 0.002321944612898046
1983. 0.002289562431593396 0.002321944612898046
1984. 0.0022895619507569067 0.002321944612898046
1985. 0.002289561470404643 0.002321944612898046
1986. 0.0022895609905358746 0.002321944612898046
1987. 0.002289560511149871 0.002321944612898046
1988. 0.002289560032245905 0.002321944612898046
1989. 0.00228955955382325 0.002321944612898046
1990. 0.00228955907558811794 0.002321944612898046
1991. 0.0022895585984189708 0.002321944612898046
1992. 0.0022895581214359014 0.002321944612898046
1993. 0.00228955764493125 0.002321944612898046
1994. 0.002289557168904298 0.002321944612898046
1995. 0.0022895566933543265 0.002321944612898046
1996. 0.0022895562182806196 0.002321944612898046
1997. 0.002289555743682462 0.002321944612898046
1998. 0.0022895552695591397 0.002321944612898046
1999. 0.002289554795909941 0.002321944612898046
Matching intensities done.
```


8) Rotate dataset

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

(Fiji Is Just) ImageJ

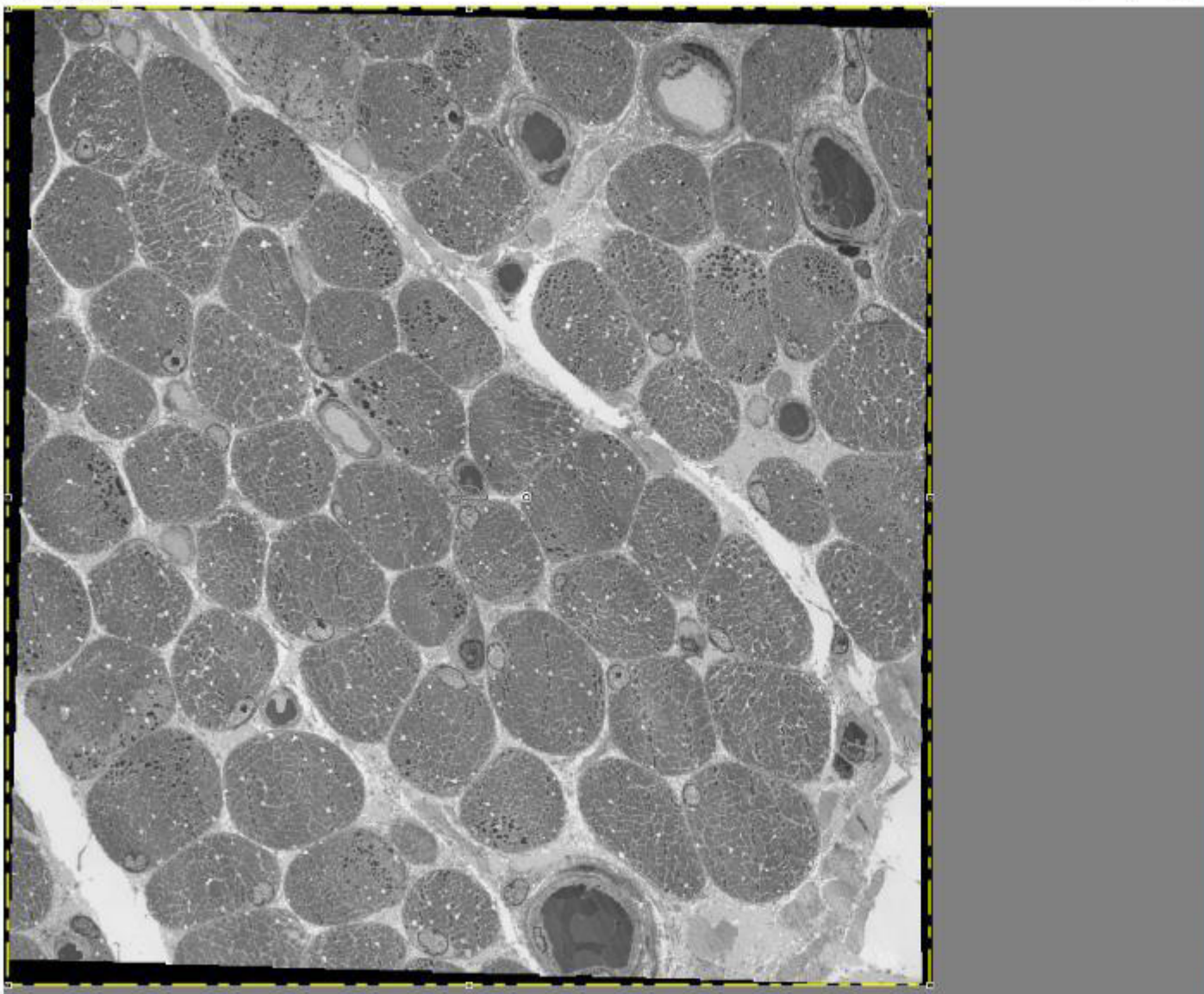
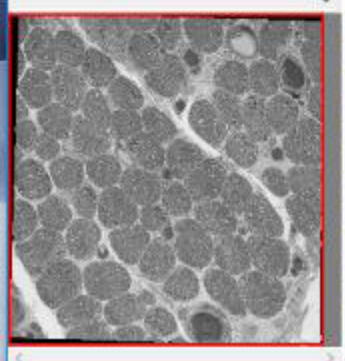
File Edit Image Process Analyze Plugins Window Help

x=17356 pixel, y=16362 pixel, value=109 [Patch #169]

2/2 z:0.0 pixels (2.6%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels

- 01_ROI80000.tif
- #8
- 01_ROI80001.tif
- #25
- 01_ROI80002.tif
- #47
- 01_ROI80003.tif
- #59
- 01_ROI80004.tif
- #76
- 01_ROI80005.tif
- #93
- 01_ROI80006.tif
- #110
- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144



Log

File Edit Font

```
1963. 0.0022895721511497296 0.002321944612898046
1964. 0.0022895716604728906 0.002321944612898046
1965. 0.0022895711702952144 0.002321944612898046
1966. 0.0022895706806159394 0.002321944612898046
1967. 0.0022895701914343062 0.002321944612898046
1968. 0.002289569702749556 0.002321944612898046
1969. 0.002289569214560933 0.002321944612898046
1970. 0.0022895687268676807 0.002321944612898046
1971. 0.002289568239669047 0.002321944612898046
1972. 0.0022895677529642788 0.002321944612898046
1973. 0.002289567266752626 0.002321944612898046
1974. 0.002289566781033399 0.002321944612898046
1975. 0.002289566295805671 0.002321944612898046
1976. 0.002289565811068876 0.002321944612898046
1977. 0.002289565326822209 0.002321944612898046
1978. 0.002289564843064927 0.002321944612898046
1979. 0.002289564359796289 0.002321944612898046
1980. 0.0022895638770155545 0.002321944612898046
1981. 0.0022895633947219857 0.002321944612898046
1982. 0.0022895629129148446 0.002321944612898046
1983. 0.002289562431593396 0.002321944612898046
1984. 0.0022895619507569067 0.002321944612898046
1985. 0.002289561470404643 0.002321944612898046
1986. 0.0022895609905358746 0.002321944612898046
1987. 0.002289560511149871 0.002321944612898046
1988. 0.002289560032245905 0.002321944612898046
1989. 0.00228955955382325 0.002321944612898046
1990. 0.00228955907558811794 0.002321944612898046
1991. 0.0022895585984189708 0.002321944612898046
1992. 0.0022895581214359014 0.002321944612898046
1993. 0.002289557644493125 0.002321944612898046
1994. 0.002289557168904298 0.002321944612898046
1995. 0.0022895566933543265 0.002321944612898046
1996. 0.0022895562182806196 0.002321944612898046
1997. 0.002289555743682462 0.002321944612898046
1998. 0.0022895552695591397 0.002321944612898046
1999. 0.00228955479590941 0.002321944612898046
Matching intensities done.
```


8) Rotate dataset

Template
● anything

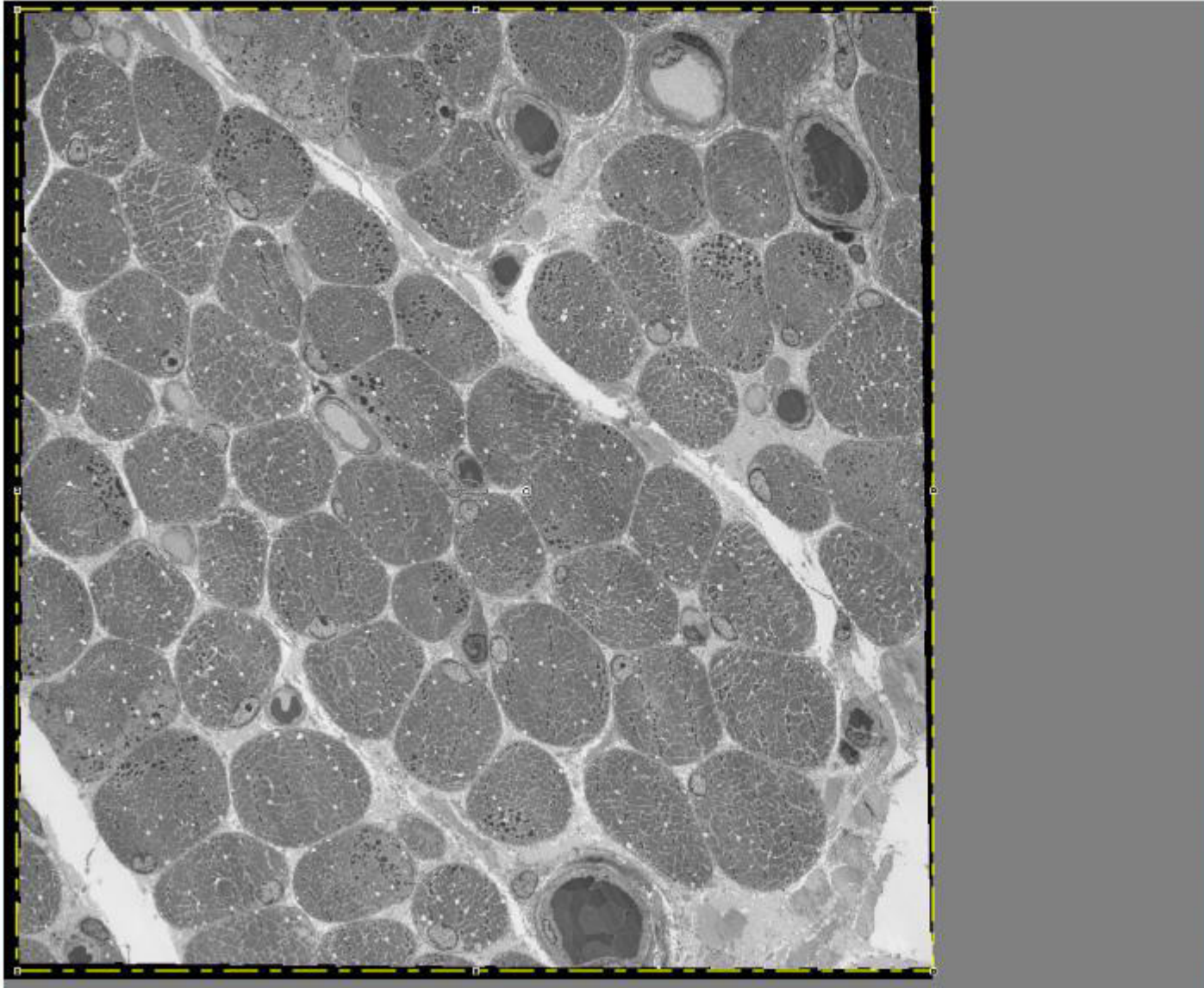
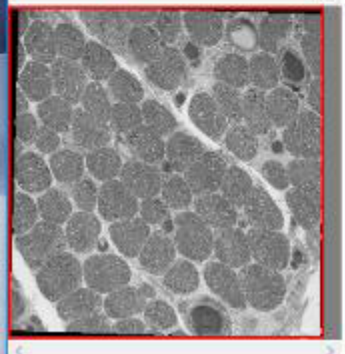
Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

2/2 z=0.0 pixels (2.6%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels

- 01_ROI80000.tif
- #8
- 01_ROI80001.tif
- #25
- 01_ROI80002.tif
- #47
- 01_ROI80003.tif
- #59
- 01_ROI80004.tif
- #76
- 01_ROI80005.tif
- #93
- 01_ROI80006.tif
- #110
- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144



(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Creating bucket 30720,30720,196,1838

Log

File Edit Font

```
1963. 0.0022895721511497296 0.002321944612898046
1964. 0.0022895716604728906 0.002321944612898046
1965. 0.0022895711702952144 0.002321944612898046
1966. 0.0022895706806159394 0.002321944612898046
1967. 0.0022895701914343062 0.002321944612898046
1968. 0.002289569702749556 0.002321944612898046
1969. 0.002289569214560933 0.002321944612898046
1970. 0.0022895687268676807 0.002321944612898046
1971. 0.002289568239669047 0.002321944612898046
1972. 0.0022895677529642788 0.002321944612898046
1973. 0.002289567266752626 0.002321944612898046
1974. 0.002289566781033399 0.002321944612898046
1975. 0.002289566295805671 0.002321944612898046
1976. 0.002289565811068876 0.002321944612898046
1977. 0.002289565326822209 0.002321944612898046
1978. 0.002289564843064927 0.002321944612898046
1979. 0.002289564359796289 0.002321944612898046
1980. 0.0022895638770155545 0.002321944612898046
1981. 0.0022895633947219857 0.002321944612898046
1982. 0.0022895629129148446 0.002321944612898046
1983. 0.002289562431593396 0.002321944612898046
1984. 0.0022895619507569067 0.002321944612898046
1985. 0.002289561470404643 0.002321944612898046
1986. 0.0022895609905358746 0.002321944612898046
1987. 0.002289560511149871 0.002321944612898046
1988. 0.002289560032245905 0.002321944612898046
1989. 0.00228955955382325 0.002321944612898046
1990. 0.00228955907558811794 0.002321944612898046
1991. 0.0022895585984189708 0.002321944612898046
1992. 0.0022895581214359014 0.002321944612898046
1993. 0.002289557644493125 0.002321944612898046
1994. 0.002289557168904298 0.002321944612898046
1995. 0.0022895566933543265 0.002321944612898046
1996. 0.0022895562182806196 0.002321944612898046
1997. 0.002289555743682462 0.002321944612898046
1998. 0.0022895552695591397 0.002321944612898046
1999. 0.00228955479590941 0.002321944612898046
Matching intensities done.
```


8) Rotate dataset

Template
● anything

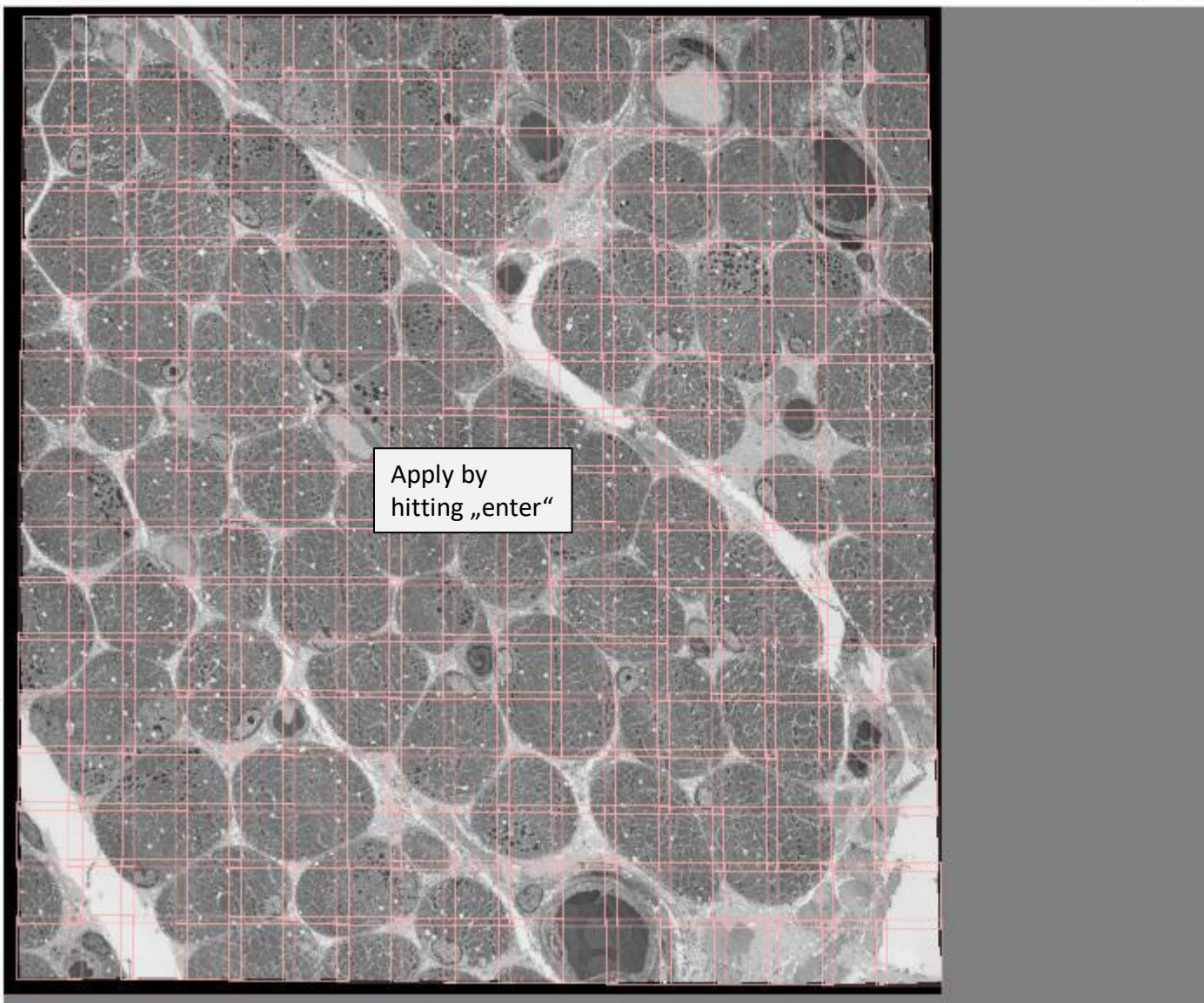
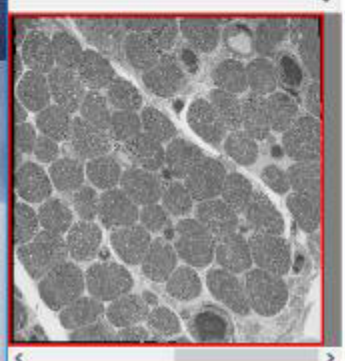
Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

2/2 z=0.0 pixels (2.6%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels

- 01_ROI80000.tif
- #8
- 01_ROI80001.tif
- #25
- 01_ROI80002.tif
- #47
- 01_ROI80003.tif
- #59
- 01_ROI80004.tif
- #76
- 01_ROI80005.tif
- #93
- 01_ROI80006.tif
- #110
- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144



(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Creating bucket 30720,30720,196,1838

Log

File Edit Font

```
1963. 0.0022895721511497296 0.002321944612898046
1964. 0.0022895716604728906 0.002321944612898046
1965. 0.0022895711702952144 0.002321944612898046
1966. 0.0022895706806159394 0.002321944612898046
1967. 0.0022895701914343062 0.002321944612898046
1968. 0.002289569702749556 0.002321944612898046
1969. 0.002289569214560933 0.002321944612898046
1970. 0.0022895687268676807 0.002321944612898046
1971. 0.002289568239669047 0.002321944612898046
1972. 0.0022895677529642788 0.002321944612898046
1973. 0.002289567266752626 0.002321944612898046
1974. 0.002289566781033399 0.002321944612898046
1975. 0.002289566295805671 0.002321944612898046
1976. 0.002289565811068876 0.002321944612898046
1977. 0.002289565326822209 0.002321944612898046
1978. 0.002289564843064927 0.002321944612898046
1979. 0.002289564359796289 0.002321944612898046
1980. 0.0022895638770155545 0.002321944612898046
1981. 0.0022895633947219857 0.002321944612898046
1982. 0.0022895629129148446 0.002321944612898046
1983. 0.002289562431593396 0.002321944612898046
1984. 0.0022895619507569067 0.002321944612898046
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1987. 0.002289560511149871 0.002321944612898046
1988. 0.002289560032245905 0.002321944612898046
1989. 0.00228955955382325 0.002321944612898046
1990. 0.00228955907558811794 0.002321944612898046
1991. 0.0022895585984189708 0.002321944612898046
1992. 0.0022895581214359014 0.002321944612898046
1993. 0.002289557644493125 0.002321944612898046
1994. 0.002289557168904298 0.002321944612898046
1995. 0.0022895566933543265 0.002321944612898046
1996. 0.0022895562182806196 0.002321944612898046
1997. 0.002289555743682462 0.002321944612898046
1998. 0.0022895552695591397 0.002321944612898046
1999. 0.002289554795909941 0.002321944612898046
Matching intensities done.
```


9) Standard export

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

"Rectangular" or rounded rectangular selections (right click to switch)

2/2 z=0.0 pixels (2.6%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Tools: Selection, Lasso, Polygon, Polyline, Freehand, Rectangle, Ellipse, Oval, Line, Arrow, Text, Eraser, Fill, Stroke, Gradient, Copy, Paste, Undo, Redo, Zoom, Pan, Rotate, Flip, Rotate 90, Rotate 180, Rotate 270, Rotate 45, Rotate 135, Rotate 225, Rotate 315, Rotate 15, Rotate 75, Rotate 105, Rotate 165, Rotate 202.5, Rotate 247.5, Rotate 292.5, Rotate 337.5, Rotate 382.5, Rotate 427.5, Rotate 472.5, Rotate 517.5, Rotate 562.5, Rotate 607.5, Rotate 652.5, Rotate 697.5, Rotate 742.5, Rotate 787.5, Rotate 832.5, Rotate 877.5, Rotate 922.5, Rotate 967.5, Rotate 1012.5, Rotate 1057.5, Rotate 1102.5, Rotate 1147.5, Rotate 1192.5, Rotate 1237.5, Rotate 1282.5, Rotate 1327.5, Rotate 1372.5, Rotate 1417.5, Rotate 1462.5, Rotate 1507.5, Rotate 1552.5, Rotate 1597.5, Rotate 1642.5, Rotate 1687.5, Rotate 1732.5, Rotate 1777.5, Rotate 1822.5, Rotate 1867.5, Rotate 1912.5, Rotate 1957.5, Rotate 2002.5, Rotate 2047.5, Rotate 2092.5, Rotate 2137.5, Rotate 2182.5, Rotate 2227.5, Rotate 2272.5, Rotate 2317.5, Rotate 2362.5, Rotate 2407.5, Rotate 2452.5, Rotate 2497.5, Rotate 2542.5, Rotate 2587.5, Rotate 2632.5, Rotate 2677.5, Rotate 2722.5, Rotate 2767.5, Rotate 2812.5, Rotate 2857.5, Rotate 2902.5, Rotate 2947.5, Rotate 2992.5, Rotate 3037.5, Rotate 3082.5, Rotate 3127.5, Rotate 3172.5, Rotate 3217.5, Rotate 3262.5, Rotate 3307.5, Rotate 3352.5, Rotate 3397.5, Rotate 3442.5, Rotate 3487.5, Rotate 3532.5, Rotate 3577.5, Rotate 3622.5, Rotate 3667.5, Rotate 3712.5, Rotate 3757.5, Rotate 3802.5, Rotate 3847.5, Rotate 3892.5, Rotate 3937.5, Rotate 3982.5, Rotate 4027.5, Rotate 4072.5, Rotate 4117.5, Rotate 4162.5, Rotate 4207.5, Rotate 4252.5, Rotate 4297.5, Rotate 4342.5, Rotate 4387.5, Rotate 4432.5, Rotate 4477.5, Rotate 4522.5, Rotate 4567.5, Rotate 4612.5, Rotate 4657.5, Rotate 4702.5, Rotate 4747.5, Rotate 4792.5, Rotate 4837.5, Rotate 4882.5, Rotate 4927.5, Rotate 4972.5, Rotate 5017.5, Rotate 5062.5, Rotate 5107.5, Rotate 5152.5, Rotate 5197.5, Rotate 5242.5, Rotate 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Rotate 48142.5, Rotate 48187.5, Rotate 48232.5, Rotate 48277.5, Rotate 48322.5, Rotate 48367.5, Rotate 48412.5, Rotate 48457.5, Rotate 48502.5, Rotate 48547.5, Rotate 48592.5, Rotate 48637.5, Rotate 48682.5, Rotate 48727.5, Rotate 48772.5, Rotate 48817.5, Rotate 48862.5, Rotate 48907.5, Rotate 48952.5, Rotate 49007.5, Rotate 49052.5, Rotate 49097.5, Rotate 49142.5, Rotate 49187.5, Rotate 49232.5, Rotate 49277.5, Rotate 49322.5, Rotate 49367.5, Rotate 49412.5, Rotate 49457.5, Rotate 49502.5, Rotate 49547.5, Rotate 49592.5, Rotate 49637.5, Rotate 49682.5, Rotate 49727.5, Rotate 49772.5, Rotate 49817.5, Rotate 49862.5, Rotate 49907.5, Rotate 49952.5, Rotate 50007.5, Rotate 50052.5, Rotate 50097.5, Rotate 50142.5, Rotate 50187.5, Rotate 50232.5, Rotate 50277.5, Rotate 50322.5, Rotate 50367.5, Rotate 50412.5, Rotate 50457.5, Rotate 50502.5, Rotate 50547.5, Rotate 50592.5, Rotate 50637.5, Rotate 50682.5, Rotate 50727.5, Rotate 50772.5, Rotate 50817.5, Rotate 50862.5, Rotate 50907.5, Rotate 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Rotate 53817.5, Rotate 53862.5, Rotate 53907.5, Rotate 53952.5, Rotate 54007.5, Rotate 54052.5, Rotate 54097.5, Rotate 54142.5, Rotate 54187.5, Rotate 54232.5, Rotate 54277.5, Rotate 54322.5, Rotate 54367.5, Rotate 54412.5, Rotate 54457.5, Rotate 54502.5, Rotate 54547.5, Rotate 54592.5, Rotate 54637.5, Rotate 54682.5, Rotate 54727.5, Rotate 54772.5, Rotate 54817.5, Rotate 54862.5, Rotate 54907.5, Rotate 54952.5, Rotate 55007.5, Rotate 55052.5, Rotate 55097.5, Rotate 55142.5, Rotate 55187.5, Rotate 55232.5, Rotate 55277.5, Rotate 55322.5, Rotate 55367.5, Rotate 55412.5, Rotate 55457.5, Rotate 55502.5

9) Standard export

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

(Fiji Is Just) ImageJ

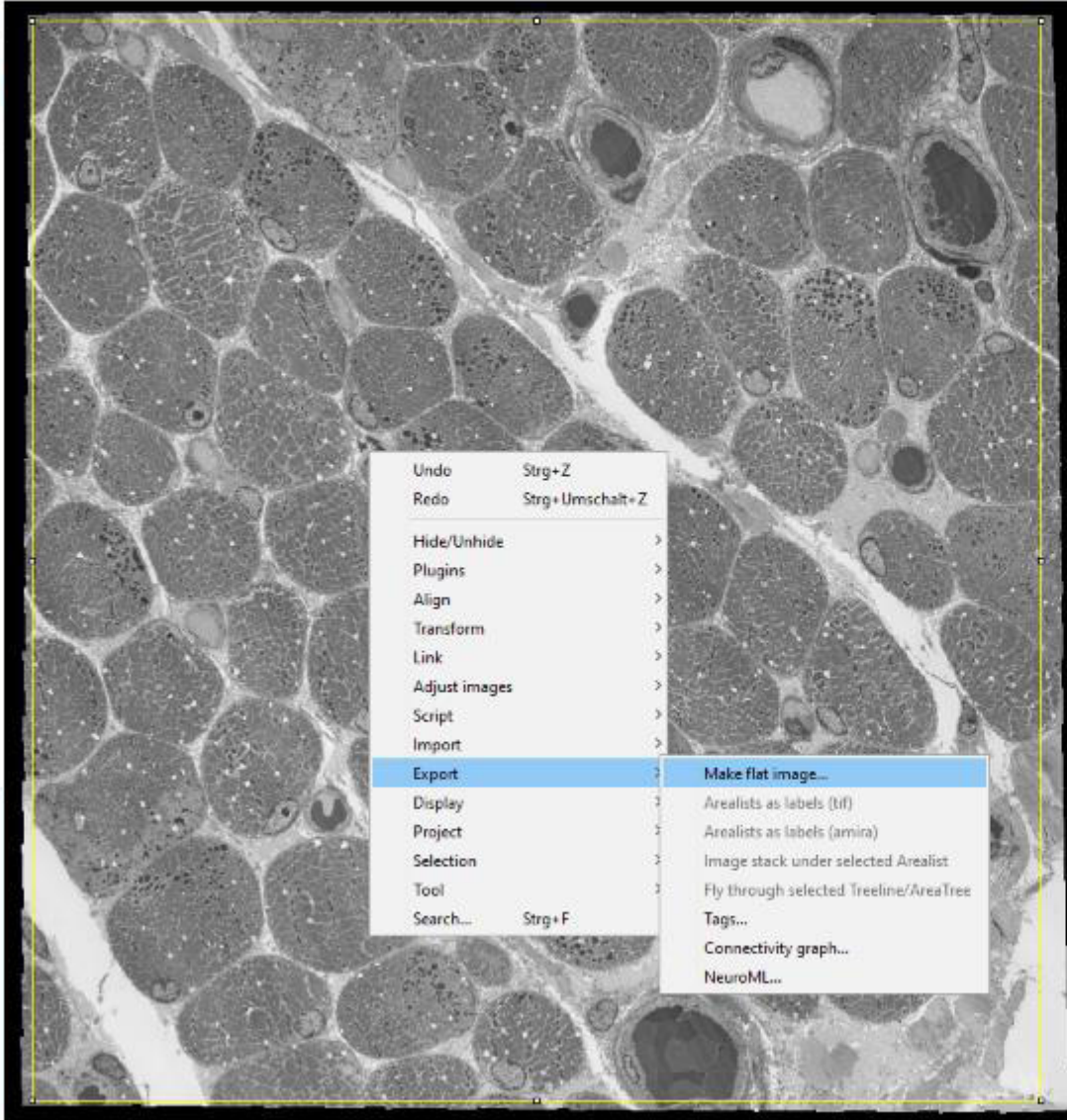
File Edit Image Process Analyze Plugins Window Help

x=25498 pixel, y=21752 pixel, value=125 [Patch #257]

2/2 z=0.0 pixels (2.6%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers Patches Tool options Annotations Live filter Profiles Z space Opacity Labels

- 01_ROI80000.tif
- #8
- 01_ROI80001.tif
- #25
- 01_ROI80002.tif
- #42
- 01_ROI80003.tif
- #59
- 01_ROI80004.tif
- #76
- 01_ROI80005.tif
- #93
- 01_ROI80006.tif
- #110
- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144



Log

File Edit Font

```
1963. 0.0022895721511497296 0.002321944612898046
1964. 0.0022895716604728906 0.002321944612898046
1965. 0.0022895711702952144 0.002321944612898046
1966. 0.0022895706806159394 0.002321944612898046
1967. 0.0022895701914343062 0.002321944612898046
1968. 0.002289569702749556 0.002321944612898046
1969. 0.002289569214560933 0.002321944612898046
1970. 0.0022895687268676807 0.002321944612898046
1971. 0.002289568239669047 0.002321944612898046
1972. 0.0022895677529642788 0.002321944612898046
1973. 0.002289567266752626 0.002321944612898046
1974. 0.002289566781033339 0.002321944612898046
1975. 0.002289566295805671 0.002321944612898046
1976. 0.002289565811068876 0.002321944612898046
1977. 0.002289565326822209 0.002321944612898046
1978. 0.002289564843064927 0.002321944612898046
1979. 0.002289564359796289 0.002321944612898046
1980. 0.0022895638770155545 0.002321944612898046
1981. 0.0022895633947219857 0.002321944612898046
1982. 0.0022895629129148446 0.002321944612898046
1983. 0.002289562431593396 0.002321944612898046
1984. 0.0022895619507569067 0.002321944612898046
1985. 0.002289561470404643 0.002321944612898046
1986. 0.0022895609905358746 0.002321944612898046
1987. 0.002289560511149871 0.002321944612898046
1988. 0.002289560032245905 0.002321944612898046
1989. 0.00228955955382325 0.002321944612898046
1990. 0.0022895590758811794 0.002321944612898046
1991. 0.0022895585984189708 0.002321944612898046
1992. 0.0022895581214359014 0.002321944612898046
1993. 0.00228955764493125 0.002321944612898046
1994. 0.002289557168904298 0.002321944612898046
1995. 0.0022895566933543265 0.002321944612898046
1996. 0.0022895562182806196 0.002321944612898046
1997. 0.002289555743682462 0.002321944612898046
1998. 0.0022895552695591397 0.002321944612898046
1999. 0.002289554795909941 0.002321944612898046
Matching intensities done.
```


9) Standard export

Template
● anything

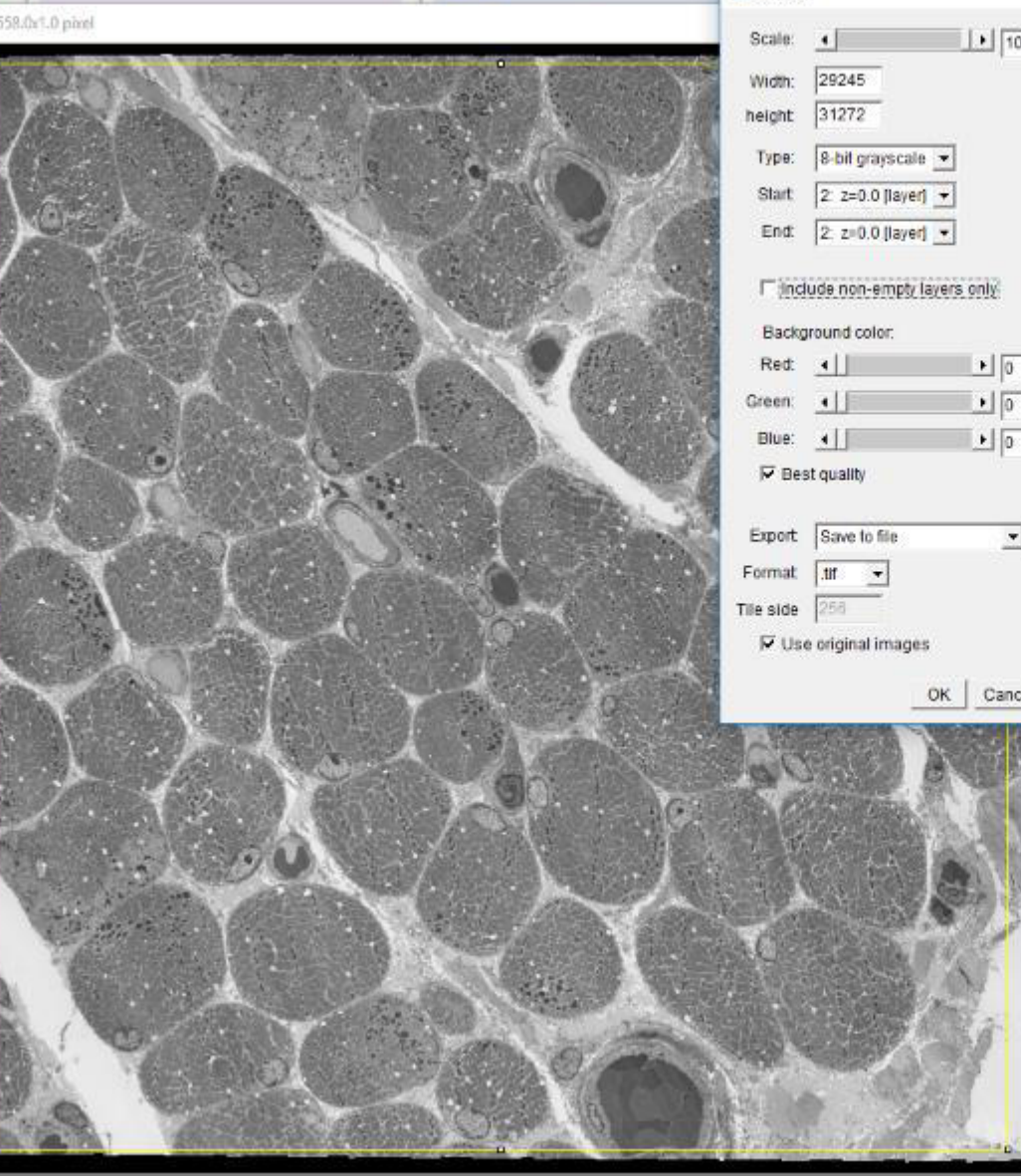
Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

2/2 z=0.0 pixels (2.6%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers Patches Tool options Annotations Live filter Profiles Z space Opacity Labels

- 01_ROI80000.tif
- #8
- 01_ROI80001.tif
- #25
- 01_ROI80002.tif
- #42
- 01_ROI80003.tif
- #59
- 01_ROI80004.tif
- #76
- 01_ROI80005.tif
- #93
- 01_ROI80006.tif
- #110
- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144



Choose

Scale: 100

Width: 29245

height: 31272

Type: 8-bit grayscale

Start: 2: z=0.0 [layer]

End: 2: z=0.0 [layer]

Include non-empty layers only

Background color:

Red: 0

Green: 0

Blue: 0

Best quality

Export: Save to file

Format: .tif

Tile side: 256

Use original images

OK Cancel

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=25498 pixel, y=21752 pixel, value=125 [Patch #257]

Log

File Edit Font

```
1963. 0.0022895721511497296 0.002321944612898046
1964. 0.0022895716604728906 0.002321944612898046
1965. 0.0022895711702952144 0.002321944612898046
1966. 0.0022895706806159394 0.002321944612898046
1967. 0.0022895701914343062 0.002321944612898046
1968. 0.002289569702749556 0.002321944612898046
1969. 0.002289569214560933 0.002321944612898046
1970. 0.0022895687268676807 0.002321944612898046
1971. 0.002289568239669047 0.002321944612898046
1972. 0.0022895677529642788 0.002321944612898046
1973. 0.002289567266752626 0.002321944612898046
1974. 0.002289566781033339 0.002321944612898046
1975. 0.002289566295805671 0.002321944612898046
1976. 0.002289565811068876 0.002321944612898046
1977. 0.002289565326822209 0.002321944612898046
1978. 0.002289564843064927 0.002321944612898046
1979. 0.002289564359796289 0.002321944612898046
1980. 0.0022895638770155545 0.002321944612898046
1981. 0.0022895633947219857 0.002321944612898046
1982. 0.0022895629129148446 0.002321944612898046
1983. 0.002289562431593396 0.002321944612898046
1984. 0.0022895619507569067 0.002321944612898046
1985. 0.002289561470404643 0.002321944612898046
1986. 0.0022895609905358746 0.002321944612898046
1987. 0.002289560511149871 0.002321944612898046
1988. 0.002289560032245905 0.002321944612898046
1989. 0.00228955955382325 0.002321944612898046
1990. 0.00228955907558811794 0.002321944612898046
1991. 0.0022895585984189708 0.002321944612898046
1992. 0.0022895581214359014 0.002321944612898046
1993. 0.00228955764493125 0.002321944612898046
1994. 0.002289557168904298 0.002321944612898046
1995. 0.0022895566933543265 0.002321944612898046
1996. 0.0022895562182806196 0.002321944612898046
1997. 0.002289555743682462 0.002321944612898046
1998. 0.0022895552695591397 0.002321944612898046
1999. 0.00228955479590941 0.002321944612898046
Matching intensities done.
```


9) Standard export

Template: anything

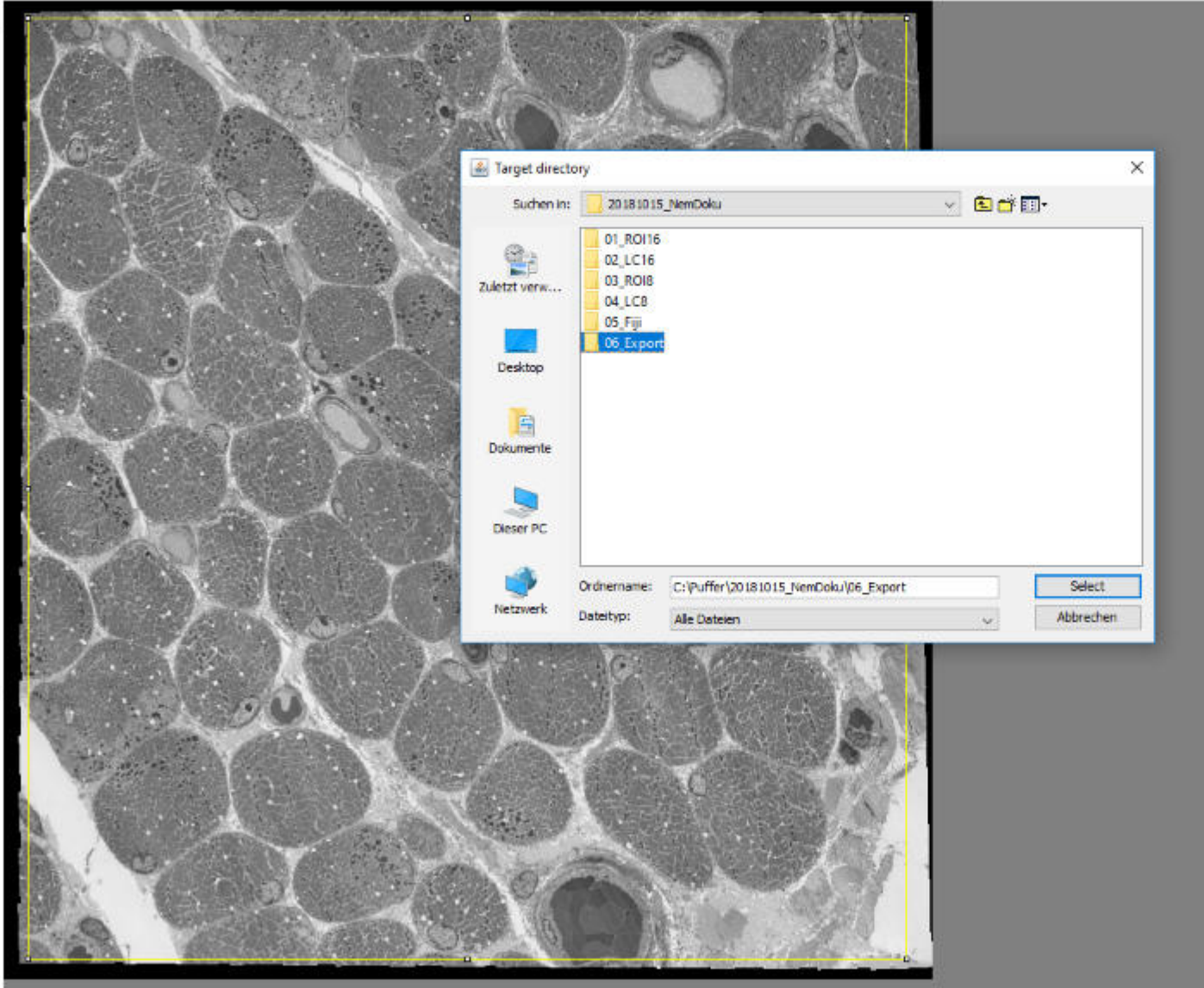
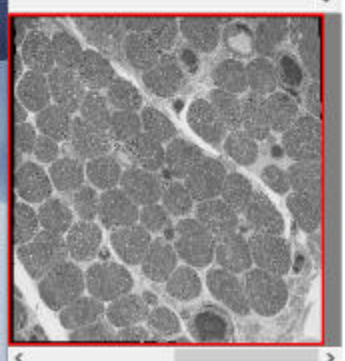
Project Objects: Untitled 0 [project]

Layers: Top Level [layer set], 1: z=0.0 [layer], 2: z=0.0 [layer]

2/2 z=0.0 pixels (2.6%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers: Patches, Profiles, Z space, Opacity, Labels

- 01_ROI80000.tif
- #8
- 01_ROI80001.tif
- #25
- 01_ROI80002.tif
- #42
- 01_ROI80003.tif
- #59
- 01_ROI80004.tif
- #76
- 01_ROI80005.tif
- #93
- 01_ROI80006.tif
- #110
- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144



Target directory

Suchen in: 20181015_NemDoku

- 01_ROI16
- 02_LC16
- 03_ROI8
- 04_LC8
- 05_Fiji
- 06_Export

Ordnername: C:\puffer\20181015_NemDoku\06_Export

Datentyp: Alle Dateien

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... making flat images - 14 seconds

Log

File Edit Font

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1963. 0.0022895721511497296 0.002321944612898046
1964. 0.0022895716604728906 0.002321944612898046
1965. 0.0022895711702952144 0.002321944612898046
1966. 0.0022895706806159394 0.002321944612898046
1967. 0.0022895701914943062 0.002321944612898046
1968. 0.002289569702749556 0.002321944612898046
1969. 0.002289569214560933 0.002321944612898046
1970. 0.0022895687268676807 0.002321944612898046
1971. 0.002289568239669047 0.002321944612898046
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1973. 0.002289567266752626 0.002321944612898046
1974. 0.002289566781033399 0.002321944612898046
1975. 0.002289566295805671 0.002321944612898046
1976. 0.002289565811068876 0.002321944612898046
1977. 0.002289565326822209 0.002321944612898046
1978. 0.002289564843064927 0.002321944612898046
1979. 0.002289564359796289 0.002321944612898046
1980. 0.0022895638770155545 0.002321944612898046
1981. 0.0022895633947219857 0.002321944612898046
1982. 0.0022895629129148446 0.002321944612898046
1983. 0.002289562431593396 0.002321944612898046
1984. 0.0022895619507569067 0.002321944612898046
1985. 0.002289561470404643 0.002321944612898046
1986. 0.0022895609905358746 0.002321944612898046
1987. 0.002289560511149871 0.002321944612898046
1988. 0.002289560032245905 0.002321944612898046
1989. 0.00228955955382325 0.002321944612898046
1990. 0.0022895590758811794 0.002321944612898046
1991. 0.0022895585984189708 0.002321944612898046
1992. 0.0022895581214359014 0.002321944612898046
1993. 0.002289557644493125 0.002321944612898046
1994. 0.002289557168904298 0.002321944612898046
1995. 0.0022895566933543265 0.002321944612898046
1996. 0.0022895562182806196 0.002321944612898046
1997. 0.002289555743682462 0.002321944612898046
1998. 0.0022895552695591397 0.002321944612898046
1999. 0.002289554795909941 0.002321944612898046
Matching intensities done.
```


9) Standard export

Template
● anything

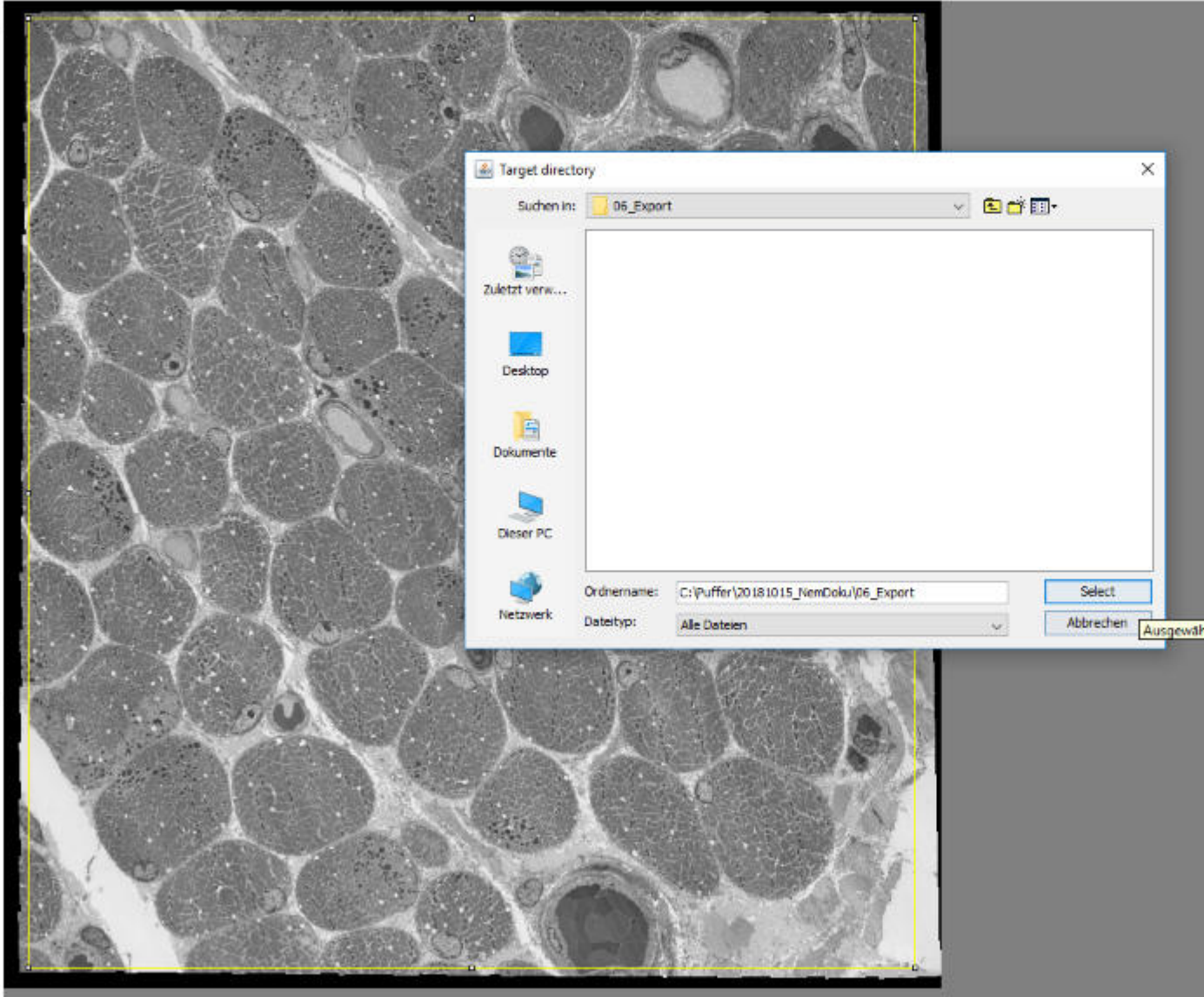
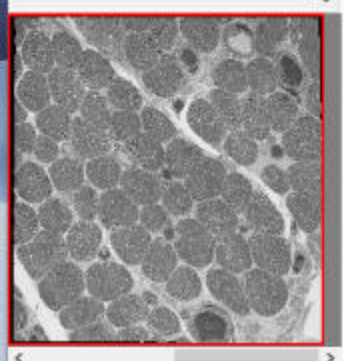
Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

2/2 z=0.0 pixels (2.6%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels

- 01_ROI80000.tif
- #8
- 01_ROI80001.tif
- #25
- 01_ROI80002.tif
- #42
- 01_ROI80003.tif
- #59
- 01_ROI80004.tif
- #76
- 01_ROI80005.tif
- #93
- 01_ROI80006.tif
- #110
- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144



Target directory

Suchen in: 06_Export

Zuletzt verw...

- Desktop
- Dokumente
- Dieser PC
- Netzwerk

Ordnername: C:\puffer\20181015_NemDoku\06_Export

Datentyp: Alle Dateien

Select Abbrechen

(Fiji to Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Processing... making flat images - 24 seconds

Log

File Edit Font

```
1963. 0.0022895721511497296 0.002321944612898046
1964. 0.0022895716604728906 0.002321944612898046
1965. 0.0022895711702952144 0.002321944612898046
1966. 0.0022895706806159394 0.002321944612898046
1967. 0.0022895701914343062 0.002321944612898046
1968. 0.002289569702749556 0.002321944612898046
1969. 0.002289569214560933 0.002321944612898046
1970. 0.0022895687268676807 0.002321944612898046
1971. 0.002289568239669047 0.002321944612898046
1972. 0.0022895677529642788 0.002321944612898046
1973. 0.002289567266752626 0.002321944612898046
1974. 0.002289566781033399 0.002321944612898046
1975. 0.002289566295805671 0.002321944612898046
1976. 0.002289565811068876 0.002321944612898046
1977. 0.002289565326822209 0.002321944612898046
1978. 0.002289564843064927 0.002321944612898046
1979. 0.002289564359796289 0.002321944612898046
1980. 0.0022895638770155545 0.002321944612898046
1981. 0.0022895633947219857 0.002321944612898046
1982. 0.0022895629129148446 0.002321944612898046
1983. 0.002289562431593396 0.002321944612898046
1984. 0.0022895619507569067 0.002321944612898046
1985. 0.002289561470404643 0.002321944612898046
1986. 0.0022895609905358746 0.002321944612898046
1987. 0.002289560511149871 0.002321944612898046
1988. 0.002289560032245905 0.002321944612898046
1989. 0.00228955955382325 0.002321944612898046
1990. 0.0022895590758811794 0.002321944612898046
1991. 0.0022895585984189708 0.002321944612898046
1992. 0.0022895581214359014 0.002321944612898046
1993. 0.002289557644493125 0.002321944612898046
1994. 0.002289557168904298 0.002321944612898046
1995. 0.0022895566933543265 0.002321944612898046
1996. 0.0022895562182806196 0.002321944612898046
1997. 0.002289555743682462 0.002321944612898046
1998. 0.0022895552695591397 0.002321944612898046
1999. 0.002289554795909941 0.002321944612898046
Matching intensities done.
```


9) Standard export

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

(Fiji Is Just) ImageJ

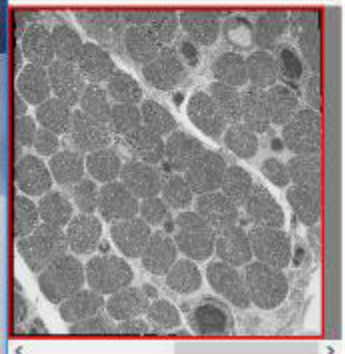
File Edit Image Process Analyze Plugins Window Help

Processing... making flat images - 27 seconds

2/2 z=0.0 pixels (2.6%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers Tool options Annotations Live filter Patches Profiles Z space Opacity Labels

- 01_ROI80000.tif
- #8
- 01_ROI80001.tif
- #25
- 01_ROI80002.tif
- #42
- 01_ROI80003.tif
- #59
- 01_ROI80004.tif
- #76
- 01_ROI80005.tif
- #93
- 01_ROI80006.tif
- #110
- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144



Log

File Edit Font

```
1963. 0.0022895721511497296 0.002321944612898046
1964. 0.0022895716604728906 0.002321944612898046
1965. 0.0022895711702952144 0.002321944612898046
1966. 0.0022895706806159394 0.002321944612898046
1967. 0.0022895701914343062 0.002321944612898046
1968. 0.002289569702749556 0.002321944612898046
1969. 0.002289569214560933 0.002321944612898046
1970. 0.0022895687268676807 0.002321944612898046
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1979. 0.002289564359796289 0.002321944612898046
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1982. 0.0022895629129148446 0.002321944612898046
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1984. 0.0022895619507569067 0.002321944612898046
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1989. 0.00228955955382325 0.002321944612898046
1990. 0.00228955907558811794 0.002321944612898046
1991. 0.0022895585984189708 0.002321944612898046
1992. 0.0022895581214359014 0.002321944612898046
1993. 0.002289557644493125 0.002321944612898046
1994. 0.002289557168904298 0.002321944612898046
1995. 0.0022895566933543265 0.002321944612898046
1996. 0.0022895562182806196 0.002321944612898046
1997. 0.002289555743682462 0.002321944612898046
1998. 0.0022895552695591397 0.002321944612898046
1999. 0.00228955479590941 0.002321944612898046
Matching intensities done.
```


9) Standard export

Template
● anything

Project Objects
● Untitled 0 [project]

Layers
● Top Level [layer set]
● 1: z=0.0 [layer]
● 2: z=0.0 [layer]

(Fiji Is Just) ImageJ

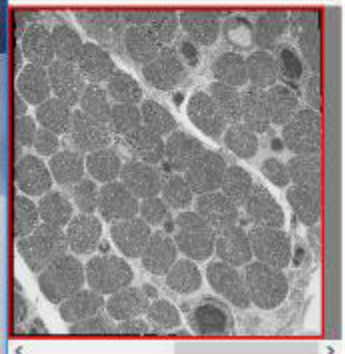
File Edit Image Process Analyze Plugins Window Help

Done making flat images (109.35s approx.)

2/2 z=0.0 pixels (2.6%) -- Untitled 0 30916.0x32558.0x1.0 pixel

Layers Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels

- 01_ROI80000.tif
- #8
- 01_ROI80001.tif
- #25
- 01_ROI80002.tif
- #42
- 01_ROI80003.tif
- #59
- 01_ROI80004.tif
- #76
- 01_ROI80005.tif
- #93
- 01_ROI80006.tif
- #110
- 01_ROI80007.tif
- #127
- 01_ROI80008.tif
- #144



Log

File Edit Font

```
1963. 0.0022895721511497296 0.002321944612898046
1964. 0.0022895716604728906 0.002321944612898046
1965. 0.0022895711702952144 0.002321944612898046
1966. 0.0022895706806159394 0.002321944612898046
1967. 0.0022895701914343062 0.002321944612898046
1968. 0.002289569702749556 0.002321944612898046
1969. 0.002289569214560933 0.002321944612898046
1970. 0.0022895687268676807 0.002321944612898046
1971. 0.002289568239669047 0.002321944612898046
1972. 0.0022895677529642788 0.002321944612898046
1973. 0.002289567266752626 0.002321944612898046
1974. 0.002289566781033339 0.002321944612898046
1975. 0.002289566295805671 0.002321944612898046
1976. 0.002289565811068876 0.002321944612898046
1977. 0.002289565326822209 0.002321944612898046
1978. 0.002289564843064927 0.002321944612898046
1979. 0.002289564359796289 0.002321944612898046
1980. 0.0022895638770155545 0.002321944612898046
1981. 0.0022895633947219857 0.002321944612898046
1982. 0.0022895629129148446 0.002321944612898046
1983. 0.002289562431593396 0.002321944612898046
1984. 0.0022895619507569067 0.002321944612898046
1985. 0.002289561470404643 0.002321944612898046
1986. 0.0022895609905358746 0.002321944612898046
1987. 0.002289560511149871 0.002321944612898046
1988. 0.002289560032245905 0.002321944612898046
1989. 0.00228955955382325 0.002321944612898046
1990. 0.00228955907558811794 0.002321944612898046
1991. 0.0022895585984189708 0.002321944612898046
1992. 0.0022895581214359014 0.002321944612898046
1993. 0.002289557644493125 0.002321944612898046
1994. 0.002289557168904298 0.002321944612898046
1995. 0.0022895566933543265 0.002321944612898046
1996. 0.0022895562182806196 0.002321944612898046
1997. 0.002289555743682462 0.002321944612898046
1998. 0.0022895552695591397 0.002321944612898046
1999. 0.00228955479590941 0.002321944612898046
Matching intensities done.
```

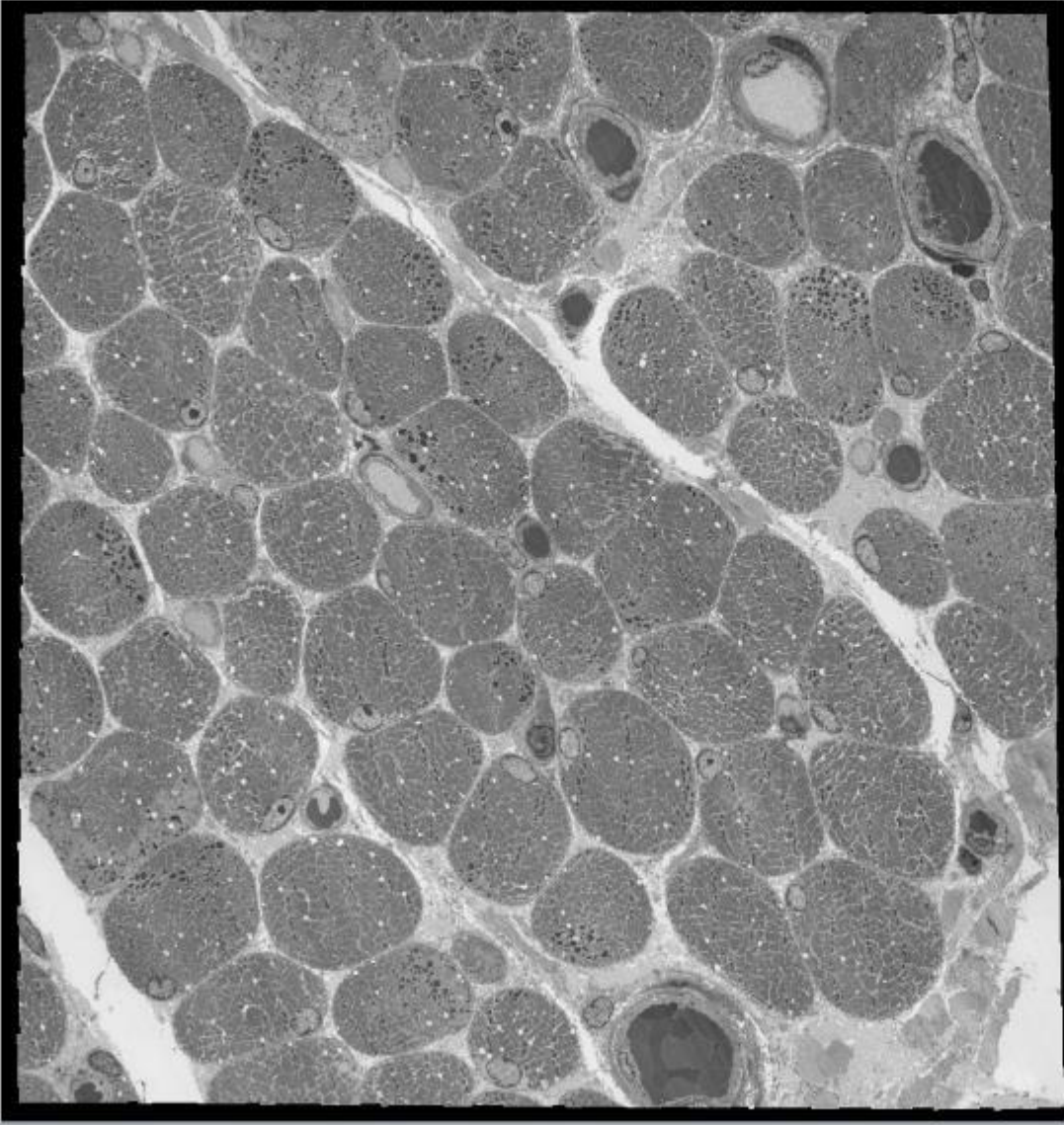

10) CATMAID tile export

Template
anything

Project Objects
20181015 Nem.xml [project]

Layers
Top Level Top Level [layer set]
1: z=0.0 [layer]
2: z=0.0 [layer]

1/2 z=0.0 pixels (2.6%) -- 20181015_Nem.xml 30916.0x32558.0x1.0 pixel



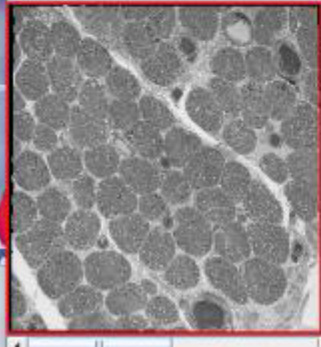
Annotations Live filter

Layers Tool options

Z space Opacity Labels

Patches Profiles

01_ROI80000.tif
#0
01_ROI80001.tif
#25
01_ROI80002.tif
#42
01_ROI80003.tif
#59
01_ROI80004.tif
#76
01_ROI80005.tif
#93
01_ROI80006.tif
#110
01_ROI80007.tif
#127



Fiji (Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

- New
Open... Strg+O
Open Next Strg+Umschalt+O
Open Samples
Open Recent
Import
Close Strg+W
Close All Strg+Umschalt+W
Save Strg+S
Save As
Revert Strg+R
Page Setup...
Print... Strg+P
Export
Quit
Fix Funny Filenames
Make Screenshot
- Image... Strg+N
Hyperstack...
Text Window Strg+Umschalt+N
Internal Clipboard
System Clipboard Strg+Umschalt+V
TrakEM2 (blank)
TrakEM2 (from template)
Script...

System log

StdOut

StdErr

10) CATMAID tile export

Template
anything

Project Objects
20181015 Nem.xml [project]

Layers
Top Level Top Level [layer sel]
1: z=0.0 [layer]
2: z=0.0 [layer]

(Fiji Is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Command finished: Script...

1/2 z=0.0 pixels (2.6%) -- 20181015_Nem.xml 30916.0x32558.0x1.0 pixel

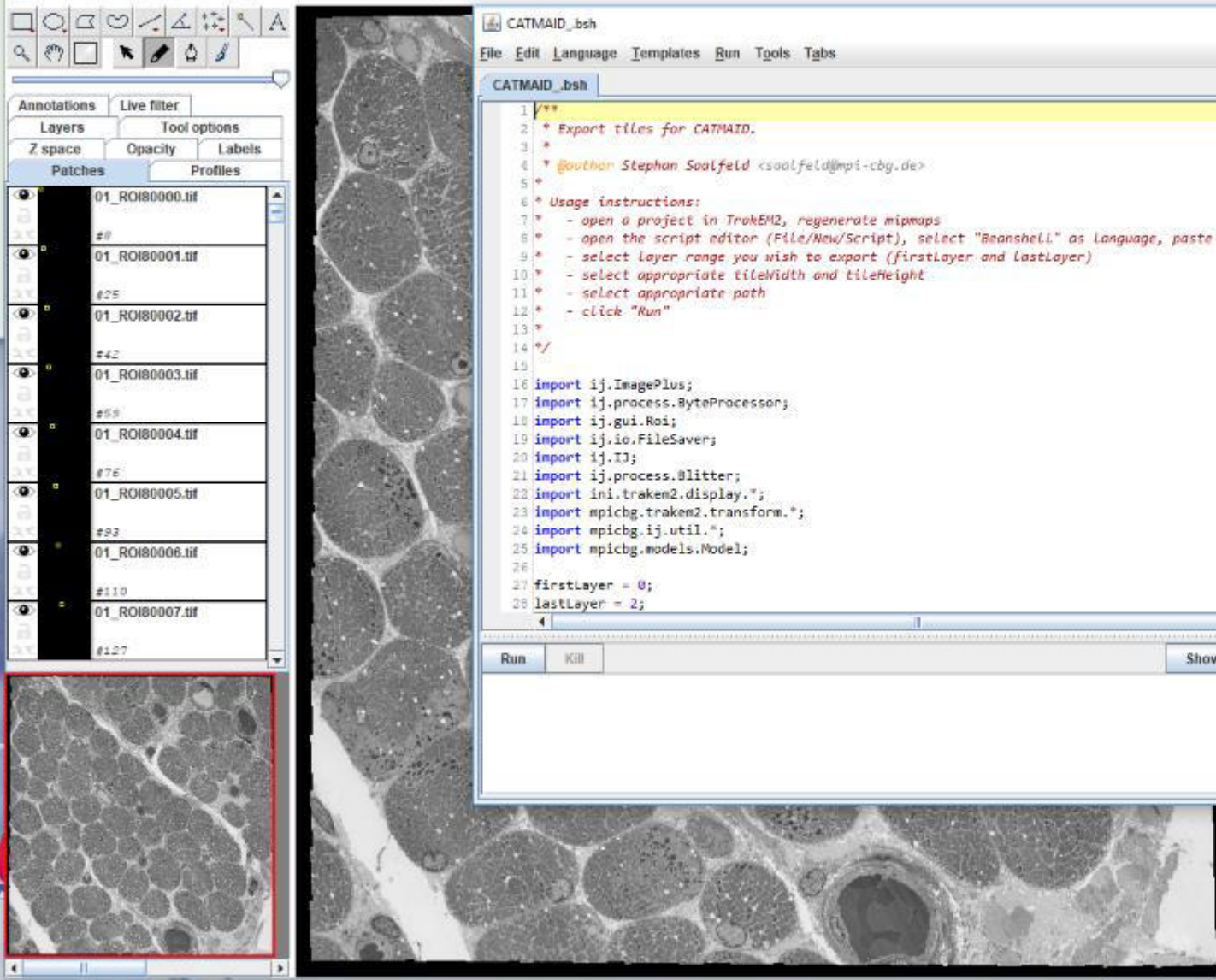
CATMAID_bsh

File Edit Language Templates Run Tools Tabs

CATMAID_bsh

```
1 /**
2  * Export tiles for CATMAID.
3  *
4  * @author Stephan Soalfeld <soalfeld@mpi-cbg.de>
5  *
6  * Usage instructions:
7  * - open a project in TrakEM2, regenerate mipmaps
8  * - open the script editor (File/New/Script), select "Beanshell" as language, paste this script in
9  * - select layer range you wish to export (firstLayer and lastLayer)
10 * - select appropriate tileWidth and tileHeight
11 * - select appropriate path
12 * - click "Run"
13 */
14
15
16 import ij.ImagePlus;
17 import ij.process.ByteProcessor;
18 import ij.gui.Roi;
19 import ij.io.FileSaver;
20 import ij.T3;
21 import ij.process.Blitter;
22 import ini.trakem2.display.*;
23 import mpicbg.trakem2.transform.*;
24 import mpicbg.ij.util.*;
25 import mpicbg.models.Model;
26
27 firstLayer = 0;
28 lastLayer = 2;
```

Run Kill Show Errors Clear



System log

StdOut

StdErr

10) CATMAID tile export

Template
anything

Project Objects
20181015 Nem.xml [project]

Layers
Top Level Top Level [layer set]
1: z=0.0 [layer]
2: z=0.0 [layer]

(Fiji is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

x=30965 pixel, y=2217 pixel

1/2 z=0.0 pixels (2.6%) -- 20181015_Nem.xml 30916.0x32558.0x1.0 pixel

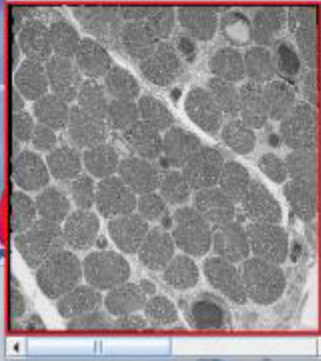
Annotations Live filter

Layers Tool options

Z space Opacity Labels

Patches Profiles

#0	01_ROI80000.tif
#1	01_ROI80001.tif
#25	01_ROI80002.tif
#42	01_ROI80003.tif
#59	01_ROI80004.tif
#76	01_ROI80005.tif
#93	01_ROI80006.tif
#110	01_ROI80007.tif
#127	



```
*CATMAID_bsh
File Edit Language Templates Run Tools Tabs

*CATMAID_bsh
import ij.*;
import ij.process.Blitter;
import ini.trakem2.display.*;
import mpicbg.trakem2.transform.*;
import mpicbg.ij.util.*;
import mpicbg.models.Model;

firstLayer = 0;
lastLayer = 1;

tileWidth = 16000;
tileHeight = 16000;

emptyImage = new ImagePlus("", new ByteProcessor(tileWidth, tileHeight));

exportFormat = "png"; // "jpg" or "png"
jpegQuality = 85;

path = "c:\\buffer\\export\\";

front = Display.getFront();
layerSet = front.getLayerSet();

layers = front.getLayerSet().getLayers();
roi = front.getRoi();
if (roi == null) {
    roi = new Roi(0, 0, layerSet.getLayerWidth(), layerSet.getLayerHeight());
}

Run Kill Show Errors Clear
```

- 1) Determine the layer(s)
 - 2) Determine the tile dimensions (max. about 25,000 x 25,000 pixels)
 - 3) Determine the path for export (will take some time)
- If the exported files get deleted, comment line „59“; „file.delete();“

System log

StdOut

StdErr

10) CATMAID tile export

Template
anything

Project Objects
20181015 Nem.xml [project]

Layers
Top Level Top Level [layer set]
1: z=0.0 [layer]
2: z=0.0 [layer]

(Fiji Is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Running command: script:E:\Workstation_MainW_12_FijiMakros\CATMAID...

1/2 z=0.0 pixels (2.6%) -- 20181015_Nem.xml 30916.0x32558.0x1.0 pixel

*CATMAID_.bsh (Running)

```
File Edit Language Templates Run Tools Tabs

*CATMAID_.bsh (Running)
1: import ij.*;
20: import ij.IJ;
21: import ij.process.Blitter;
22: import ini.traken2.display.*;
23: import mpicbg.traken2.transform.*;
24: import mpicbg.ij.util.*;
25: import mpicbg.models.Model;
26:
27: firstLayer = 0;
28: lastLayer = 1;
29:
30: tileWidth = 16000;
31: tileHeight = 16000;
32:
33: emptyImage = new ImagePlus("", new ByteProcessor(tileWidth, tileHeight));
34:
35: exportFormat = "png"; // "jpg" or "png"
36: jpegQuality = 85;
37:
38: path = "c:\\buffer\\Export\\";
39:
40: front = Display.getFront();
41: layerSet = front.getLayerSet();
42:
43: layers = front.getLayerSet().getLayers();
44: roi = front.getRoi();
45: if (roi == null) {
46:     roi = new Roi(0, 0, layerSet.getLayerWidth(), layerSet.getLayerHeight());
47: }
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step-by-step protocol 2 (pdf files A-E)

Processing of STEM image tiles; stitching and bigtif generation (the process is scalable for up to more than 10 large datasets)

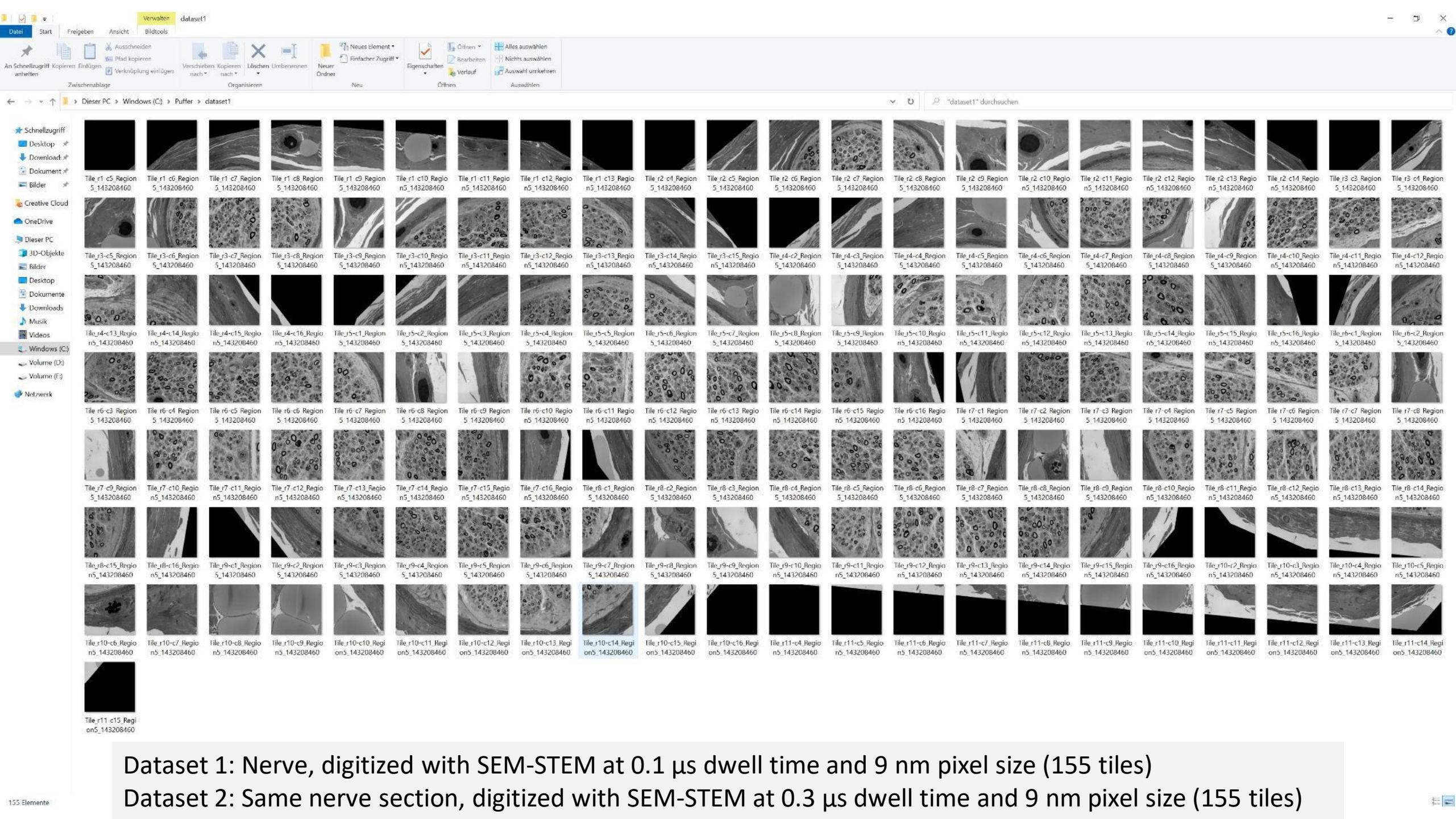
A) Excel; semiautomated generation of a text file containing coordinates (X, Y and Z) of overlapping STEM image tiles

B) Fiji/ TrakEM2 plugin; import of overlapping STEM image tiles and stitching of these into coherent datasets

C) Fiji/ TrakEM2 plugin; export of stitched datasets into non-overlapping tif tiles

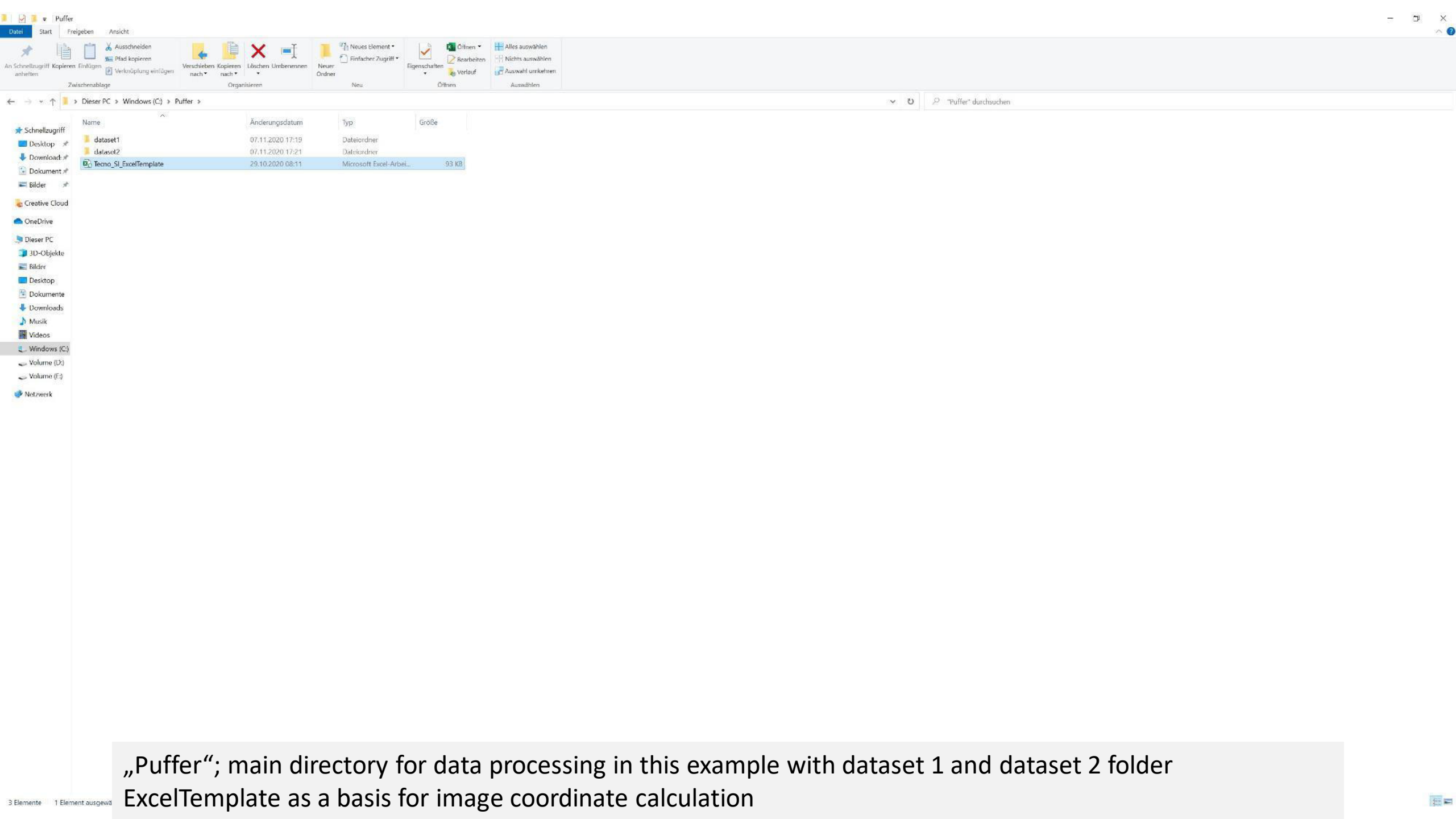
D) Nip2; import of non-overlapping tif tiles and export into a coherent bigtif file

E) QuPath; basic workflow for import, pan-and-zoom analysis, annotation, measurement, saving



Dataset 1: Nerve, digitized with SEM-STEM at 0.1 μ s dwell time and 9 nm pixel size (155 tiles)

Dataset 2: Same nerve section, digitized with SEM-STEM at 0.3 μ s dwell time and 9 nm pixel size (155 tiles)



„Puffer“; main directory for data processing in this example with dataset 1 and dataset 2 folder
ExcelTemplate as a basis for image coordinate calculation

Tecno SI ExcelTemplate - Excel

Datei Start Einfügen Seitenlayout Formeln Daten Überprüfen Ansicht Hilfe Was möchten Sie tun?

Ausschneiden Kopieren Format übertragen Zwischenablage

Calibri 11 A A+

F K U

Standard

Bedingte Formatierung Als Tabelle formatieren

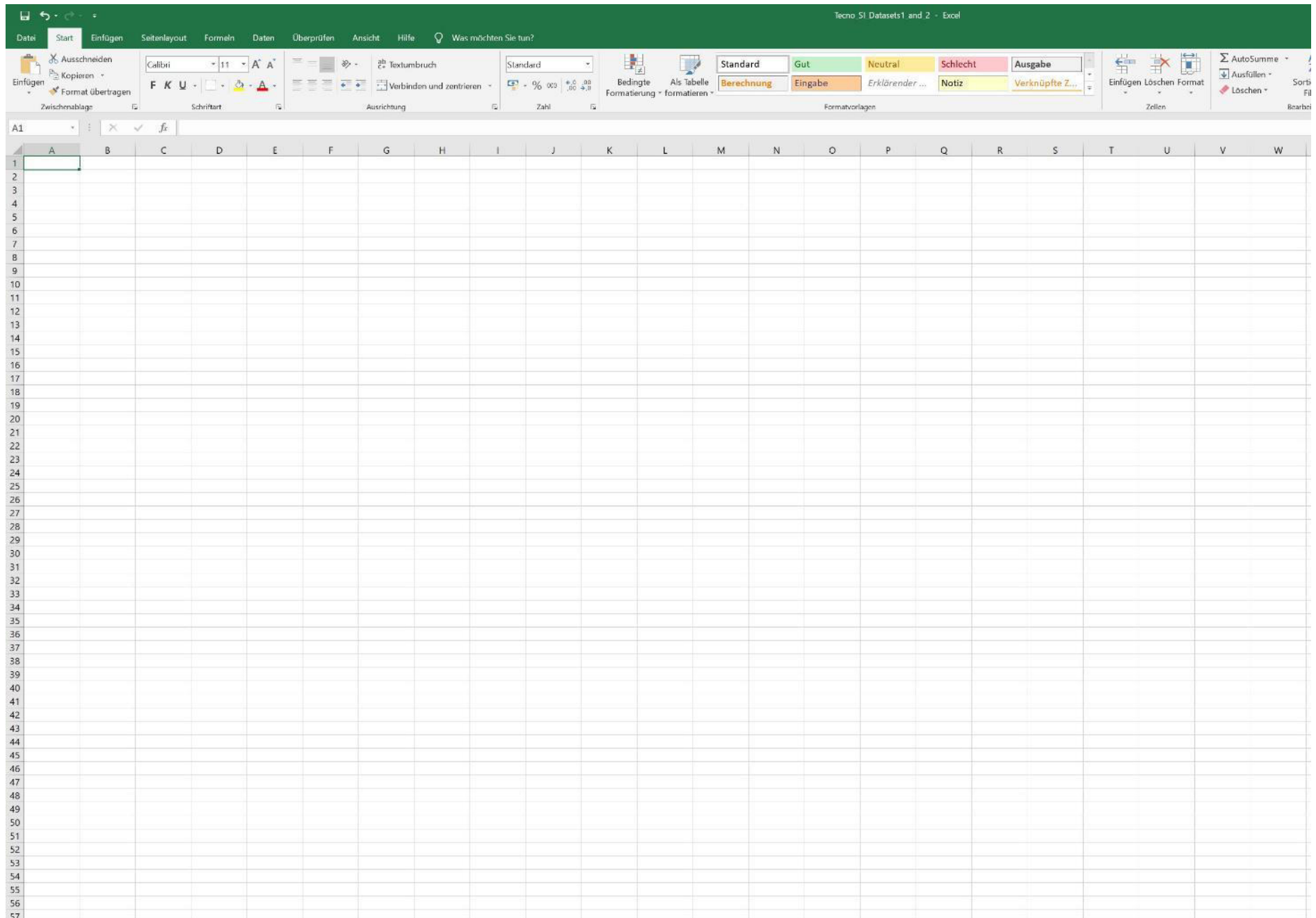
Standard Gut Neutral Schlecht Ausgabe Berechnung Eingabe Erklärender... Notiz Verknüpfte Z...

AutoSumme Ausfüllen Löschen

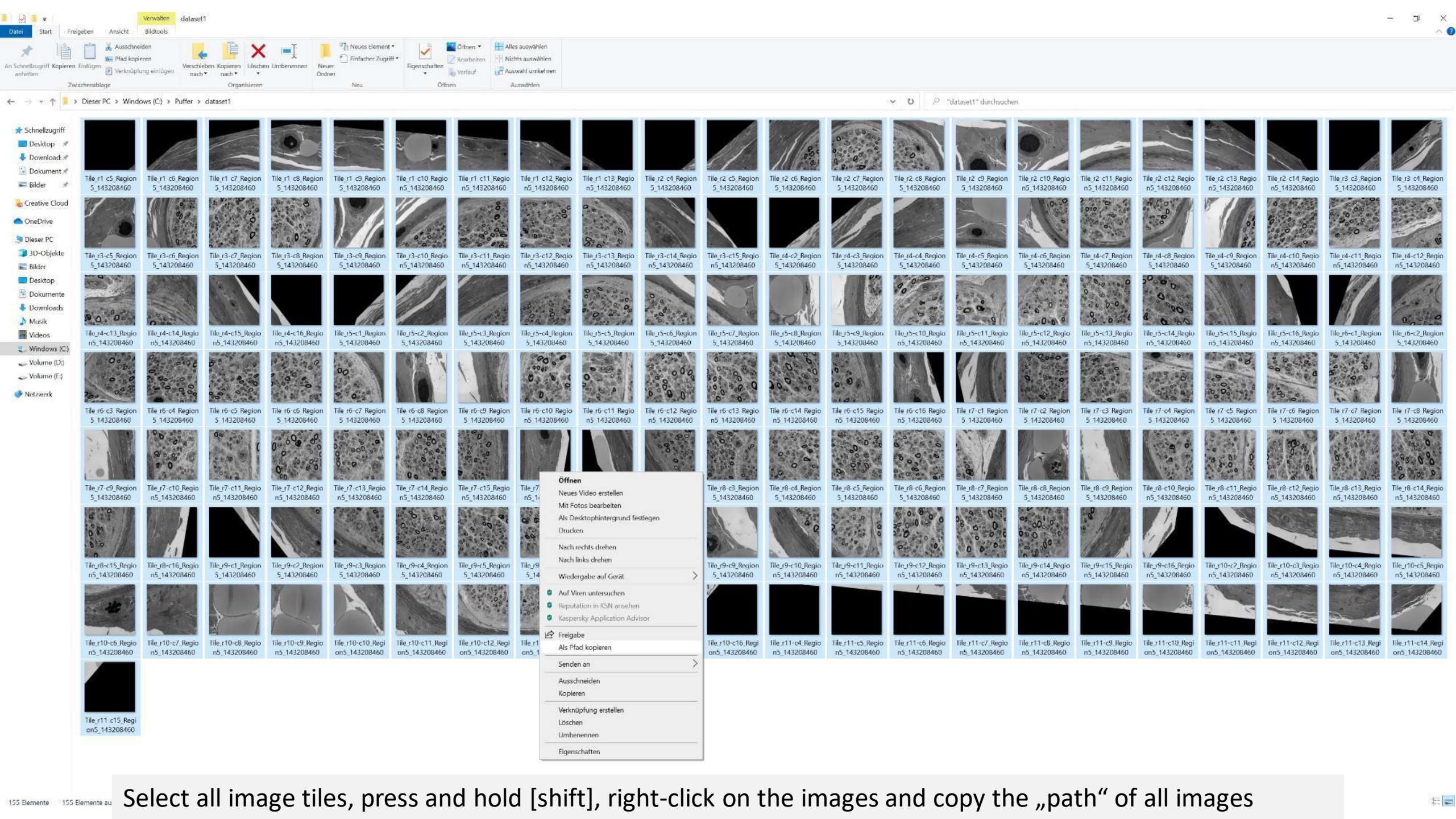
Einfügen Löschen Format Zellen Bearbeiten

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1													0	0				9625	9625	0.0
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Details are described in the Excel file (Description)



New page



Select all image tiles, press and hold [shift], right-click on the images and copy the „path“ of all images

Tecno SI Datasets1 and 2 - Excel

Start Einfügen Seitenlayout Formeln Daten Überprüfen Ansicht Hilfe Was möchten Sie tun?

Ausschneiden Kopieren Einfügen Format übertragen Zwischenablage

Calibri 11 Textumbruch Standard

F K U % 000 +.0 /100 -0.8

Bedingte Formatierung Als Tabelle formatieren

Standard Gut Neutral Schlecht Ausgabe Berechnung Eingabe Erklärender ... Notiz Verknüpfte Z...

Einfügen Löschen Format AutoSumme Ausfüllen Sortieren Löschen

Zellen Bearbeiten

C4

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	C:\Puffer\dataset1\Tile_r7-c16_Region5_143208460.tif																		
2	C:\Puffer\dataset1\Tile_r8-c1_Region5_143208460.tif																		
3	C:\Puffer\dataset1\Tile_r8-c2_Region5_143208460.tif																		
4	C:\Puffer\dataset1\Tile_r8-c3_Region5_143208460.tif																		
5	C:\Puffer\dataset1\Tile_r8-c4_Region5_143208460.tif																		
6	C:\Puffer\dataset1\Tile_r8-c5_Region5_143208460.tif																		
7	C:\Puffer\dataset1\Tile_r8-c6_Region5_143208460.tif																		
8	C:\Puffer\dataset1\Tile_r8-c7_Region5_143208460.tif																		
9	C:\Puffer\dataset1\Tile_r8-c8_Region5_143208460.tif																		
10	C:\Puffer\dataset1\Tile_r8-c9_Region5_143208460.tif																		
11	C:\Puffer\dataset1\Tile_r8-c10_Region5_143208460.tif																		
12	C:\Puffer\dataset1\Tile_r8-c11_Region5_143208460.tif																		
13	C:\Puffer\dataset1\Tile_r8-c12_Region5_143208460.tif																		
14	C:\Puffer\dataset1\Tile_r8-c13_Region5_143208460.tif																		
15	C:\Puffer\dataset1\Tile_r8-c14_Region5_143208460.tif																		
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19	C:\Puffer\dataset1\Tile_r9-c2_Region5_143208460.tif																		
20	C:\Puffer\dataset1\Tile_r9-c3_Region5_143208460.tif																		
21	C:\Puffer\dataset1\Tile_r9-c4_Region5_143208460.tif																		
22	C:\Puffer\dataset1\Tile_r9-c5_Region5_143208460.tif																		
23	C:\Puffer\dataset1\Tile_r9-c6_Region5_143208460.tif																		
24	C:\Puffer\dataset1\Tile_r9-c7_Region5_143208460.tif																		
25	C:\Puffer\dataset1\Tile_r9-c8_Region5_143208460.tif																		
26	C:\Puffer\dataset1\Tile_r9-c9_Region5_143208460.tif																		
27	C:\Puffer\dataset1\Tile_r9-c10_Region5_143208460.tif																		
28	C:\Puffer\dataset1\Tile_r9-c11_Region5_143208460.tif																		
29	C:\Puffer\dataset1\Tile_r9-c12_Region5_143208460.tif																		
30	C:\Puffer\dataset1\Tile_r9-c13_Region5_143208460.tif																		
31	C:\Puffer\dataset1\Tile_r9-c14_Region5_143208460.tif																		
32	C:\Puffer\dataset1\Tile_r9-c15_Region5_143208460.tif																		
33	C:\Puffer\dataset1\Tile_r9-c16_Region5_143208460.tif																		
34	C:\Puffer\dataset1\Tile_r10-c2_Region5_143208460.tif																		
35	C:\Puffer\dataset1\Tile_r10-c3_Region5_143208460.tif																		
36	C:\Puffer\dataset1\Tile_r10-c4_Region5_143208460.tif																		
37	C:\Puffer\dataset1\Tile_r10-c5_Region5_143208460.tif																		
38	C:\Puffer\dataset1\Tile_r10-c6_Region5_143208460.tif																		
39	C:\Puffer\dataset1\Tile_r10-c7_Region5_143208460.tif																		
40	C:\Puffer\dataset1\Tile_r10-c8_Region5_143208460.tif																		
41	C:\Puffer\dataset1\Tile_r10-c9_Region5_143208460.tif																		
42	C:\Puffer\dataset1\Tile_r10-c10_Region5_143208460.tif																		
43	C:\Puffer\dataset1\Tile_r10-c11_Region5_143208460.tif																		
44	C:\Puffer\dataset1\Tile_r10-c12_Region5_143208460.tif																		
45	C:\Puffer\dataset1\Tile_r10-c13_Region5_143208460.tif																		
46	C:\Puffer\dataset1\Tile_r10-c14_Region5_143208460.tif																		
47	C:\Puffer\dataset1\Tile_r10-c15_Region5_143208460.tif																		
48	C:\Puffer\dataset1\Tile_r10-c16_Region5_143208460.tif																		
49	C:\Puffer\dataset1\Tile_r11-c4_Region5_143208460.tif																		
50	C:\Puffer\dataset1\Tile_r11-c5_Region5_143208460.tif																		
51	C:\Puffer\dataset1\Tile_r11-c6_Region5_143208460.tif																		
52	C:\Puffer\dataset1\Tile_r11-c7_Region5_143208460.tif																		
53	C:\Puffer\dataset1\Tile_r11-c8_Region5_143208460.tif																		
54	C:\Puffer\dataset1\Tile_r11-c9_Region5_143208460.tif																		
55	C:\Puffer\dataset1\Tile_r11-c10_Region5_143208460.tif																		
56	C:\Puffer\dataset1\Tile_r11-c11_Region5_143208460.tif																		
57	C:\Puffer\dataset1\Tile_r11-c12_Region5_143208460.tif																		

Copy the „path“ of all images into the new Excel page

Tecno SI Datasets1 and 2 - Excel

Suchen und Ersetzen

Suchen nach: C:\Puffer\dataset1\
Ersetzen durch:

Alle ersetzen Ersetzen Alle suchen Weitersuchen Schließen

1 C:\Puffer\dataset1\Tile_r7-c16_Region5_143208460.tif
2 C:\Puffer\dataset1\Tile_r8-c1_Region5_143208460.tif
3 C:\Puffer\dataset1\Tile_r8-c2_Region5_143208460.tif
4 C:\Puffer\dataset1\Tile_r8-c3_Region5_143208460.tif
5 C:\Puffer\dataset1\Tile_r8-c4_Region5_143208460.tif
6 C:\Puffer\dataset1\Tile_r8-c5_Region5_143208460.tif
7 C:\Puffer\dataset1\Tile_r8-c6_Region5_143208460.tif
8 C:\Puffer\dataset1\Tile_r8-c7_Region5_143208460.tif
9 C:\Puffer\dataset1\Tile_r8-c8_Region5_143208460.tif
10 C:\Puffer\dataset1\Tile_r8-c9_Region5_143208460.tif
11 C:\Puffer\dataset1\Tile_r8-c10_Region5_143208460.tif
12 C:\Puffer\dataset1\Tile_r8-c11_Region5_143208460.tif
13 C:\Puffer\dataset1\Tile_r8-c12_Region5_143208460.tif
14 C:\Puffer\dataset1\Tile_r8-c13_Region5_143208460.tif
15 C:\Puffer\dataset1\Tile_r8-c14_Region5_143208460.tif
16 C:\Puffer\dataset1\Tile_r8-c15_Region5_143208460.tif
17 C:\Puffer\dataset1\Tile_r8-c16_Region5_143208460.tif
18 C:\Puffer\dataset1\Tile_r9-c1_Region5_143208460.tif
19 C:\Puffer\dataset1\Tile_r9-c2_Region5_143208460.tif
20 C:\Puffer\dataset1\Tile_r9-c3_Region5_143208460.tif
21 C:\Puffer\dataset1\Tile_r9-c4_Region5_143208460.tif
22 C:\Puffer\dataset1\Tile_r9-c5_Region5_143208460.tif
23 C:\Puffer\dataset1\Tile_r9-c6_Region5_143208460.tif
24 C:\Puffer\dataset1\Tile_r9-c7_Region5_143208460.tif
25 C:\Puffer\dataset1\Tile_r9-c8_Region5_143208460.tif
26 C:\Puffer\dataset1\Tile_r9-c9_Region5_143208460.tif
27 C:\Puffer\dataset1\Tile_r9-c10_Region5_143208460.tif
28 C:\Puffer\dataset1\Tile_r9-c11_Region5_143208460.tif
29 C:\Puffer\dataset1\Tile_r9-c12_Region5_143208460.tif
30 C:\Puffer\dataset1\Tile_r9-c13_Region5_143208460.tif
31 C:\Puffer\dataset1\Tile_r9-c14_Region5_143208460.tif
32 C:\Puffer\dataset1\Tile_r9-c15_Region5_143208460.tif
33 C:\Puffer\dataset1\Tile_r9-c16_Region5_143208460.tif
34 C:\Puffer\dataset1\Tile_r10-c2_Region5_143208460.tif
35 C:\Puffer\dataset1\Tile_r10-c3_Region5_143208460.tif
36 C:\Puffer\dataset1\Tile_r10-c4_Region5_143208460.tif
37 C:\Puffer\dataset1\Tile_r10-c5_Region5_143208460.tif
38 C:\Puffer\dataset1\Tile_r10-c6_Region5_143208460.tif
39 C:\Puffer\dataset1\Tile_r10-c7_Region5_143208460.tif
40 C:\Puffer\dataset1\Tile_r10-c8_Region5_143208460.tif
41 C:\Puffer\dataset1\Tile_r10-c9_Region5_143208460.tif
42 C:\Puffer\dataset1\Tile_r10-c10_Region5_143208460.tif
43 C:\Puffer\dataset1\Tile_r10-c11_Region5_143208460.tif
44 C:\Puffer\dataset1\Tile_r10-c12_Region5_143208460.tif
45 C:\Puffer\dataset1\Tile_r10-c13_Region5_143208460.tif
46 C:\Puffer\dataset1\Tile_r10-c14_Region5_143208460.tif
47 C:\Puffer\dataset1\Tile_r10-c15_Region5_143208460.tif
48 C:\Puffer\dataset1\Tile_r10-c16_Region5_143208460.tif
49 C:\Puffer\dataset1\Tile_r11-c4_Region5_143208460.tif
50 C:\Puffer\dataset1\Tile_r11-c5_Region5_143208460.tif
51 C:\Puffer\dataset1\Tile_r11-c6_Region5_143208460.tif
52 C:\Puffer\dataset1\Tile_r11-c7_Region5_143208460.tif
53 C:\Puffer\dataset1\Tile_r11-c8_Region5_143208460.tif
54 C:\Puffer\dataset1\Tile_r11-c9_Region5_143208460.tif
55 C:\Puffer\dataset1\Tile_r11-c10_Region5_143208460.tif
56 C:\Puffer\dataset1\Tile_r11-c11_Region5_143208460.tif
57 C:\Puffer\dataset1\Tile_r11-c12_Region5_143208460.tif

Exchange the „path“ by „nothing“, thus, only the image tile names will remain

Techno SI Datasets1 and 2 - Excel

Datei Start Einfügen Seitenlayout Formeln Daten Überprüfen Ansicht Hilfe Was möchten Sie tun?

Ausschneiden Kopieren Einfügen Format übertragen Zwischenablage Schriftart Ausrichtung Zahl

Standard Gut Neutral Schlecht Ausgabe Berechnung Eingabe Erklärender ... Notiz Verknüpfte Z...

Bedingte Formatierung Als Tabelle Einfügen Löschen Format Ausfüllen Löschen

Tile_r7-c16_Region5_143208460.tif

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1																		
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59																		

Suchen und Ersetzen

Suchen Ersetzen

Suchen nach: C:\Puffer\dataset\...

Ersetzen durch:

Alle ersetzen Ersetzen Alle suchen Weitersuchen Schließen

Microsoft Excel

Alles erledigt. Wir haben 155 Stellen geändert.

OK

Optionen >>

Tecno SI Datasets1 and 2 - Excel

Start Einfügen Seitenlayout Formeln Daten Überprüfen Ansicht Hilfe Was möchten Sie tun?

Ausschneiden Kopieren Einfügen Format übertragen

Calibri 11 Textumbruch Standard % 000 +.00 -0.00 Bedingte Formatierung Als Tabelle Berechnung Gut Neutral Schlecht Ausgabe Eingabe Erklärender... Notiz Verknüpfte Z...

Zellen

AutoSumme Ausfüllen Löschen Einfügen Löschen Formatieren

Sortieren Filter

Tile_r7-c16_Region5_143208460.tif

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Tile_r7-c16_Region5_143208460.tif	7-			c16							0	0					9625	9625	0.0
2	Tile_r8-c1_Region5_143208460.tif	8-			c1_R							0	0					9625	9625	0.0
3	Tile_r8-c2_Region5_143208460.tif	8-			c2_R							0	0					9625	9625	0.0
4	Tile_r8-c3_Region5_143208460.tif	8-			c3_R							0	0					9625	9625	0.0
5	Tile_r8-c4_Region5_143208460.tif	8-			c4_R							0	0					9625	9625	0.0
6	Tile_r8-c5_Region5_143208460.tif	8-			c5_R							0	0					9625	9625	0.0
7	Tile_r8-c6_Region5_143208460.tif	8-			c6_R							0	0					9625	9625	0.0
8	Tile_r8-c7_Region5_143208460.tif	8-			c7_R							0	0					9625	9625	0.0
9	Tile_r8-c8_Region5_143208460.tif	8-			c8_R							0	0					9625	9625	0.0
10	Tile_r8-c9_Region5_143208460.tif	8-			c9_R							0	0					9625	9625	0.0
11	Tile_r8-c10_Region5_143208460.tif	8-			c10							0	0					9625	9625	0.0
12	Tile_r8-c11_Region5_143208460.tif	8-			c11							0	0					9625	9625	0.0
13	Tile_r8-c12_Region5_143208460.tif	8-			c12							0	0					9625	9625	0.0
14	Tile_r8-c13_Region5_143208460.tif	8-			c13							0	0					9625	9625	0.0
15	Tile_r8-c14_Region5_143208460.tif	8-			c14							0	0					9625	9625	0.0
16	Tile_r8-c15_Region5_143208460.tif	8-			c15							0	0					9625	9625	0.0
17	Tile_r8-c16_Region5_143208460.tif	8-			c16							0	0					9625	9625	0.0
18	Tile_r9-c1_Region5_143208460.tif	9-			c1_R							0	0					9625	9625	0.0
19	Tile_r9-c2_Region5_143208460.tif	9-			c2_R							0	0					9625	9625	0.0
20	Tile_r9-c3_Region5_143208460.tif	9-			c3_R							0	0					9625	9625	0.0
21	Tile_r9-c4_Region5_143208460.tif	9-			c4_R							0	0					9625	9625	0.0
22	Tile_r9-c5_Region5_143208460.tif	9-			c5_R							0	0					9625	9625	0.0
23	Tile_r9-c6_Region5_143208460.tif	9-			c6_R							0	0					9625	9625	0.0
24	Tile_r9-c7_Region5_143208460.tif	9-			c7_R							0	0					9625	9625	0.0
25	Tile_r9-c8_Region5_143208460.tif	9-			c8_R							0	0					9625	9625	0.0
26	Tile_r9-c9_Region5_143208460.tif	9-			c9_R							0	0					9625	9625	0.0
27	Tile_r9-c10_Region5_143208460.tif	9-			c10							0	0					9625	9625	0.0
28	Tile_r9-c11_Region5_143208460.tif	9-			c11							0	0					9625	9625	0.0
29	Tile_r9-c12_Region5_143208460.tif	9-			c12							0	0					9625	9625	0.0
30	Tile_r9-c13_Region5_143208460.tif	9-			c13							0	0					9625	9625	0.0
31	Tile_r9-c14_Region5_143208460.tif	9-			c14							0	0					9625	9625	0.0
32	Tile_r9-c15_Region5_143208460.tif	9-			c15							0	0					9625	9625	0.0
33	Tile_r9-c16_Region5_143208460.tif	9-			c16							0	0					9625	9625	0.0
34	Tile_r10-c2_Region5_143208460.tif	10			c2							0	0					9625	9625	0.0
35	Tile_r10-c3_Region5_143208460.tif	10			c3							0	0					9625	9625	0.0
36	Tile_r10-c4_Region5_143208460.tif	10			c4							0	0					9625	9625	0.0
37	Tile_r10-c5_Region5_143208460.tif	10			c5							0	0					9625	9625	0.0
38	Tile_r10-c6_Region5_143208460.tif	10			c6							0	0					9625	9625	0.0
39	Tile_r10-c7_Region5_143208460.tif	10			c7							0	0					9625	9625	0.0
40	Tile_r10-c8_Region5_143208460.tif	10			c8							0	0					9625	9625	0.0
41	Tile_r10-c9_Region5_143208460.tif	10			c9							0	0					9625	9625	0.0
42	Tile_r10-c10_Region5_143208460.tif	10			c10							0	0					9625	9625	0.0
43	Tile_r10-c11_Region5_143208460.tif	10			c11							0	0					9625	9625	0.0
44	Tile_r10-c12_Region5_143208460.tif	10			c12							0	0					9625	9625	0.0
45	Tile_r10-c13_Region5_143208460.tif	10			c13							0	0					9625	9625	0.0
46	Tile_r10-c14_Region5_143208460.tif	10			c14							0	0					9625	9625	0.0
47	Tile_r10-c15_Region5_143208460.tif	10			c15							0	0					9625	9625	0.0
48	Tile_r10-c16_Region5_143208460.tif	10			c16							0	0					9625	9625	0.0
49	Tile_r11-c4_Region5_143208460.tif	11			c4							0	0					9625	9625	0.0
50	Tile_r11-c5_Region5_143208460.tif	11			c5							0	0					9625	9625	0.0
51	Tile_r11-c6_Region5_143208460.tif	11			c6							0	0					9625	9625	0.0
52	Tile_r11-c7_Region5_143208460.tif	11			c7							0	0					9625	9625	0.0
53	Tile_r11-c8_Region5_143208460.tif	11			c8							0	0					9625	9625	0.0
54	Tile_r11-c9_Region5_143208460.tif	11			c9							0	0					9625	9625	0.0
55	Tile_r11-c10_Region5_143208460.tif	11			c10							0	0					9625	9625	0.0
56	Tile_r11-c11_Region5_143208460.tif	11			c11							0	0					9625	9625	0.0
57	Tile_r11-c12_Region5_143208460.tif	11			c12							0	0					9625	9625	0.0
58	Tile_r11-c13_Region5_143208460.tif	11			c13							0	0					9625	9625	0.0
59	Tile_r11-c14_Region5_143208460.tif	11			c14							0	0					9625	9625	0.0
60	Tile_r11-c15_Region5_143208460.tif	11			c15							0	0					9625	9625	0.0
61	Tile_r1-c5_Region5_143208460.tif	1-			c5_R							0	0					9625	9625	0.0
62	Tile_r1-c6_Region5_143208460.tif	1-			c6_R							0	0					9625	9625	0.0
63	Tile_r1-c7_Region5_143208460.tif	1-			c7_R							0	0					9625	9625	0.0
64	Tile_r1-c8_Region5_143208460.tif	1-			c8_R							0	0					9625	9625	0.0
65	Tile_r1-c9_Region5_143208460.tif	1-			c9_R							0	0					9625	9625	0.0
66	Tile_r1-c10_Region5_143208460.tif	1-			c10							0	0					9625	9625	0.0

Copy the image tile names (of dataset 1) into the Template (first clear all gray areas)

Tecno SI Datasets1 and 2 - Excel

Start Einfügen Seitenlayout Formeln Daten Überprüfen Ansicht Hilfe Was möchten Sie tun?

Ausschneiden Kopieren Einfügen Format übertragen

Calibri 11 Textumbruch Standard

Bedingte Formatierung Als Tabelle Berechnung Gut Neutral Schlecht Ausgabe Berechnung Eingabe Erklärender ... Notiz Verknüpfte Z...

Zellen

A157 Tile_r6-c11_Region16_412761276.tif

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
136	Tile_r6-c12_Region5_143208460.tif	6-			c12								0	0				9625	9625	0.0
137	Tile_r6-c13_Region5_143208460.tif	6-			c13								0	0				9625	9625	0.0
138	Tile_r6-c14_Region5_143208460.tif	6-			c14								0	0				9625	9625	0.0
139	Tile_r6-c15_Region5_143208460.tif	6-			c15								0	0				9625	9625	0.0
140	Tile_r6-c16_Region5_143208460.tif	6-			c16								0	0				9625	9625	0.0
141	Tile_r7-c1_Region5_143208460.tif	7-			c1_R								0	0				9625	9625	0.0
142	Tile_r7-c2_Region5_143208460.tif	7-			c2_R								0	0				9625	9625	0.0
143	Tile_r7-c3_Region5_143208460.tif	7-			c3_R								0	0				9625	9625	0.0
144	Tile_r7-c4_Region5_143208460.tif	7-			c4_R								0	0				9625	9625	0.0
145	Tile_r7-c5_Region5_143208460.tif	7-			c5_R								0	0				9625	9625	0.0
146	Tile_r7-c6_Region5_143208460.tif	7-			c6_R								0	0				9625	9625	0.0
147	Tile_r7-c7_Region5_143208460.tif	7-			c7_R								0	0				9625	9625	0.0
148	Tile_r7-c8_Region5_143208460.tif	7-			c8_R								0	0				9625	9625	0.0
149	Tile_r7-c9_Region5_143208460.tif	7-			c9_R								0	0				9625	9625	0.0
150	Tile_r7-c10_Region5_143208460.tif	7-			c10								0	0				9625	9625	0.0
151	Tile_r7-c11_Region5_143208460.tif	7-			c11								0	0				9625	9625	0.0
152	Tile_r7-c12_Region5_143208460.tif	7-			c12								0	0				9625	9625	0.0
153	Tile_r7-c13_Region5_143208460.tif	7-			c13								0	0				9625	9625	0.0
154	Tile_r7-c14_Region5_143208460.tif	7-			c14								0	0				9625	9625	0.0
155	Tile_r7-c15_Region5_143208460.tif	7-			c15								0	0				9625	9625	0.0
156													0	0				9625	9625	0.0
157	Tile_r6-c11_Region16_412761276.tif	6-			c11								0	0				9625	9625	0.0
158	Tile_r6-c12_Region16_412761276.tif	6-			c12								0	0				9625	9625	0.0
159	Tile_r6-c13_Region16_412761276.tif	6-			c13								0	0				9625	9625	0.0
160	Tile_r6-c14_Region16_412761276.tif	6-			c14								0	0				9625	9625	0.0
161	Tile_r6-c15_Region16_412761276.tif	6-			c15								0	0				9625	9625	0.0
162	Tile_r6-c16_Region16_412761276.tif	6-			c16								0	0				9625	9625	0.0
163	Tile_r7-c1_Region16_412761276.tif	7-			c1_R								0	0				9625	9625	0.0
164	Tile_r7-c2_Region16_412761276.tif	7-			c2_R								0	0				9625	9625	0.0
165	Tile_r7-c3_Region16_412761276.tif	7-			c3_R								0	0				9625	9625	0.0
166	Tile_r7-c4_Region16_412761276.tif	7-			c4_R								0	0				9625	9625	0.0
167	Tile_r7-c5_Region16_412761276.tif	7-			c5_R								0	0				9625	9625	0.0
168	Tile_r7-c6_Region16_412761276.tif	7-			c6_R								0	0				9625	9625	0.0
169	Tile_r7-c7_Region16_412761276.tif	7-			c7_R								0	0				9625	9625	0.0
170	Tile_r7-c8_Region16_412761276.tif	7-			c8_R								0	0				9625	9625	0.0
171	Tile_r7-c9_Region16_412761276.tif	7-			c9_R								0	0				9625	9625	0.0
172	Tile_r7-c10_Region16_412761276.tif	7-			c10								0	0				9625	9625	0.0
173	Tile_r7-c11_Region16_412761276.tif	7-			c11								0	0				9625	9625	0.0
174	Tile_r7-c12_Region16_412761276.tif	7-			c12								0	0				9625	9625	0.0
175	Tile_r7-c13_Region16_412761276.tif	7-			c13								0	0				9625	9625	0.0
176	Tile_r7-c14_Region16_412761276.tif	7-			c14								0	0				9625	9625	0.0
177	Tile_r7-c15_Region16_412761276.tif	7-			c15								0	0				9625	9625	0.0
178	Tile_r7-c16_Region16_412761276.tif	7-			c16								0	0				9625	9625	0.0
179	Tile_r8-c1_Region16_412761276.tif	8-			c1_R								0	0				9625	9625	0.0
180	Tile_r8-c2_Region16_412761276.tif	8-			c2_R								0	0				9625	9625	0.0
181	Tile_r8-c3_Region16_412761276.tif	8-			c3_R								0	0				9625	9625	0.0
182	Tile_r8-c4_Region16_412761276.tif	8-			c4_R								0	0				9625	9625	0.0
183	Tile_r8-c5_Region16_412761276.tif	8-			c5_R								0	0				9625	9625	0.0
184	Tile_r8-c6_Region16_412761276.tif	8-			c6_R								0	0				9625	9625	0.0
185	Tile_r8-c7_Region16_412761276.tif	8-			c7_R								0	0				9625	9625	0.0
186	Tile_r8-c8_Region16_412761276.tif	8-			c8_R								0	0				9625	9625	0.0
187	Tile_r8-c9_Region16_412761276.tif	8-			c9_R								0	0				9625	9625	0.0
188	Tile_r8-c10_Region16_412761276.tif	8-			c10								0	0				9625	9625	0.0
189	Tile_r8-c11_Region16_412761276.tif	8-			c11								0	0				9625	9625	0.0
190	Tile_r8-c12_Region16_412761276.tif	8-			c12								0	0				9625	9625	0.0
191	Tile_r8-c13_Region16_412761276.tif	8-			c13								0	0				9625	9625	0.0
192	Tile_r8-c14_Region16_412761276.tif	8-			c14								0	0				9625	9625	0.0
193	Tile_r8-c15_Region16_412761276.tif	8-			c15								0	0				9625	9625	0.0
194	Tile_r8-c16_Region16_412761276.tif	8-			c16								0	0				9625	9625	0.0
195	Tile_r9-c1_Region16_412761276.tif	9-			c1_R								0	0				9625	9625	0.0
196	Tile_r9-c2_Region16_412761276.tif	9-			c2_R								0	0				9625	9625	0.0
197	Tile_r9-c3_Region16_412761276.tif	9-			c3_R								0	0				9625	9625	0.0
198	Tile_r9-c4_Region16_412761276.tif	9-			c4_R								0	0				9625	9625	0.0
199	Tile_r9-c5_Region16_412761276.tif	9-			c5_R								0	0				9625	9625	0.0
200	Tile_r9-c6_Region16_412761276.tif	9-			c6_R								0	0				9625	9625	0.0
201	Tile_r9-c7_Region16_412761276.tif	9-			c7_R								0	0				9625	9625	0.0

Prepare the image tile names of dataset 2 and copy these into the Template

Tecno SI Datasets1 and 2 - Excel

Start Einfügen Seitenlayout Formeln Daten Überprüfen Ansicht Hilfe Was möchten Sie tun?

Ausschneiden Einfügen Kopieren Format übertragen

Calibri 11 A A⁺ Textumbruch Standard

F K U Verbinden und zentrieren

Schriftart Ausrichtung Zahl

Bedingte Formatierung Als Tabelle Berechnung Gut Neutral Schlecht Ausgabe Eingabe Erklärender ... Notiz Verknüpfte Z...

Formatvorlagen

Zellen AutoSumme Ausfüllen Löschen

Sortieren Löschen

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
136	Tile_r6-c12_Region5_143208460.tif	6-			c12							0	0					9625	9625	0.0
137	Tile_r6-c13_Region5_143208460.tif	6-			c13							0	0					9625	9625	0.0
138	Tile_r6-c14_Region5_143208460.tif	6-			c14							0	0					9625	9625	0.0
139	Tile_r6-c15_Region5_143208460.tif	6-			c15							0	0					9625	9625	0.0
140	Tile_r6-c16_Region5_143208460.tif	6-			c16							0	0					9625	9625	0.0
141	Tile_r7-c1_Region5_143208460.tif	7-			c1_R							0	0					9625	9625	0.0
142	Tile_r7-c2_Region5_143208460.tif	7-			c2_R							0	0					9625	9625	0.0
143	Tile_r7-c3_Region5_143208460.tif	7-			c3_R							0	0					9625	9625	0.0
144	Tile_r7-c4_Region5_143208460.tif	7-			c4_R							0	0					9625	9625	0.0
145	Tile_r7-c5_Region5_143208460.tif	7-			c5_R							0	0					9625	9625	0.0
146	Tile_r7-c6_Region5_143208460.tif	7-			c6_R							0	0					9625	9625	0.0
147	Tile_r7-c7_Region5_143208460.tif	7-			c7_R							0	0					9625	9625	0.0
148	Tile_r7-c8_Region5_143208460.tif	7-			c8_R							0	0					9625	9625	0.0
149	Tile_r7-c9_Region5_143208460.tif	7-			c9_R							0	0					9625	9625	0.0
150	Tile_r7-c10_Region5_143208460.tif	7-			c10							0	0					9625	9625	0.0
151	Tile_r7-c11_Region5_143208460.tif	7-			c11							0	0					9625	9625	0.0
152	Tile_r7-c12_Region5_143208460.tif	7-			c12							0	0					9625	9625	0.0
153	Tile_r7-c13_Region5_143208460.tif	7-			c13							0	0					9625	9625	0.0
154	Tile_r7-c14_Region5_143208460.tif	7-			c14							0	0					9625	9625	0.0
155	Tile_r7-c15_Region5_143208460.tif	7-			c15							0	0					9625	9625	0.0
156																				
157	Tile_r6-c11_Region16_412761276.tif	6-			c11							0	0					9625	9625	0.0
158	Tile_r6-c12_Region16_412761276.tif	6-			c12							0	0					9625	9625	0.0
159	Tile_r6-c13_Region16_412761276.tif	6-			c13							0	0					9625	9625	0.0
160	Tile_r6-c14_Region16_412761276.tif	6-			c14							0	0					9625	9625	0.0
161	Tile_r6-c15_Region16_412761276.tif	6-			c15							0	0					9625	9625	0.0
162	Tile_r6-c16_Region16_412761276.tif	6-			c16							0	0					9625	9625	0.0
163	Tile_r7-c1_Region16_412761276.tif	7-			c1_R							0	0					9625	9625	0.0
164	Tile_r7-c2_Region16_412761276.tif	7-			c2_R							0	0					9625	9625	0.0
165	Tile_r7-c3_Region16_412761276.tif	7-			c3_R							0	0					9625	9625	0.0
166	Tile_r7-c4_Region16_412761276.tif	7-			c4_R							0	0					9625	9625	0.0
167	Tile_r7-c5_Region16_412761276.tif	7-			c5_R							0	0					9625	9625	0.0
168	Tile_r7-c6_Region16_412761276.tif	7-			c6_R							0	0					9625	9625	0.0
169	Tile_r7-c7_Region16_412761276.tif	7-			c7_R							0	0					9625	9625	0.0
170	Tile_r7-c8_Region16_412761276.tif	7-			c8_R							0	0					9625	9625	0.0
171	Tile_r7-c9_Region16_412761276.tif	7-			c9_R							0	0					9625	9625	0.0
172	Tile_r7-c10_Region16_412761276.tif	7-			c10							0	0					9625	9625	0.0
173	Tile_r7-c11_Region16_412761276.tif	7-			c11							0	0					9625	9625	0.0
174	Tile_r7-c12_Region16_412761276.tif	7-			c12							0	0					9625	9625	0.0
175	Tile_r7-c13_Region16_412761276.tif	7-			c13							0	0					9625	9625	0.0
176	Tile_r7-c14_Region16_412761276.tif	7-			c14							0	0					9625	9625	0.0
177	Tile_r7-c15_Region16_412761276.tif	7-			c15							0	0					9625	9625	0.0
178	Tile_r7-c16_Region16_412761276.tif	7-			c16							0	0					9625	9625	0.0
179	Tile_r8-c1_Region16_412761276.tif	8-			c1_R							0	0					9625	9625	0.0
180	Tile_r8-c2_Region16_412761276.tif	8-			c2_R							0	0					9625	9625	0.0
181	Tile_r8-c3_Region16_412761276.tif	8-			c3_R							0	0					9625	9625	0.0
182	Tile_r8-c4_Region16_412761276.tif	8-			c4_R							0	0					9625	9625	0.0
183	Tile_r8-c5_Region16_412761276.tif	8-			c5_R							0	0					9625	9625	0.0
184	Tile_r8-c6_Region16_412761276.tif	8-			c6_R							0	0					9625	9625	0.0
185	Tile_r8-c7_Region16_412761276.tif	8-			c7_R							0	0					9625	9625	0.0
186	Tile_r8-c8_Region16_412761276.tif	8-			c8_R							0	0					9625	9625	0.0
187	Tile_r8-c9_Region16_412761276.tif	8-			c9_R							0	0					9625	9625	0.0
188	Tile_r8-c10_Region16_412761276.tif	8-			c10							0	0					9625	9625	0.0
189	Tile_r8-c11_Region16_412761276.tif	8-			c11							0	0					9625	9625	0.0
190	Tile_r8-c12_Region16_412761276.tif	8-			c12							0	0					9625	9625	0.0
191	Tile_r8-c13_Region16_412761276.tif	8-			c13							0	0					9625	9625	0.0
192	Tile_r8-c14_Region16_412761276.tif	8-			c14							0	0					9625	9625	0.0
193	Tile_r8-c15_Region16_412761276.tif	8-			c15							0	0					9625	9625	0.0
194	Tile_r8-c16_Region16_412761276.tif	8-			c16							0	0					9625	9625	0.0
195	Tile_r9-c1_Region16_412761276.tif	9-			c1_R							0	0					9625	9625	0.0
196	Tile_r9-c2_Region16_412761276.tif	9-			c2_R							0	0					9625	9625	0.0
197	Tile_r9-c3_Region16_412761276.tif	9-			c3_R							0	0					9625	9625	0.0
198	Tile_r9-c4_Region16_412761276.tif	9-			c4_R							0	0					9625	9625	0.0
199	Tile_r9-c5_Region16_412761276.tif	9-			c5_R							0	0					9625	9625	0.0
200	Tile_r9-c6_Region16_412761276.tif	9-			c6_R							0	0					9625	9625	0.0
201	Tile_r9-c7_Region16_412761276.tif	9-			c7_R							0	0					9625	9625	0.0

Clear the space between the names of dataset 1 and dataset 2

The screenshot displays the Microsoft Excel interface with the VBA editor open. The Excel window shows a spreadsheet with columns A through T and rows 1 through 21. The VBA editor window shows a sub procedure named 'ExtrNumbersFromRange' with the following code:

```

Sub ExtrNumbersFromRange()
    Dim xRg As Range
    Dim xDRg As Range
    Dim xRRg As Range
    Dim nCellLength As Integer
    Dim xNumber As Integer
    Dim strNumber As String
    Dim xTitleId As String
    Dim xI As Integer
    xTitleId = "KutoolsforExcel"
    Set xDRg = Application.InputBox("Please select text strings:", xTitleId, "", Type:=8)
    If TypeName(xDRg) = "Nothing" Then Exit Sub
    Set xRRg = Application.InputBox("Please select output cell:", xTitleId, "", Type:=8)
    If TypeName(xRRg) = "Nothing" Then Exit Sub
    xI = 0
    strNumber = ""
    For Each xRg In xDRg
        xI = xI + 1
        nCellLength = Len(xRg)
        For xNumber = 1 To nCellLength
            If IsNumeric(Mid(xRg, xNumber, 1)) Then
                strNumber = strNumber & Mid(xRg, xNumber, 1)
            End If
        Next xNumber
    Next xRg
End Sub

```

Press [Alt] and [F11] to open the macro file that is included in the Excel file
(see online methods for source)

Tecno SI Datasets1 and 2 - Excel

File Start Einfügen Seitenlayout Formeln Daten Überprüfen Ansicht Hilfe Was möchten Sie tun?

Ausschneiden Einfügen Kopieren Format übertragen Zwischenablage Schriftart Ausrichtung Zahl Bedingte Formatierung Als Tabelle Berechnung Eingabe Erklärender... Notiz Verknüpfte Zellen AutoSumme Ausfüllen Löschen

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Title_r7-c16_Region5_143208460.tif	7-			c16							0	0					9625	9625	0.0
2	Title_r8-c1_Region5_143208460.tif	8-			c1_R							0	0					9625	9625	0.0
3	Title_r8-c2_Region5_143208460.tif	8-			c2_R							0	0					9625	9625	0.0
4	Title_r8-c3_Region5_143208460.tif	8-			c3_R							0	0					9625	9625	0.0
5	Title_r8-c4_Region5_143208460.tif	8-			c4_R							0	0					9625	9625	0.0
6	Title_r8-c5_Region5_143208460.tif	8-			c5_R							0	0					9625	9625	0.0
7	Title_r8-c6_Region5_143208460.tif	8-			c6_R							0	0					9625	9625	0.0
8	Title_r8-c7_Region5_143208460.tif	8-			c7_R							0	0					9625	9625	0.0
9	Title_r8-c8_Region5_143208460.tif	8-			c8_R							0	0					9625	9625	0.0
10	Title_r8-c9_Region5_143208460.tif	8-			c9_R							0	0					9625	9625	0.0
11	Title_r8-c10_Region5_143208460.tif	8-			c10							0	0					9625	9625	0.0
12	Title_r8-c11_Region5_143208460.tif	8-			c11							0	0					9625	9625	0.0
13	Title_r8-c12_Region5_143208460.tif	8-			c12							0	0					9625	9625	0.0
14	Title_r8-c13_Region5_143208460.tif	8-			c13							0	0					9625	9625	0.0
15	Title_r8-c14_Region5_143208460.tif	8-			c14							0	0					9625	9625	0.0
16	Title_r8-c15_Region5_143208460.tif	8-			c15							0	0					9625	9625	0.0
17	Title_r8-c16_Region5_143208460.tif	8-			c16							0	0					9625	9625	0.0
18	Title_r9-c1_Region5_143208460.tif	9-			c1_R							0	0					9625	9625	0.0
19	Title_r9-c2_Region5_143208460.tif	9-			c2_R							0	0					9625	9625	0.0
20	Title_r9-c3_Region5_143208460.tif	9-			c3_R							0	0					9625	9625	0.0
21	Title_r9-c4_Region5_143208460.tif	9-			c4_R							0	0					9625	9625	0.0

Microsoft Visual Basic for Applications - Tecno SI Datasets1 and 2.xlsm (Aktiv)

Projekt - VBAProjekte

Tecno_SI_Datasets1_and_2.xlsm - Modul1 (Code)

```

Sub ExtrNumbersFromRange()
    Dim xRg As Range
    Dim xDRg As Range
    Dim xRRg As Range
    Dim nCellLength As Integer
    Dim xNumber As Integer
    Dim strNumber As String
    Dim xTitleId As String
    Dim xI As Integer
    xTitleId = "KutoolsforExcel"
    Set xDRg = Application.InputBox("Please select text strings:", xTitleId, "", Type:=8)
    If TypeName(xDRg) = "Nothing" Then Exit Sub
    Set xRRg = Application.InputBox("Please select output cell:", xTitleId, "", Type:=8)
    If TypeName(xRRg) = "Nothing" Then Exit Sub
    xI = 0
    strNumber = ""
    For Each xRg In xDRg
        xI = xI + 1
        nCellLength = Len(xRg)
        For xNumber = 1 To nCellLength
            If IsNumeric(Mid(xRg, xNumber, 1)) Then
                strNumber = strNumber & Mid(xRg, xNumber, 1)
            End If
        Next xNumber
    Next xRg
End Sub

```

KutoolsforExcel

Please select text strings:

\$B:\$B

OK Abbrechen

Press [F5] and select the entire column B as import

Tecno SI Datasets1 and 2 - Excel

Datei Start Einfügen Seitenlayout Formeln Daten Überprüfen Ansicht Hilfe Was möchten Sie tun?

Ausschneiden Kopieren Einfügen Zwischenablage

F K U Schriftart Ausrichtung Zahl

Bedingte Formatierung Als Tabelle Berechnung Eingabe

Standard Gut Neutral Schlecht Ausgabe

Berechnung Eingabe Erklärender... Notiz Verknüpfte Z...

AutoSumme Ausfüllen Sortieren Löschen

Zellen Bearbeiten

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Title r7-c16_Region5_143208460.tif	7-			c16							0	0					9625	9625	0,0
2	Title r8-c1_Region5_143208460.tif	8-			c1_R							0	0					9625	9625	0,0
3	Title r8-c2_Region5_143208460.tif	8-			c2_R							0	0					9625	9625	0,0
4	Title r8-c3_Region5_143208460.tif	8-			c3_R							0	0					9625	9625	0,0
5	Title r8-c4_Region5_143208460.tif	8-			c4_R							0	0					9625	9625	0,0
6	Title r8-c5_Region5_143208460.tif	8-			c5_R							0	0					9625	9625	0,0
7	Title r8-c6_Region5_143208460.tif	8-			c6_R							0	0					9625	9625	0,0
8	Title r8-c7_Region5_143208460.tif	8-			c7_R							0	0					9625	9625	0,0
9	Title r8-c8_Region5_143208460.tif	8-			c8_R							0	0					9625	9625	0,0
10	Title r8-c9_Region5_143208460.tif	8-			c9_R							0	0					9625	9625	0,0
11	Title r8-c10_Region5_143208460.tif	8-			c10							0	0					9625	9625	0,0
12	Title r8-c11_Region5_143208460.tif	8-			c11							0	0					9625	9625	0,0
13	Title r8-c12_Region5_143208460.tif	8-			c12							0	0					9625	9625	0,0
14	Title r8-c13_Region5_143208460.tif	8-			c13							0	0					9625	9625	0,0
15	Title r8-c14_Region5_143208460.tif	8-			c14							0	0					9625	9625	0,0
16	Title r8-c15_Region5_143208460.tif	8-			c15							0	0					9625	9625	0,0
17	Title r8-c16_Region5_143208460.tif	8-			c16							0	0					9625	9625	0,0
18	Title r9-c1_Region5_143208460.tif	9-			c1_R							0	0					9625	9625	0,0
19	Title r9-c2_Region5_143208460.tif	9-			c2_R							0	0					9625	9625	0,0
20	Title r9-c3_Region5_143208460.tif	9-			c3_R							0	0					9625	9625	0,0
21	Title r9-c4_Region5_143208460.tif	9-			c4_R							0	0					9625	9625	0,0
22	Title r9-c5_Region5_143208460.tif	9-			c5_R							0	0					9625	9625	0,0
23	Title r9-c6_Region5_143208460.tif	9-			c6_R							0	0					9625	9625	0,0
24	Title r9-c7_Region5_143208460.tif	9-			c7_R							0	0					9625	9625	0,0
25	Title r9-c8_Region5_143208460.tif	9-			c8_R							0	0					9625	9625	0,0
26	Title r9-c9_Region5_143208460.tif	9-			c9_R							0	0					9625	9625	0,0
27	Title r9-c10_Region5_143208460.tif	9-			c10							0	0					9625	9625	0,0
28	Title r9-c11_Region5_143208460.tif	9-			c11							0	0					9625	9625	0,0
29	Title r9-c12_Region5_143208460.tif	9-			c12							0	0					9625	9625	0,0
30	Title r9-c13_Region5_143208460.tif	9-			c13							0	0					9625	9625	0,0
31	Title r9-c14_Region5_143208460.tif	9-			c14							0	0					9625	9625	0,0
32	Title r9-c15_Region5_143208460.tif	9-			c15							0	0					9625	9625	0,0
33	Title r9-c16_Region5_143208460.tif	9-			c16							0	0					9625	9625	0,0
34	Title r10-c2_Region5_143208460.tif	10			c2							0	0					9625	9625	0,0
35	Title r10-c3_Region5_143208460.tif	10			c3							0	0					9625	9625	0,0
36	Title r10-c4_Region5_143208460.tif	10			c4							0	0					9625	9625	0,0
37	Title r10-c5_Region5_143208460.tif	10			c5							0	0					9625	9625	0,0
38	Title r10-c6_Region5_143208460.tif	10			c6							0	0					9625	9625	0,0
39	Title r10-c7_Region5_143208460.tif	10			c7							0	0					9625	9625	0,0
40	Title r10-c8_Region5_143208460.tif	10			c8							0	0					9625	9625	0,0
41	Title r10-c9_Region5_143208460.tif	10			c9							0	0					9625	9625	0,0
42	Title r10-c10_Region5_143208460.tif	10			c10							0	0					9625	9625	0,0
43	Title r10-c11_Region5_143208460.tif	10			c11							0	0					9625	9625	0,0
44	Title r10-c12_Region5_143208460.tif	10			c12							0	0					9625	9625	0,0
45	Title r10-c13_Region5_143208460.tif	10			c13							0	0					9625	9625	0,0
46	Title r10-c14_Region5_143208460.tif	10			c14							0	0					9625	9625	0,0
47	Title r10-c15_Region5_143208460.tif	10			c15							0	0					9625	9625	0,0
48	Title r10-c16_Region5_143208460.tif	10			c16							0	0					9625	9625	0,0
49	Title r11-c4_Region5_143208460.tif	11			c4							0	0					9625	9625	0,0
50	Title r11-c5_Region5_143208460.tif	11			c5							0	0					9625	9625	0,0
51	Title r11-c6_Region5_143208460.tif	11			c6							0	0					9625	9625	0,0
52	Title r11-c7_Region5_143208460.tif	11			c7							0	0					9625	9625	0,0
53	Title r11-c8_Region5_143208460.tif	11			c8							0	0					9625	9625	0,0
54	Title r11-c9_Region5_143208460.tif	11			c9							0	0					9625	9625	0,0
55	Title r11-c10_Region5_143208460.tif	11			c10							0	0					9625	9625	0,0
56	Title r11-c11_Region5_143208460.tif	11			c11							0	0					9625	9625	0,0
57	Title r11-c12_Region5_143208460.tif	11			c12							0	0					9625	9625	0,0
58	Title r11-c13_Region5_143208460.tif	11			c13							0	0					9625	9625	0,0
59	Title r11-c14_Region5_143208460.tif	11			c14							0	0					9625	9625	0,0
60	Title r11-c15_Region5_143208460.tif	11			c15							0	0					9625	9625	0,0
61	Title r1-c5_Region5_143208460.tif	1-			c5_R							0	0					9625	9625	0,0
62	Title r1-c6_Region5_143208460.tif	1-			c6_R							0	0					9625	9625	0,0
63	Title r1-c7_Region5_143208460.tif	1-			c7_R							0	0					9625	9625	0,0
64	Title r1-c8_Region5_143208460.tif	1-			c8_R							0	0					9625	9625	0,0
65	Title r1-c9_Region5_143208460.tif	1-			c9_R							0	0					9625	9625	0,0
66	Title r1-c10_Region5_143208460.tif	1-			c10							0	0					9625	9625	0,0

KutoolsforExcel

Please select output cell:

\$C:\$C

OK Abbrechen

Select the entire column C as export, press „ok“



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Title r7-c16_Region5_143208460.tif	7-	7		c16								0	0				9625	9625	0.0
2	Title r8-c1_Region5_143208460.tif	8-	8		c1_R								0	0				9625	9625	0.0
3	Title r8-c2_Region5_143208460.tif	8-	8		c2_R								0	0				9625	9625	0.0
4	Title r8-c3_Region5_143208460.tif	8-	8		c3_R								0	0				9625	9625	0.0
5	Title r8-c4_Region5_143208460.tif	8-	8		c4_R								0	0				9625	9625	0.0
6	Title r8-c5_Region5_143208460.tif	8-	8		c5_R								0	0				9625	9625	0.0
7	Title r8-c6_Region5_143208460.tif	8-	8		c6_R								0	0				9625	9625	0.0
8	Title r8-c7_Region5_143208460.tif	8-	8		c7_R								0	0				9625	9625	0.0
9	Title r8-c8_Region5_143208460.tif	8-	8		c8_R								0	0				9625	9625	0.0
10	Title r8-c9_Region5_143208460.tif	8-	8		c9_R								0	0				9625	9625	0.0
11	Title r8-c10_Region5_143208460.tif	8-	8		c10								0	0				9625	9625	0.0
12	Title r8-c11_Region5_143208460.tif	8-	8		c11								0	0				9625	9625	0.0
13	Title r8-c12_Region5_143208460.tif	8-	8		c12								0	0				9625	9625	0.0
14	Title r8-c13_Region5_143208460.tif	8-	8		c13								0	0				9625	9625	0.0
15	Title r8-c14_Region5_143208460.tif	8-	8		c14								0	0				9625	9625	0.0
16	Title r8-c15_Region5_143208460.tif	8-	8		c15								0	0				9625	9625	0.0
17	Title r8-c16_Region5_143208460.tif	8-	8		c16								0	0				9625	9625	0.0
18	Title r9-c1_Region5_143208460.tif	9-	9		c1_R								0	0				9625	9625	0.0
19	Title r9-c2_Region5_143208460.tif	9-	9		c2_R								0	0				9625	9625	0.0
20	Title r9-c3_Region5_143208460.tif	9-	9		c3_R								0	0				9625	9625	0.0
21	Title r9-c4_Region5_143208460.tif	9-	9		c4_R								0	0				9625	9625	0.0
22	Title r9-c5_Region5_143208460.tif	9-	9		c5_R								0	0				9625	9625	0.0
23	Title r9-c6_Region5_143208460.tif	9-	9		c6_R								0	0				9625	9625	0.0
24	Title r9-c7_Region5_143208460.tif	9-	9		c7_R								0	0				9625	9625	0.0
25	Title r9-c8_Region5_143208460.tif	9-	9		c8_R								0	0				9625	9625	0.0
26	Title r9-c9_Region5_143208460.tif	9-	9		c9_R								0	0				9625	9625	0.0
27	Title r9-c10_Region5_143208460.tif	9-	9		c10								0	0				9625	9625	0.0
28	Title r9-c11_Region5_143208460.tif	9-	9		c11								0	0				9625	9625	0.0
29	Title r9-c12_Region5_143208460.tif	9-	9		c12								0	0				9625	9625	0.0
30	Title r9-c13_Region5_143208460.tif	9-	9		c13								0	0				9625	9625	0.0
31	Title r9-c14_Region5_143208460.tif	9-	9		c14								0	0				9625	9625	0.0
32	Title r9-c15_Region5_143208460.tif	9-	9		c15								0	0				9625	9625	0.0
33	Title r9-c16_Region5_143208460.tif	9-	9		c16								0	0				9625	9625	0.0
34	Title r10-c2_Region5_143208460.tif	10	10		c2								0	0				9625	9625	0.0
35	Title r10-c3_Region5_143208460.tif	10	10		c3								0	0				9625	9625	0.0
36	Title r10-c4_Region5_143208460.tif	10	10		c4								0	0				9625	9625	0.0
37	Title r10-c5_Region5_143208460.tif	10	10		c5								0	0				9625	9625	0.0
38	Title r10-c6_Region5_143208460.tif	10	10		c6								0	0				9625	9625	0.0
39	Title r10-c7_Region5_143208460.tif	10	10		c7								0	0				9625	9625	0.0
40	Title r10-c8_Region5_143208460.tif	10	10		c8								0	0				9625	9625	0.0
41	Title r10-c9_Region5_143208460.tif	10	10		c9								0	0				9625	9625	0.0
42	Title r10-c10_Region5_143208460.tif	10	10		c10								0	0				9625	9625	0.0
43	Title r10-c11_Region5_143208460.tif	10	10		c11								0	0				9625	9625	0.0
44	Title r10-c12_Region5_143208460.tif	10	10		c12								0	0				9625	9625	0.0
45	Title r10-c13_Region5_143208460.tif	10	10		c13								0	0				9625	9625	0.0
46	Title r10-c14_Region5_143208460.tif	10	10		c14								0	0				9625	9625	0.0
47	Title r10-c15_Region5_143208460.tif	10	10		c15								0	0				9625	9625	0.0
48	Title r10-c16_Region5_143208460.tif	10	10		c16								0	0				9625	9625	0.0
49	Title r11-c4_Region5_143208460.tif	11	11		c4								0	0				9625	9625	0.0
50	Title r11-c5_Region5_143208460.tif	11	11		c5								0	0				9625	9625	0.0
51	Title r11-c6_Region5_143208460.tif	11	11		c6								0	0				9625	9625	0.0
52	Title r11-c7_Region5_143208460.tif	11	11		c7								0	0				9625	9625	0.0
53	Title r11-c8_Region5_143208460.tif	11	11		c8								0	0				9625	9625	0.0
54	Title r11-c9_Region5_143208460.tif	11	11		c9								0	0				9625	9625	0.0
55	Title r11-c10_Region5_143208460.tif	11	11		c10								0	0				9625	9625	0.0
56	Title r11-c11_Region5_143208460.tif	11	11		c11								0	0				9625	9625	0.0
57	Title r11-c12_Region5_143208460.tif	11	11		c12								0	0				9625	9625	0.0
58	Title r11-c13_Region5_143208460.tif	11	11		c13								0	0				9625	9625	0.0
59	Title r11-c14_Region5_143208460.tif	11	11		c14								0	0				9625	9625	0.0
60	Title r11-c15_Region5_143208460.tif	11	11		c15								0	0				9625	9625	0.0
61	Title r1-c5_Region5_143208460.tif	1-	1		c5_R								0	0				9625	9625	0.0
62	Title r1-c6_Region5_143208460.tif	1-	1		c6_R								0	0				9625	9625	0.0
63	Title r1-c7_Region5_143208460.tif	1-	1		c7_R								0	0				9625	9625	0.0
64	Title r1-c8_Region5_143208460.tif	1-	1		c8_R								0	0				9625	9625	0.0
65	Title r1-c9_Region5_143208460.tif	1-	1		c9_R								0	0				9625	9625	0.0
66	Title r1-c10_Region5_143208460.tif	1-	1		c10								0	0				9625	9625	0.0

The numbers of column B are extracted and placed in column C

The screenshot shows the Microsoft Excel interface with the Visual Basic for Applications (VBA) editor open. The VBA editor displays the following code for the `ExtrNumbersFromRange` subroutine:

```
Sub ExtrNumbersFromRange()  
    Dim xRg As Range  
    Dim xDRg As Range  
    Dim xRRg As Range  
    Dim nCellLength As Integer  
    Dim xNumber As Integer  
    Dim strNumber As String  
    Dim xTitleId As String  
    Dim xI As Integer  
    xTitleId = "KutoolsforExcel"  
    Set xDRg = Application.InputBox("Please select text strings:", xTitleId, "", Type:=8)  
    If TypeName(xDRg) = "Nothing" Then Exit Sub  
    Set xRRg = Application.InputBox("Please select output cell:", xTitleId, "", Type:=8)  
    If TypeName(xRRg) = "Nothing" Then Exit Sub  
    xI = 0  
    strNumber = ""  
    For Each xRg In xDRg  
        xI = xI + 1  
        nCellLength = Len(xRg)  
        For xNumber = 1 To nCellLength  
            If IsNumeric(Mid(xRg, xNumber, 1)) Then  
                strNumber = strNumber & Mid(xRg, xNumber, 1)  
            End If  
        Next  
    Next  
End Sub
```

A runtime error dialog box titled "Microsoft Visual Basic" is displayed, showing the error "Laufzeitfehler '0': Überlauf" (Run-time error '0': Overflow). The dialog box has buttons for "Fortfahren" (Continue), "Beenden" (End), "Debuggen" (Debug), and "Hilfe" (Help).

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Title_r7-c16_Region5_143208460.tif	7-	7	c16								0	0					9625	9625	0.0
2	Title_r8-c1_Region5_143208460.tif	8-	8	c1_R								0	0					9625	9625	0.0
3	Title_r8-c2_Region5_143208460.tif	8-	8	c2_R								0	0					9625	9625	0.0
4	Title_r8-c3_Region5_143208460.tif	8-	8	c3_R								0	0					9625	9625	0.0
5	Title_r8-c4_Region5_143208460.tif	8-	8	c4_R								0	0					9625	9625	0.0
6	Title_r8-c5_Region5_143208460.tif	8-	8	c5_R								0	0					9625	9625	0.0
7	Title_r8-c6_Region5_143208460.tif	8-	8	c6_R								0	0					9625	9625	0.0
8	Title_r8-c7_Region5_143208460.tif	8-	8	c7_R								0	0					9625	9625	0.0
9	Title_r8-c8_Region5_143208460.tif	8-	8	c8_R								0	0					9625	9625	0.0
10	Title_r8-c9_Region5_143208460.tif	8-	8	c9_R								0	0					9625	9625	0.0
11	Title_r8-c10_Region5_143208460.tif	8-	8	c10								0	0					9625	9625	0.0
12	Title_r8-c11_Region5_143208460.tif	8-	8	c11								0	0					9625	9625	0.0
13	Title_r8-c12_Region5_143208460.tif	8-	8	c12								0	0					9625	9625	0.0
14	Title_r8-c13_Region5_143208460.tif	8-	8	c13								0	0					9625	9625	0.0
15	Title_r8-c14_Region5_143208460.tif	8-	8	c14								0	0					9625	9625	0.0
16	Title_r8-c15_Region5_143208460.tif	8-	8	c15								0	0					9625	9625	0.0
17	Title_r8-c16_Region5_143208460.tif	8-	8	c16								0	0					9625	9625	0.0
18	Title_r9-c1_Region5_143208460.tif	9-	9	c1_R								0	0					9625	9625	0.0
19	Title_r9-c2_Region5_143208460.tif	9-	9	c2_R								0	0					9625	9625	0.0
20	Title_r9-c3_Region5_143208460.tif	9-	9	c3_R								0	0					9625	9625	0.0
21	Title_r9-c4_Region5_143208460.tif	9-	9	c4_R								0	0					9625	9625	0.0

An error might occur, but also then, the extraction usually worked

Tecno SI Datasets1 and 2 - Excel

File Start Einfügen Seitenlayout Formeln Daten Überprüfen Ansicht Hilfe Was möchten Sie tun?

Ausschneiden Einfügen Kopieren Format übertragen Zwischenablage

Schriftart Ausrichtung Zahl

Standard Gut Neutral Schlecht Ausgabe Berechnung Eingabe Erklärender... Notiz Verknüpfte Z...

Bedingte Formatierung Als Tabelle formatieren

Zellen

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Title r7-c16_Region5_143208460.tif	7-	7		c16	16							0	0				9625	9625	0.0
2	Title r8-c1_Region5_143208460.tif	8-	8		c1_R	1							0	0				9625	9625	0.0
3	Title r8-c2_Region5_143208460.tif	8-	8		c2_R	2							0	0				9625	9625	0.0
4	Title r8-c3_Region5_143208460.tif	8-	8		c3_R	3							0	0				9625	9625	0.0
5	Title r8-c4_Region5_143208460.tif	8-	8		c4_R	4							0	0				9625	9625	0.0
6	Title r8-c5_Region5_143208460.tif	8-	8		c5_R	5							0	0				9625	9625	0.0
7	Title r8-c6_Region5_143208460.tif	8-	8		c6_R	6							0	0				9625	9625	0.0
8	Title r8-c7_Region5_143208460.tif	8-	8		c7_R	7							0	0				9625	9625	0.0
9	Title r8-c8_Region5_143208460.tif	8-	8		c8_R	8							0	0				9625	9625	0.0
10	Title r8-c9_Region5_143208460.tif	8-	8		c9_R	9							0	0				9625	9625	0.0
11	Title r8-c10_Region5_143208460.tif	8-	8		c10	10							0	0				9625	9625	0.0
12	Title r8-c11_Region5_143208460.tif	8-	8		c11	11							0	0				9625	9625	0.0
13	Title r8-c12_Region5_143208460.tif	8-	8		c12	12							0	0				9625	9625	0.0
14	Title r8-c13_Region5_143208460.tif	8-	8		c13	13							0	0				9625	9625	0.0
15	Title r8-c14_Region5_143208460.tif	8-	8		c14	14							0	0				9625	9625	0.0
16	Title r8-c15_Region5_143208460.tif	8-	8		c15	15							0	0				9625	9625	0.0
17	Title r8-c16_Region5_143208460.tif	8-	8		c16	16							0	0				9625	9625	0.0
18	Title r9-c1_Region5_143208460.tif	9-	9		c1_R	1							0	0				9625	9625	0.0
19	Title r9-c2_Region5_143208460.tif	9-	9		c2_R	2							0	0				9625	9625	0.0
20	Title r9-c3_Region5_143208460.tif	9-	9		c3_R	3							0	0				9625	9625	0.0
21	Title r9-c4_Region5_143208460.tif	9-	9		c4_R	4							0	0				9625	9625	0.0
22	Title r9-c5_Region5_143208460.tif	9-	9		c5_R	5							0	0				9625	9625	0.0
23	Title r9-c6_Region5_143208460.tif	9-	9		c6_R	6							0	0				9625	9625	0.0
24	Title r9-c7_Region5_143208460.tif	9-	9		c7_R	7							0	0				9625	9625	0.0
25	Title r9-c8_Region5_143208460.tif	9-	9		c8_R	8							0	0				9625	9625	0.0
26	Title r9-c9_Region5_143208460.tif	9-	9		c9_R	9							0	0				9625	9625	0.0
27	Title r9-c10_Region5_143208460.tif	9-	9		c10	10							0	0				9625	9625	0.0
28	Title r9-c11_Region5_143208460.tif	9-	9		c11	11							0	0				9625	9625	0.0
29	Title r9-c12_Region5_143208460.tif	9-	9		c12	12							0	0				9625	9625	0.0
30	Title r9-c13_Region5_143208460.tif	9-	9		c13	13							0	0				9625	9625	0.0
31	Title r9-c14_Region5_143208460.tif	9-	9		c14	14							0	0				9625	9625	0.0
32	Title r9-c15_Region5_143208460.tif	9-	9		c15	15							0	0				9625	9625	0.0
33	Title r9-c16_Region5_143208460.tif	9-	9		c16	16							0	0				9625	9625	0.0
34	Title r10-c2_Region5_143208460.tif	10	10		-c2	2							0	0				9625	9625	0.0
35	Title r10-c3_Region5_143208460.tif	10	10		-c3	3							0	0				9625	9625	0.0
36	Title r10-c4_Region5_143208460.tif	10	10		-c4	4							0	0				9625	9625	0.0
37	Title r10-c5_Region5_143208460.tif	10	10		-c5	5							0	0				9625	9625	0.0
38	Title r10-c6_Region5_143208460.tif	10	10		-c6	6							0	0				9625	9625	0.0
39	Title r10-c7_Region5_143208460.tif	10	10		-c7	7							0	0				9625	9625	0.0
40	Title r10-c8_Region5_143208460.tif	10	10		-c8	8							0	0				9625	9625	0.0
41	Title r10-c9_Region5_143208460.tif	10	10		-c9	9							0	0				9625	9625	0.0
42	Title r10-c10_Region5_143208460.tif	10	10		-c10	10							0	0				9625	9625	0.0
43	Title r10-c11_Region5_143208460.tif	10	10		-c11	11							0	0				9625	9625	0.0
44	Title r10-c12_Region5_143208460.tif	10	10		-c12	12							0	0				9625	9625	0.0
45	Title r10-c13_Region5_143208460.tif	10	10		-c13	13							0	0				9625	9625	0.0
46	Title r10-c14_Region5_143208460.tif	10	10		-c14	14							0	0				9625	9625	0.0
47	Title r10-c15_Region5_143208460.tif	10	10		-c15	15							0	0				9625	9625	0.0
48	Title r10-c16_Region5_143208460.tif	10	10		-c16	16							0	0				9625	9625	0.0
49	Title r11-c4_Region5_143208460.tif	11	11		-c4	4							0	0				9625	9625	0.0
50	Title r11-c5_Region5_143208460.tif	11	11		-c5	5							0	0				9625	9625	0.0
51	Title r11-c6_Region5_143208460.tif	11	11		-c6	6							0	0				9625	9625	0.0
52	Title r11-c7_Region5_143208460.tif	11	11		-c7	7							0	0				9625	9625	0.0
53	Title r11-c8_Region5_143208460.tif	11	11		-c8	8							0	0				9625	9625	0.0
54	Title r11-c9_Region5_143208460.tif	11	11		-c9	9							0	0				9625	9625	0.0
55	Title r11-c10_Region5_143208460.tif	11	11		-c10	10							0	0				9625	9625	0.0
56	Title r11-c11_Region5_143208460.tif	11	11		-c11	11							0	0				9625	9625	0.0
57	Title r11-c12_Region5_143208460.tif	11	11		-c12	12							0	0				9625	9625	0.0
58	Title r11-c13_Region5_143208460.tif	11	11		-c13	13							0	0				9625	9625	0.0
59	Title r11-c14_Region5_143208460.tif	11	11		-c14	14							0	0				9625	9625	0.0
60	Title r11-c15_Region5_143208460.tif	11	11		-c15	15							0	0				9625	9625	0.0
61	Title r1-c5_Region5_143208460.tif	1-	1		c5_R	5							0	0				9625	9625	0.0
62	Title r1-c6_Region5_143208460.tif	1-	1		c6_R	6							0	0				9625	9625	0.0
63	Title r1-c7_Region5_143208460.tif	1-	1		c7_R	7							0	0				9625	9625	0.0
64	Title r1-c8_Region5_143208460.tif	1-	1		c8_R	8							0	0				9625	9625	0.0
65	Title r1-c9_Region5_143208460.tif	1-	1		c9_R	9							0	0				9625	9625	0.0
66	Title r1-c10_Region5_143208460.tif	1-	1		c10	10							0	0				9625	9625	0.0

Extract the numbers in column E to column F the same way



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Title r7-c16_Region5_143208460.tif	7-	7		c16	16		7	16			154000	67375					9625	9625	154000 67375
2	Title r8-c1_Region5_143208460.tif	8-	8		c1_R	1		8	1			9625	77000					9625	9625	9625 77000
3	Title r8-c2_Region5_143208460.tif	8-	8		c2_R	2		8	2			19250	77000					9625	9625	19250 77000
4	Title r8-c3_Region5_143208460.tif	8-	8		c3_R	3		8	3			28875	77000					9625	9625	28875 77000
5	Title r8-c4_Region5_143208460.tif	8-	8		c4_R	4		8	4			38500	77000					9625	9625	38500 77000
6	Title r8-c5_Region5_143208460.tif	8-	8		c5_R	5		8	5			48125	77000					9625	9625	48125 77000
7	Title r8-c6_Region5_143208460.tif	8-	8		c6_R	6		8	6			57750	77000					9625	9625	57750 77000
8	Title r8-c7_Region5_143208460.tif	8-	8		c7_R	7		8	7			67375	77000					9625	9625	67375 77000
9	Title r8-c8_Region5_143208460.tif	8-	8		c8_R	8		8	8			77000	77000					9625	9625	77000 77000
10	Title r8-c9_Region5_143208460.tif	8-	8		c9_R	9		8	9			86625	77000					9625	9625	86625 77000
11	Title r8-c10_Region5_143208460.tif	8-	8		c10	10		8	10			96250	77000					9625	9625	96250 77000
12	Title r8-c11_Region5_143208460.tif	8-	8		c11	11		8	11			105875	77000					9625	9625	105875 77000
13	Title r8-c12_Region5_143208460.tif	8-	8		c12	12		8	12			115500	77000					9625	9625	115500 77000
14	Title r8-c13_Region5_143208460.tif	8-	8		c13	13		8	13			125125	77000					9625	9625	125125 77000
15	Title r8-c14_Region5_143208460.tif	8-	8		c14	14		8	14			134750	77000					9625	9625	134750 77000
16	Title r8-c15_Region5_143208460.tif	8-	8		c15	15		8	15			144375	77000					9625	9625	144375 77000
17	Title r8-c16_Region5_143208460.tif	8-	8		c16	16		8	16			154000	77000					9625	9625	154000 77000
18	Title r9-c1_Region5_143208460.tif	9-	9		c1_R	1		9	1			9625	86625					9625	9625	9625 86625
19	Title r9-c2_Region5_143208460.tif	9-	9		c2_R	2		9	2			19250	86625					9625	9625	19250 86625
20	Title r9-c3_Region5_143208460.tif	9-	9		c3_R	3		9	3			28875	86625					9625	9625	28875 86625
21	Title r9-c4_Region5_143208460.tif	9-	9		c4_R	4		9	4			38500	86625					9625	9625	38500 86625
22	Title r9-c5_Region5_143208460.tif	9-	9		c5_R	5		9	5			48125	86625					9625	9625	48125 86625
23	Title r9-c6_Region5_143208460.tif	9-	9		c6_R	6		9	6			57750	86625					9625	9625	57750 86625
24	Title r9-c7_Region5_143208460.tif	9-	9		c7_R	7		9	7			67375	86625					9625	9625	67375 86625
25	Title r9-c8_Region5_143208460.tif	9-	9		c8_R	8		9	8			77000	86625					9625	9625	77000 86625
26	Title r9-c9_Region5_143208460.tif	9-	9		c9_R	9		9	9			86625	86625					9625	9625	86625 86625
27	Title r9-c10_Region5_143208460.tif	9-	9		c10	10		9	10			96250	86625					9625	9625	96250 86625
28	Title r9-c11_Region5_143208460.tif	9-	9		c11	11		9	11			105875	86625					9625	9625	105875 86625
29	Title r9-c12_Region5_143208460.tif	9-	9		c12	12		9	12			115500	86625					9625	9625	115500 86625
30	Title r9-c13_Region5_143208460.tif	9-	9		c13	13		9	13			125125	86625					9625	9625	125125 86625
31	Title r9-c14_Region5_143208460.tif	9-	9		c14	14		9	14			134750	86625					9625	9625	134750 86625
32	Title r9-c15_Region5_143208460.tif	9-	9		c15	15		9	15			144375	86625					9625	9625	144375 86625
33	Title r9-c16_Region5_143208460.tif	9-	9		c16	16		9	16			154000	86625					9625	9625	154000 86625
34	Title r10-c2_Region5_143208460.tif	10	10		c2	2		10	2			19250	96250					9625	9625	19250 96250
35	Title r10-c3_Region5_143208460.tif	10	10		c3	3		10	3			28875	96250					9625	9625	28875 96250
36	Title r10-c4_Region5_143208460.tif	10	10		c4	4		10	4			38500	96250					9625	9625	38500 96250
37	Title r10-c5_Region5_143208460.tif	10	10		c5	5		10	5			48125	96250					9625	9625	48125 96250
38	Title r10-c6_Region5_143208460.tif	10	10		c6	6		10	6			57750	96250					9625	9625	57750 96250
39	Title r10-c7_Region5_143208460.tif	10	10		c7	7		10	7			67375	96250					9625	9625	67375 96250
40	Title r10-c8_Region5_143208460.tif	10	10		c8	8		10	8			77000	96250					9625	9625	77000 96250
41	Title r10-c9_Region5_143208460.tif	10	10		c9	9		10	9			86625	96250					9625	9625	86625 96250
42	Title r10-c10_Region5_143208460.tif	10	10		c10	10		10	10			96250	96250					9625	9625	96250 96250
43	Title r10-c11_Region5_143208460.tif	10	10		c11	11		10	11			105875	96250					9625	9625	105875 96250
44	Title r10-c12_Region5_143208460.tif	10	10		c12	12		10	12			115500	96250					9625	9625	115500 96250
45	Title r10-c13_Region5_143208460.tif	10	10		c13	13		10	13			125125	96250					9625	9625	125125 96250
46	Title r10-c14_Region5_143208460.tif	10	10		c14	14		10	14			134750	96250					9625	9625	134750 96250
47	Title r10-c15_Region5_143208460.tif	10	10		c15	15		10	15			144375	96250					9625	9625	144375 96250
48	Title r10-c16_Region5_143208460.tif	10	10		c16	16		10	16			154000	96250					9625	9625	154000 96250
49	Title r11-c4_Region5_143208460.tif	11	11		c4	4		11	4			38500	105875					9625	9625	38500 105875
50	Title r11-c5_Region5_143208460.tif	11	11		c5	5		11	5			48125	105875					9625	9625	48125 105875
51	Title r11-c6_Region5_143208460.tif	11	11		c6	6		11	6			57750	105875					9625	9625	57750 105875
52	Title r11-c7_Region5_143208460.tif	11	11		c7	7		11	7			67375	105875					9625	9625	67375 105875
53	Title r11-c8_Region5_143208460.tif	11	11		c8	8		11	8			77000	105875					9625	9625	77000 105875
54	Title r11-c9_Region5_143208460.tif	11	11		c9	9		11	9			86625	105875					9625	9625	86625 105875
55	Title r11-c10_Region5_143208460.tif	11	11		c10	10		11	10			96250	105875					9625	9625	96250 105875
56	Title r11-c11_Region5_143208460.tif	11	11		c11	11		11	11			105875	105875					9625	9625	105875 105875
57	Title r11-c12_Region5_143208460.tif	11	11		c12	12		11	12			115500	105875					9625	9625	115500 105875
58	Title r11-c13_Region5_143208460.tif	11	11		c13	13		11	13			125125	105875					9625	9625	125125 105875
59	Title r11-c14_Region5_143208460.tif	11	11		c14	14		11	14			134750	105875					9625	9625	134750 105875
60	Title r11-c15_Region5_143208460.tif	11	11		c15	15		11	15			144375	105875					9625	9625	144375 105875
61	Title r1-c5_Region5_143208460.tif	1-	1		c5_R	5		1	5			48125	9625					9625	9625	48125 9625
62	Title r1-c6_Region5_143208460.tif	1-	1		c6_R	6		1	6			57750	9625					9625	9625	57750 9625
63	Title r1-c7_Region5_143208460.tif	1-	1		c7_R	7		1	7			67375	9625					9625	9625	67375 9625
64	Title r1-c8_Region5_143208460.tif	1-	1		c8_R	8		1	8			77000	9625					9625	9625	77000 9625
65	Title r1-c9_Region5_143208460.tif	1-	1		c9_R	9		1	9			86625	9625					9625	9625	86625 9625
66	Title r1-c10_Region5_143208460.tif	1-	1		c10	10		1	10			96250	9625					9625	9625	96250 9625

Copy all numbers of column C and column F to column H and column I

Tecno SI Datasets1 and 2 - Excel

Datei Start Einfügen Seitenlayout Formeln Daten Überprüfen Ansicht Hilfe Was möchten Sie tun?

Einfügen Ausschneiden Kopieren Format übertragen Zwischenablage

Calibri 11 Textumbruch Standard Bedingte Formatierung Als Tabelle formatieren

Standard Gut Neutral Schlecht Ausgabe Berechnung Eingabe Erklärender... Notiz Verknüpfte Z...

Einfügen Löschen Format AutoSumme Ausfüllen Löschen Sortieren Filter

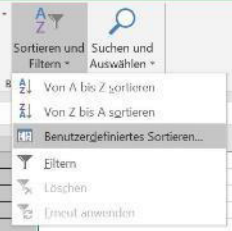
A1 Tile_r7-c16_Region5_143208460.tif

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	
90	Tile_r3-c12_Region5_143208460.tif	3-	3	c12	12			3	12			115500	28875					9625	9625	115500	28875
91	Tile_r3-c13_Region5_143208460.tif	3-	3	c13	13							125125	28875					9625	9625	125125	28875
92	Tile_r3-c14_Region5_143208460.tif	3-	3	c14	14			3	14			134750	28875					9625	9625	134750	28875
93	Tile_r3-c15_Region5_143208460.tif	3-	3	c15	15			3	15			144375	28875					9625	9625	144375	28875
94	Tile_r4-c2_Region5_143208460.tif	4-	4	c2	2			4	2			19250	38500					9625	9625	19250	38500
95	Tile_r4-c3_Region5_143208460.tif	4-	4	c3	3			4	3			28875	38500					9625	9625	28875	38500
96	Tile_r4-c4_Region5_143208460.tif	4-	4	c4	4			4	4			38500	38500					9625	9625	38500	38500
97	Tile_r4-c5_Region5_143208460.tif	4-	4	c5	5			4	5			48125	38500					9625	9625	48125	38500
98	Tile_r4-c6_Region5_143208460.tif	4-	4	c6	6			4	6			57750	38500					9625	9625	57750	38500
99	Tile_r4-c7_Region5_143208460.tif	4-	4	c7	7			4	7			67375	38500					9625	9625	67375	38500
100	Tile_r4-c8_Region5_143208460.tif	4-	4	c8	8			4	8			77000	38500					9625	9625	77000	38500
101	Tile_r4-c9_Region5_143208460.tif	4-	4	c9	9			4	9			86625	38500					9625	9625	86625	38500
102	Tile_r4-c10_Region5_143208460.tif	4-	4	c10	10			4	10			96250	38500					9625	9625	96250	38500
103	Tile_r4-c11_Region5_143208460.tif	4-	4	c11	11			4	11			105875	38500					9625	9625	105875	38500
104	Tile_r4-c12_Region5_143208460.tif	4-	4	c12	12			4	12			115500	38500					9625	9625	115500	38500
105	Tile_r4-c13_Region5_143208460.tif	4-	4	c13	13			4	13			125125	38500					9625	9625	125125	38500
106	Tile_r4-c14_Region5_143208460.tif	4-	4	c14	14			4	14			134750	38500					9625	9625	134750	38500
107	Tile_r4-c15_Region5_143208460.tif	4-	4	c15	15			4	15			144375	38500					9625	9625	144375	38500
108	Tile_r4-c16_Region5_143208460.tif	4-	4	c16	16			4	16			154000	38500					9625	9625	154000	38500
109	Tile_r5-c1_Region5_143208460.tif	5-	5	c1	1			5	1			9625	48125					9625	9625	9625	48125
110	Tile_r5-c2_Region5_143208460.tif	5-	5	c2	2			5	2			19250	48125					9625	9625	19250	48125
111	Tile_r5-c3_Region5_143208460.tif	5-	5	c3	3			5	3			28875	48125					9625	9625	28875	48125
112	Tile_r5-c4_Region5_143208460.tif	5-	5	c4	4			5	4			38500	48125					9625	9625	38500	48125
113	Tile_r5-c5_Region5_143208460.tif	5-	5	c5	5			5	5			48125	48125					9625	9625	48125	48125
114	Tile_r5-c6_Region5_143208460.tif	5-	5	c6	6			5	6			57750	48125					9625	9625	57750	48125
115	Tile_r5-c7_Region5_143208460.tif	5-	5	c7	7			5	7			67375	48125					9625	9625	67375	48125
116	Tile_r5-c8_Region5_143208460.tif	5-	5	c8	8			5	8			77000	48125					9625	9625	77000	48125
117	Tile_r5-c9_Region5_143208460.tif	5-	5	c9	9			5	9			86625	48125					9625	9625	86625	48125
118	Tile_r5-c10_Region5_143208460.tif	5-	5	c10	10			5	10			96250	48125					9625	9625	96250	48125
119	Tile_r5-c11_Region5_143208460.tif	5-	5	c11	11			5	11			105875	48125					9625	9625	105875	48125
120	Tile_r5-c12_Region5_143208460.tif	5-	5	c12	12			5	12			115500	48125					9625	9625	115500	48125
121	Tile_r5-c13_Region5_143208460.tif	5-	5	c13	13			5	13			125125	48125					9625	9625	125125	48125
122	Tile_r5-c14_Region5_143208460.tif	5-	5	c14	14			5	14			134750	48125					9625	9625	134750	48125
123	Tile_r5-c15_Region5_143208460.tif	5-	5	c15	15			5	15			144375	48125					9625	9625	144375	48125
124	Tile_r5-c16_Region5_143208460.tif	5-	5	c16	16			5	16			154000	48125					9625	9625	154000	48125
125	Tile_r6-c1_Region5_143208460.tif	6-	6	c1	1			6	1			9625	57750					9625	9625	9625	57750
126	Tile_r6-c2_Region5_143208460.tif	6-	6	c2	2			6	2			19250	57750					9625	9625	19250	57750
127	Tile_r6-c3_Region5_143208460.tif	6-	6	c3	3			6	3			28875	57750					9625	9625	28875	57750
128	Tile_r6-c4_Region5_143208460.tif	6-	6	c4	4			6	4			38500	57750					9625	9625	38500	57750
129	Tile_r6-c5_Region5_143208460.tif	6-	6	c5	5			6	5			48125	57750					9625	9625	48125	57750
130	Tile_r6-c6_Region5_143208460.tif	6-	6	c6	6			6	6			57750	57750					9625	9625	57750	57750
131	Tile_r6-c7_Region5_143208460.tif	6-	6	c7	7			6	7			67375	57750					9625	9625	67375	57750
132	Tile_r6-c8_Region5_143208460.tif	6-	6	c8	8			6	8			77000	57750					9625	9625	77000	57750
133	Tile_r6-c9_Region5_143208460.tif	6-	6	c9	9			6	9			86625	57750					9625	9625	86625	57750
134	Tile_r6-c10_Region5_143208460.tif	6-	6	c10	10			6	10			96250	57750					9625	9625	96250	57750
135	Tile_r6-c11_Region5_143208460.tif	6-	6	c11	11			6	11			105875	57750					9625	9625	105875	57750
136	Tile_r6-c12_Region5_143208460.tif	6-	6	c12	12			6	12			115500	57750					9625	9625	115500	57750
137	Tile_r6-c13_Region5_143208460.tif	6-	6	c13	13			6	13			125125	57750					9625	9625	125125	57750
138	Tile_r6-c14_Region5_143208460.tif	6-	6	c14	14			6	14			134750	57750					9625	9625	134750	57750
139	Tile_r6-c15_Region5_143208460.tif	6-	6	c15	15			6	15			144375	57750					9625	9625	144375	57750
140	Tile_r6-c16_Region5_143208460.tif	6-	6	c16	16			6	16			154000	57750					9625	9625	154000	57750
141	Tile_r7-c1_Region5_143208460.tif	7-	7	c1	1			7	1			9625	67375					9625	9625	9625	67375
142	Tile_r7-c2_Region5_143208460.tif	7-	7	c2	2			7	2			19250	67375					9625	9625	19250	67375
143	Tile_r7-c3_Region5_143208460.tif	7-	7	c3	3			7	3			28875	67375					9625	9625	28875	67375
144	Tile_r7-c4_Region5_143208460.tif	7-	7	c4	4			7	4			38500	67375					9625	9625	38500	67375
145	Tile_r7-c5_Region5_143208460.tif	7-	7	c5	5			7	5			48125	67375					9625	9625	48125	67375
146	Tile_r7-c6_Region5_143208460.tif	7-	7	c6	6			7	6			57750	67375					9625	9625	57750	67375
147	Tile_r7-c7_Region5_143208460.tif	7-	7	c7	7			7	7			67375	67375					9625	9625	67375	67375
148	Tile_r7-c8_Region5_143208460.tif	7-	7	c8	8			7	8			77000	67375					9625	9625	77000	67375
149	Tile_r7-c9_Region5_143208460.tif	7-	7	c9	9			7	9			86625	67375					9625	9625	86625	67375
150	Tile_r7-c10_Region5_143208460.tif	7-	7	c10	10			7	10			96250	67375					9625	9625	96250	67375
151	Tile_r7-c11_Region5_143208460.tif	7-	7	c11	11			7	11			105875	67375					9625	9625	105875	67375
152	Tile_r7-c12_Region5_143208460.tif	7-	7	c12	12			7	12			115500	67375					9625	9625	115500	67375
153	Tile_r7-c13_Region5_143208460.tif	7-	7	c13	13			7	13			125125	67375					9625	9625	125125	67375
154	Tile_r7-c14_Region5_143208460.tif	7-	7	c14	14			7	14			134750	67375					9625	9625	134750	67375
155	Tile_r7-c15_Region5_143208460.tif	7-	7	c15	15			7	15			144375	67375					9625	9625	144375	67375

Select all data as shown of dataset 1



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
90	Tile r3-c12_Region5_143208460.tif	3-	3		c12	12		3	12			115500	28875					9625	9625	115500 28875
91	Tile r3-c13_Region5_143208460.tif	3-	3		c13	13		3	13			125125	28875					9625	9625	125125 28875
92	Tile r3-c14_Region5_143208460.tif	3-	3		c14	14		3	14			134750	28875					9625	9625	134750 28875
93	Tile r3-c15_Region5_143208460.tif	3-	3		c15	15		3	15			144375	28875					9625	9625	144375 28875
94	Tile r4-c2_Region5_143208460.tif	4-	4		c2_R	2		4	2			19250	38500					9625	9625	19250 38500
95	Tile r4-c3_Region5_143208460.tif	4-	4		c3_R	3		4	3			28875	38500					9625	9625	28875 38500
96	Tile r4-c4_Region5_143208460.tif	4-	4		c4_R	4		4	4			38500	38500					9625	9625	38500 38500
97	Tile r4-c5_Region5_143208460.tif	4-	4		c5_R	5		4	5			48125	38500					9625	9625	48125 38500
98	Tile r4-c6_Region5_143208460.tif	4-	4		c6_R	6		4	6			57750	38500					9625	9625	57750 38500
99	Tile r4-c7_Region5_143208460.tif	4-	4		c7_R	7		4	7			67375	38500					9625	9625	67375 38500
100	Tile r4-c8_Region5_143208460.tif	4-	4		c8_R	8		4	8			77000	38500					9625	9625	77000 38500
101	Tile r4-c9_Region5_143208460.tif	4-	4		c9_R	9		4	9			86625	38500					9625	9625	86625 38500
102	Tile r4-c10_Region5_143208460.tif	4-	4		c10	10		4	10			96250	38500					9625	9625	96250 38500
103	Tile r4-c11_Region5_143208460.tif	4-	4		c11	11		4	11			105875	38500					9625	9625	105875 38500
104	Tile r4-c12_Region5_143208460.tif	4-	4		c12	12		4	12			115500	38500					9625	9625	115500 38500
105	Tile r4-c13_Region5_143208460.tif	4-	4		c13	13		4	13			125125	38500					9625	9625	125125 38500
106	Tile r4-c14_Region5_143208460.tif	4-	4		c14	14		4	14			134750	38500					9625	9625	134750 38500
107	Tile r4-c15_Region5_143208460.tif	4-	4		c15	15		4	15			144375	38500					9625	9625	144375 38500
108	Tile r4-c16_Region5_143208460.tif	4-	4		c16	16		4	16			154000	38500					9625	9625	154000 38500
109	Tile r5-c1_Region5_143208460.tif	5-	5		c1_R	1		5	1			9625	48125					9625	9625	9625 48125
110	Tile r5-c2_Region5_143208460.tif	5-	5		c2_R	2		5	2			19250	48125					9625	9625	19250 48125
111	Tile r5-c3_Region5_143208460.tif	5-	5		c3_R	3		5	3			28875	48125					9625	9625	28875 48125
112	Tile r5-c4_Region5_143208460.tif	5-	5		c4_R	4		5	4			38500	48125					9625	9625	38500 48125
113	Tile r5-c5_Region5_143208460.tif	5-	5		c5_R	5		5	5			48125	48125					9625	9625	48125 48125
114	Tile r5-c6_Region5_143208460.tif	5-	5		c6_R	6		5	6			57750	48125					9625	9625	57750 48125
115	Tile r5-c7_Region5_143208460.tif	5-	5		c7_R	7		5	7			67375	48125					9625	9625	67375 48125
116	Tile r5-c8_Region5_143208460.tif	5-	5		c8_R	8		5	8			77000	48125					9625	9625	77000 48125
117	Tile r5-c9_Region5_143208460.tif	5-	5		c9_R	9		5	9			86625	48125					9625	9625	86625 48125
118	Tile r5-c10_Region5_143208460.tif	5-	5		c10	10		5	10			96250	48125					9625	9625	96250 48125
119	Tile r5-c11_Region5_143208460.tif	5-	5		c11	11		5	11			105875	48125					9625	9625	105875 48125
120	Tile r5-c12_Region5_143208460.tif	5-	5		c12	12		5	12			115500	48125					9625	9625	115500 48125
121	Tile r5-c13_Region5_143208460.tif	5-	5		c13	13		5	13			125125	48125					9625	9625	125125 48125
122	Tile r5-c14_Region5_143208460.tif	5-	5		c14	14		5	14			134750	48125					9625	9625	134750 48125
123	Tile r5-c15_Region5_143208460.tif	5-	5		c15	15		5	15			144375	48125					9625	9625	144375 48125
124	Tile r5-c16_Region5_143208460.tif	5-	5		c16	16		5	16			154000	48125					9625	9625	154000 48125
125	Tile r6-c1_Region5_143208460.tif	6-	6		c1_R	1		6	1			9625	57750					9625	9625	9625 57750
126	Tile r6-c2_Region5_143208460.tif	6-	6		c2_R	2		6	2			19250	57750					9625	9625	19250 57750
127	Tile r6-c3_Region5_143208460.tif	6-	6		c3_R	3		6	3			28875	57750					9625	9625	28875 57750
128	Tile r6-c4_Region5_143208460.tif	6-	6		c4_R	4		6	4			38500	57750					9625	9625	38500 57750
129	Tile r6-c5_Region5_143208460.tif	6-	6		c5_R	5		6	5			48125	57750					9625	9625	48125 57750
130	Tile r6-c6_Region5_143208460.tif	6-	6		c6_R	6		6	6			57750	57750					9625	9625	57750 57750
131	Tile r6-c7_Region5_143208460.tif	6-	6		c7_R	7		6	7			67375	57750					9625	9625	67375 57750
132	Tile r6-c8_Region5_143208460.tif	6-	6		c8_R	8		6	8			77000	57750					9625	9625	77000 57750
133	Tile r6-c9_Region5_143208460.tif	6-	6		c9_R	9		6	9			86625	57750					9625	9625	86625 57750
134	Tile r6-c10_Region5_143208460.tif	6-	6		c10	10		6	10			96250	57750					9625	9625	96250 57750
135	Tile r6-c11_Region5_143208460.tif	6-	6		c11	11		6	11			105875	57750					9625	9625	105875 57750
136	Tile r6-c12_Region5_143208460.tif	6-	6		c12	12		6	12			115500	57750					9625	9625	115500 57750
137	Tile r6-c13_Region5_143208460.tif	6-	6		c13	13		6	13			125125	57750					9625	9625	125125 57750
138	Tile r6-c14_Region5_143208460.tif	6-	6		c14	14		6	14			134750	57750					9625	9625	134750 57750
139	Tile r6-c15_Region5_143208460.tif	6-	6		c15	15		6	15			144375	57750					9625	9625	144375 57750
140	Tile r6-c16_Region5_143208460.tif	6-	6		c16	16		6	16			154000	57750					9625	9625	154000 57750
141	Tile r7-c1_Region5_143208460.tif	7-	7		c1_R	1		7	1			9625	67375					9625	9625	9625 67375
142	Tile r7-c2_Region5_143208460.tif	7-	7		c2_R	2		7	2			19250	67375					9625	9625	19250 67375
143	Tile r7-c3_Region5_143208460.tif	7-	7		c3_R	3		7	3			28875	67375					9625	9625	28875 67375
144	Tile r7-c4_Region5_143208460.tif	7-	7		c4_R	4		7	4			38500	67375					9625	9625	38500 67375
145	Tile r7-c5_Region5_143208460.tif	7-	7		c5_R	5		7	5			48125	67375					9625	9625	48125 67375
146	Tile r7-c6_Region5_143208460.tif	7-	7		c6_R	6		7	6			57750	67375					9625	9625	57750 67375
147	Tile r7-c7_Region5_143208460.tif	7-	7		c7_R	7		7	7			67375	67375					9625	9625	67375 67375
148	Tile r7-c8_Region5_143208460.tif	7-	7		c8_R	8		7	8			77000	67375					9625	9625	77000 67375
149	Tile r7-c9_Region5_143208460.tif	7-	7		c9_R	9		7	9			86625	67375					9625	9625	86625 67375
150	Tile r7-c10_Region5_143208460.tif	7-	7		c10	10		7	10			96250	67375					9625	9625	96250 67375
151	Tile r7-c11_Region5_143208460.tif	7-	7		c11	11		7	11			105875	67375					9625	9625	105875 67375
152	Tile r7-c12_Region5_143208460.tif	7-	7		c12	12		7	12			115500	67375					9625	9625	115500 67375
153	Tile r7-c13_Region5_143208460.tif	7-	7		c13	13		7	13			125125	67375					9625	9625	125125 67375
154	Tile r7-c14_Region5_143208460.tif	7-	7		c14	14		7	14			134750	67375					9625	9625	134750 67375
155	Tile r7-c15_Region5_143208460.tif	7-	7		c15	15		7	15			144375	67375					9625	9625	144375 67375



Perform a custom sorting process



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Tile r7-c16_Region5_143208460.tif	7-	7		c16	16		7	16			154000	67375					9625	9625	154000 67375
2	Tile r8-c1_Region5_143208460.tif	8-	8		c1_R	1		8	1			9625	77000					9625	9625	9625 77000
3	Tile r8-c2_Region5_143208460.tif	8-	8		c2_R	2		8	2			19250	77000					9625	9625	19250 77000
4	Tile r8-c3_Region5_143208460.tif	8-	8		c3_R	3		8	3			28875	77000					9625	9625	28875 77000
5	Tile r8-c4_Region5_143208460.tif	8-	8		c4_R	4		8	4			38500	77000					9625	9625	38500 77000
6	Tile r8-c5_Region5_143208460.tif	8-	8		c5_R	5		8	5			48125	77000					9625	9625	48125 77000
7	Tile r8-c6_Region5_143208460.tif	8-	8		c6_R	6		8	6			57750	77000					9625	9625	57750 77000
8	Tile r8-c7_Region5_143208460.tif	8-	8		c7_R	7		8	7			67375	77000					9625	9625	67375 77000
9	Tile r8-c8_Region5_143208460.tif	8-	8		c8_R	8		8	8			77000	77000					9625	9625	77000 77000
10	Tile r8-c9_Region5_143208460.tif	8-	8		c9_R	9		8	9			86625	77000					9625	9625	86625 77000
11	Tile r8-c10_Region5_143208460.tif	8-	8		c10	10		8	10			96250	77000					9625	9625	96250 77000
12	Tile r8-c11_Region5_143208460.tif	8-	8		c11	11		8	11			105875	77000					9625	9625	105875 77000
13	Tile r8-c12_Region5_143208460.tif	8-	8		c12	12		8	12			115500	77000					9625	9625	115500 77000
14	Tile r8-c13_Region5_143208460.tif	8-	8		c13	13		8	13			125125	77000					9625	9625	125125 77000
15	Tile r8-c14_Region5_143208460.tif	8-	8		c14	14		8	14			134750	77000					9625	9625	134750 77000
16	Tile r8-c15_Region5_143208460.tif	8-	8		c15	15		8	15			144375	77000					9625	9625	144375 77000
17	Tile r8-c16_Region5_143208460.tif	8-	8		c16	16		8	16			154000	77000					9625	9625	154000 77000
18	Tile r9-c1_Region5_143708460.tif	9-	9		c1_R	1		9	1			9625	86625					9625	9625	9625 86625
19	Tile r9-c2_Region5_143708460.tif	9-	9		c2_R	2		9	2			19250	86625					9625	9625	19250 86625
20	Tile r9-c3_Region5_143708460.tif	9-	9		c3_R	3		9	3			28875	86625					9625	9625	28875 86625
21	Tile r9-c4_Region5_143708460.tif	9-	9		c4_R	4		9	4			38500	86625					9625	9625	38500 86625
22	Tile r9-c5_Region5_143708460.tif	9-	9		c5_R	5		9	5			48125	86625					9625	9625	48125 86625
23	Tile r9-c6_Region5_143708460.tif	9-	9		c6_R	6		9	6			57750	86625					9625	9625	57750 86625
24	Tile r9-c7_Region5_143708460.tif	9-	9		c7_R	7		9	7			67375	86625					9625	9625	67375 86625
25	Tile r9-c8_Region5_143708460.tif	9-	9		c8_R	8		9	8			77000	86625					9625	9625	77000 86625
26	Tile r9-c9_Region5_143708460.tif	9-	9		c9_R	9		9	9			86625	86625					9625	9625	86625 86625
27	Tile r9-c10_Region5_143708460.tif	9-	9		c10	10		9	10			96250	86625					9625	9625	96250 86625
28	Tile r9-c11_Region5_143708460.tif	9-	9		c11	11		9	11			105875	86625					9625	9625	105875 86625
29	Tile r9-c12_Region5_143708460.tif	9-	9		c12	12		9	12			115500	86625					9625	9625	115500 86625
30	Tile r9-c13_Region5_143708460.tif	9-	9		c13	13		9	13			125125	86625					9625	9625	125125 86625
31	Tile r9-c14_Region5_143708460.tif	9-	9		c14	14		9	14			134750	86625					9625	9625	134750 86625
32	Tile r9-c15_Region5_143708460.tif	9-	9		c15	15		9	15			144375	86625					9625	9625	144375 86625
33	Tile r9-c16_Region5_143708460.tif	9-	9		c16	16		9	16			154000	86625					9625	9625	154000 86625
34	Tile r10-c2_Region5_143208460.tif	10	10		-c2	2		10	2			19250	96250					9625	9625	19250 96250
35	Tile r10-c3_Region5_143208460.tif	10	10		-c3	3		10	3			28875	96250					9625	9625	28875 96250
36	Tile r10-c4_Region5_143208460.tif	10	10		-c4	4		10	4			38500	96250					9625	9625	38500 96250
37	Tile r10-c5_Region5_143208460.tif	10	10		-c5	5		10	5			48125	96250					9625	9625	48125 96250
38	Tile r10-c6_Region5_143208460.tif	10	10		-c6	6		10	6			57750	96250					9625	9625	57750 96250
39	Tile r10-c7_Region5_143208460.tif	10	10		-c7	7		10	7			67375	96250					9625	9625	67375 96250
40	Tile r10-c8_Region5_143208460.tif	10	10		-c8	8		10	8			77000	96250					9625	9625	77000 96250
41	Tile r10-c9_Region5_143208460.tif	10	10		-c9	9		10	9			86625	96250					9625	9625	86625 96250
42	Tile r10-c10_Region5_143208460.tif	10	10		-c10	10		10	10			96250	96250					9625	9625	96250 96250
43	Tile r10-c11_Region5_143208460.tif	10	10		-c11	11		10	11			105875	96250					9625	9625	105875 96250
44	Tile r10-c12_Region5_143208460.tif	10	10		-c12	12		10	12			115500	96250					9625	9625	115500 96250
45	Tile r10-c13_Region5_143208460.tif	10	10		-c13	13		10	13			125125	96250					9625	9625	125125 96250
46	Tile r10-c14_Region5_143208460.tif	10	10		-c14	14		10	14			134750	96250					9625	9625	134750 96250
47	Tile r10-c15_Region5_143208460.tif	10	10		-c15	15		10	15			144375	96250					9625	9625	144375 96250
48	Tile r10-c16_Region5_143208460.tif	10	10		-c16	16		10	16			154000	96250					9625	9625	154000 96250
49	Tile r11-c4_Region5_143208460.tif	11	11		-c4	4		11	4			38500	105875					9625	9625	38500 105875
50	Tile r11-c5_Region5_143208460.tif	11	11		-c5	5		11	5			48125	105875					9625	9625	48125 105875
51	Tile r11-c6_Region5_143208460.tif	11	11		-c6	6		11	6			57750	105875					9625	9625	57750 105875
52	Tile r11-c7_Region5_143208460.tif	11	11		-c7	7		11	7			67375	105875					9625	9625	67375 105875
53	Tile r11-c8_Region5_143208460.tif	11	11		-c8	8		11	8			77000	105875					9625	9625	77000 105875
54	Tile r11-c9_Region5_143208460.tif	11	11		-c9	9		11	9			86625	105875					9625	9625	86625 105875
55	Tile r11-c10_Region5_143208460.tif	11	11		-c10	10		11	10			96250	105875					9625	9625	96250 105875
56	Tile r11-c11_Region5_143208460.tif	11	11		-c11	11		11	11			105875	105875					9625	9625	105875 105875
57	Tile r11-c12_Region5_143208460.tif	11	11		-c12	12		11	12			115500	105875					9625	9625	115500 105875
58	Tile r11-c13_Region5_143208460.tif	11	11		-c13	13		11	13			125125	105875					9625	9625	125125 105875
59	Tile r11-c14_Region5_143208460.tif	11	11		-c14	14		11	14			134750	105875					9625	9625	134750 105875
60	Tile r11-c15_Region5_143208460.tif	11	11		-c15	15		11	15			144375	105875					9625	9625	144375 105875
61	Tile r1-c5_Region5_143708460.tif	1	1		c5_R	5		1	5			48125	9625					9625	9625	48125 9625
62	Tile r1-c6_Region5_143708460.tif	1	1		c6_R	6		1	6			57750	9625					9625	9625	57750 9625
63	Tile r1-c7_Region5_143708460.tif	1	1		c7_R	7		1	7			67375	9625					9625	9625	67375 9625
64	Tile r1-c8_Region5_143708460.tif	1	1		c8_R	8		1	8			77000	9625					9625	9625	77000 9625
65	Tile r1-c9_Region5_143708460.tif	1	1		c9_R	9		1	9			86625	9625					9625	9625	86625 9625
66	Tile r1-c10_Region5_143708460.tif	1	1		c10	10		1	10			96250	9625					9625	9625	96250 9625

Sortieren

Ebene hinzufügen
 Ebene löschen
 Ebene kopieren
 Optionen...
 Daten haben Überschriften

Spalte:
 Sortieren nach:
 Reihenfolge:

Dann nach:

OK Abbrechen

Include column H and column I

Tecno SI Datasets1 and 2 - Excel

Was möchten Sie tun?

Standard Gut Neutral Schlecht Ausgabe Berechnung Eingabe Erklärender... Notiz Verknüpfte Z...

Tile_r1-c5_Region5_143208460.tif

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Tile_r1-c5_Region5_143208460.tif	1-	1	c5_R	5							48125	9625					9625	9625	48125 9625
2	Tile_r1-c6_Region5_143208460.tif	1-	1	c6_R	6							57750	9625					9625	9625	57750 9625
3	Tile_r1-c7_Region5_143208460.tif	1-	1	c7_R	7							67375	9625					9625	9625	67375 9625
4	Tile_r1-c8_Region5_143208460.tif	1-	1	c8_R	8							77000	9625					9625	9625	77000 9625
5	Tile_r1-c9_Region5_143208460.tif	1-	1	c9_R	9							86625	9625					9625	9625	86625 9625
6	Tile_r1-c10_Region5_143208460.tif	1-	1	c10	10							96250	9625					9625	9625	96250 9625
7	Tile_r1-c11_Region5_143208460.tif	1-	1	c11	11							105875	9625					9625	9625	105875 9625
8	Tile_r1-c12_Region5_143208460.tif	1-	1	c12	12							115500	9625					9625	9625	115500 9625
9	Tile_r1-c13_Region5_143208460.tif	1-	1	c13	13							125125	9625					9625	9625	125125 9625
10	Tile_r2-c4_Region5_143208460.tif	2-	2	c4_R	4							38500	19250					9625	9625	38500 19250
11	Tile_r2-c5_Region5_143208460.tif	2-	2	c5_R	5							48125	19250					9625	9625	48125 19250
12	Tile_r2-c6_Region5_143208460.tif	2-	2	c6_R	6							57750	19250					9625	9625	57750 19250
13	Tile_r2-c7_Region5_143208460.tif	2-	2	c7_R	7							67375	19250					9625	9625	67375 19250
14	Tile_r2-c8_Region5_143208460.tif	2-	2	c8_R	8							77000	19250					9625	9625	77000 19250
15	Tile_r2-c9_Region5_143208460.tif	2-	2	c9_R	9							86625	19250					9625	9625	86625 19250
16	Tile_r2-c10_Region5_143208460.tif	2-	2	c10	10							96250	19250					9625	9625	96250 19250
17	Tile_r2-c11_Region5_143208460.tif	2-	2	c11	11							105875	19250					9625	9625	105875 19250
18	Tile_r2-c12_Region5_143208460.tif	2-	2	c12	12							115500	19250					9625	9625	115500 19250
19	Tile_r2-c13_Region5_143208460.tif	2-	2	c13	13							125125	19250					9625	9625	125125 19250
20	Tile_r2-c14_Region5_143208460.tif	2-	2	c14	14							134750	19250					9625	9625	134750 19250
21	Tile_r3-c3_Region5_143208460.tif	3-	3	c3_R	3							28875	28875					9625	9625	28875 28875
22	Tile_r3-c4_Region5_143208460.tif	3-	3	c4_R	4							38500	28875					9625	9625	38500 28875
23	Tile_r3-c5_Region5_143208460.tif	3-	3	c5_R	5							48125	28875					9625	9625	48125 28875
24	Tile_r3-c6_Region5_143208460.tif	3-	3	c6_R	6							57750	28875					9625	9625	57750 28875
25	Tile_r3-c7_Region5_143208460.tif	3-	3	c7_R	7							67375	28875					9625	9625	67375 28875
26	Tile_r3-c8_Region5_143208460.tif	3-	3	c8_R	8							77000	28875					9625	9625	77000 28875
27	Tile_r3-c9_Region5_143208460.tif	3-	3	c9_R	9							86625	28875					9625	9625	86625 28875
28	Tile_r3-c10_Region5_143208460.tif	3-	3	c10	10							96250	28875					9625	9625	96250 28875
29	Tile_r3-c11_Region5_143208460.tif	3-	3	c11	11							105875	28875					9625	9625	105875 28875
30	Tile_r3-c12_Region5_143208460.tif	3-	3	c12	12							115500	28875					9625	9625	115500 28875
31	Tile_r3-c13_Region5_143208460.tif	3-	3	c13	13							125125	28875					9625	9625	125125 28875
32	Tile_r3-c14_Region5_143208460.tif	3-	3	c14	14							134750	28875					9625	9625	134750 28875
33	Tile_r3-c15_Region5_143208460.tif	3-	3	c15	15							144375	28875					9625	9625	144375 28875
34	Tile_r4-c2_Region5_143208460.tif	4-	4	c2_R	2							19250	38500					9625	9625	19250 38500
35	Tile_r4-c3_Region5_143208460.tif	4-	4	c3_R	3							28875	38500					9625	9625	28875 38500
36	Tile_r4-c4_Region5_143208460.tif	4-	4	c4_R	4							38500	38500					9625	9625	38500 38500
37	Tile_r4-c5_Region5_143208460.tif	4-	4	c5_R	5							48125	38500					9625	9625	48125 38500
38	Tile_r4-c6_Region5_143208460.tif	4-	4	c6_R	6							57750	38500					9625	9625	57750 38500
39	Tile_r4-c7_Region5_143208460.tif	4-	4	c7_R	7							67375	38500					9625	9625	67375 38500
40	Tile_r4-c8_Region5_143208460.tif	4-	4	c8_R	8							77000	38500					9625	9625	77000 38500
41	Tile_r4-c9_Region5_143208460.tif	4-	4	c9_R	9							86625	38500					9625	9625	86625 38500
42	Tile_r4-c10_Region5_143208460.tif	4-	4	c10	10							96250	38500					9625	9625	96250 38500
43	Tile_r4-c11_Region5_143208460.tif	4-	4	c11	11							105875	38500					9625	9625	105875 38500
44	Tile_r4-c12_Region5_143208460.tif	4-	4	c12	12							115500	38500					9625	9625	115500 38500
45	Tile_r4-c13_Region5_143208460.tif	4-	4	c13	13							125125	38500					9625	9625	125125 38500
46	Tile_r4-c14_Region5_143208460.tif	4-	4	c14	14							134750	38500					9625	9625	134750 38500
47	Tile_r4-c15_Region5_143208460.tif	4-	4	c15	15							144375	38500					9625	9625	144375 38500
48	Tile_r4-c16_Region5_143208460.tif	4-	4	c16	16							154000	38500					9625	9625	154000 38500
49	Tile_r5-c1_Region5_143208460.tif	5-	5	c1_R	1							9625	48125					9625	9625	9625 48125
50	Tile_r5-c2_Region5_143208460.tif	5-	5	c2_R	2							19250	48125					9625	9625	19250 48125
51	Tile_r5-c3_Region5_143208460.tif	5-	5	c3_R	3							28875	48125					9625	9625	28875 48125
52	Tile_r5-c4_Region5_143208460.tif	5-	5	c4_R	4							38500	48125					9625	9625	38500 48125
53	Tile_r5-c5_Region5_143208460.tif	5-	5	c5_R	5							48125	48125					9625	9625	48125 48125
54	Tile_r5-c6_Region5_143208460.tif	5-	5	c6_R	6							57750	48125					9625	9625	57750 48125
55	Tile_r5-c7_Region5_143208460.tif	5-	5	c7_R	7							67375	48125					9625	9625	67375 48125
56	Tile_r5-c8_Region5_143208460.tif	5-	5	c8_R	8							77000	48125					9625	9625	77000 48125
57	Tile_r5-c9_Region5_143208460.tif	5-	5	c9_R	9							86625	48125					9625	9625	86625 48125
58	Tile_r5-c10_Region5_143208460.tif	5-	5	c10	10							96250	48125					9625	9625	96250 48125
59	Tile_r5-c11_Region5_143208460.tif	5-	5	c11	11							105875	48125					9625	9625	105875 48125
60	Tile_r5-c12_Region5_143208460.tif	5-	5	c12	12							115500	48125					9625	9625	115500 48125
61	Tile_r5-c13_Region5_143208460.tif	5-	5	c13	13							125125	48125					9625	9625	125125 48125
62	Tile_r5-c14_Region5_143208460.tif	5-	5	c14	14							134750	48125					9625	9625	134750 48125
63	Tile_r5-c15_Region5_143208460.tif	5-	5	c15	15							144375	48125					9625	9625	144375 48125
64	Tile_r5-c16_Region5_143208460.tif	5-	5	c16	16							154000	48125					9625	9625	154000 48125
65	Tile_r6-c1_Region5_143208460.tif	6-	6	c1_R	1							9625	57750					9625	9625	9625 57750
66	Tile_r6-c2_Region5_143208460.tif	6-	6	c2_R	2							19250	57750					9625	9625	19250 57750

As a result, all rows will be sorted in the order of STEM image tile acquisition

Tecno SI Datasets1 and 2 - Excel

Start Einfügen Seitenlayout Formeln Daten Überprüfen Ansicht Hilfe Was möchten Sie tun?

Ausschneiden Einfügen Kopieren Format übertragen

Calibri 11

Standard

Standard Gut Neutral Schlecht Ausgabe

Berechnung Eingabe Erklärender ... Notiz Verknüpfte Z...

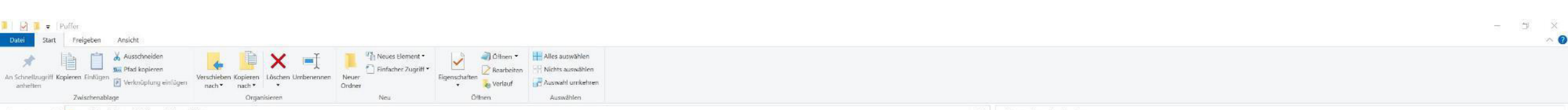
AutoSumme Ausfüllen Löschen

O311

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
282	Tile_r9-c14_Region16_412761276.tif	9-	9		c14	14		9	14			134750	86625	1				9625	9625	13475086625 1
283	Tile_r9-c15_Region16_412761276.tif	9-	9		c15	15		9	15			144375	86625	1				9625	9625	14437586625 1
284	Tile_r9-c16_Region16_412761276.tif	9-	9		c16	16		9	16			154000	86625	1				9625	9625	15400086625 1
285	Tile_r10-c2_Region16_412761276.tif	10	10		-c2	2		10	2			19250	96250	1				9625	9625	1925096250 1
286	Tile_r10-c3_Region16_412761276.tif	10	10		-c3	3		10	3			28875	96250	1				9625	9625	2887596250 1
287	Tile_r10-c4_Region16_412761276.tif	10	10		-c4	4		10	4			38500	96250	1				9625	9625	3850096250 1
288	Tile_r10-c5_Region16_412761276.tif	10	10		-c5	5		10	5			48125	96250	1				9625	9625	4812596250 1
289	Tile_r10-c6_Region16_412761276.tif	10	10		-c6	6		10	6			57750	96250	1				9625	9625	5775096250 1
290	Tile_r10-c7_Region16_412761276.tif	10	10		-c7	7		10	7			67375	96250	1				9625	9625	6737596250 1
291	Tile_r10-c8_Region16_412761276.tif	10	10		-c8	8		10	8			77000	96250	1				9625	9625	7700096250 1
292	Tile_r10-c9_Region16_412761276.tif	10	10		-c9	9		10	9			86625	96250	1				9625	9625	8662596250 1
293	Tile_r10-c10_Region16_412761276.tif	10	10		-c10	10		10	10			96250	96250	1				9625	9625	9625096250 1
294	Tile_r10-c11_Region16_412761276.tif	10	10		-c11	11		10	11			105875	96250	1				9625	9625	10587596250 1
295	Tile_r10-c12_Region16_412761276.tif	10	10		-c12	12		10	12			115500	96250	1				9625	9625	11550096250 1
296	Tile_r10-c13_Region16_412761276.tif	10	10		-c13	13		10	13			125125	96250	1				9625	9625	12512596250 1
297	Tile_r10-c14_Region16_412761276.tif	10	10		-c14	14		10	14			134750	96250	1				9625	9625	13475096250 1
298	Tile_r10-c15_Region16_412761276.tif	10	10		-c15	15		10	15			144375	96250	1				9625	9625	14437596250 1
299	Tile_r10-c16_Region16_412761276.tif	10	10		-c16	16		10	16			154000	96250	1				9625	9625	15400096250 1
300	Tile_r11-c4_Region16_412761276.tif	11	11		-c4	4		11	4			38500	105875	1				9625	9625	38500105875 1
301	Tile_r11-c5_Region16_412761276.tif	11	11		-c5	5		11	5			48125	105875	1				9625	9625	48125105875 1
302	Tile_r11-c6_Region16_412761276.tif	11	11		-c6	6		11	6			57750	105875	1				9625	9625	57750105875 1
303	Tile_r11-c7_Region16_412761276.tif	11	11		-c7	7		11	7			67375	105875	1				9625	9625	67375105875 1
304	Tile_r11-c8_Region16_412761276.tif	11	11		-c8	8		11	8			77000	105875	1				9625	9625	77000105875 1
305	Tile_r11-c9_Region16_412761276.tif	11	11		-c9	9		11	9			86625	105875	1				9625	9625	86625105875 1
306	Tile_r11-c10_Region16_412761276.tif	11	11		-c10	10		11	10			96250	105875	1				9625	9625	96250105875 1
307	Tile_r11-c11_Region16_412761276.tif	11	11		-c11	11		11	11			105875	105875	1				9625	9625	105875105875 1
308	Tile_r11-c12_Region16_412761276.tif	11	11		-c12	12		11	12			115500	105875	1				9625	9625	115500105875 1
309	Tile_r11-c13_Region16_412761276.tif	11	11		-c13	13		11	13			125125	105875	1				9625	9625	125125105875 1
310	Tile_r11-c14_Region16_412761276.tif	11	11		-c14	14		11	14			134750	105875	1				9625	9625	134750105875 1
311	Tile_r11-c15_Region16_412761276.tif	11	11		-c15	15		11	15			144375	105875	1				9625	9625	144375105875 1
312												0	0					9625	9625	0 0
313												0	0					9625	9625	0 0
314												0	0					9625	9625	0 0
315												0	0					9625	9625	0 0
316												0	0					9625	9625	0 0
317												0	0					9625	9625	0 0
318												0	0					9625	9625	0 0
319												0	0					9625	9625	0 0
320												0	0					9625	9625	0 0
321												0	0					9625	9625	0 0
322												0	0					9625	9625	0 0
323												0	0					9625	9625	0 0
324												0	0					9625	9625	0 0
325												0	0					9625	9625	0 0
326												0	0					9625	9625	0 0
327												0	0					9625	9625	0 0
328												0	0					9625	9625	0 0
329												0	0					9625	9625	0 0
330												0	0					9625	9625	0 0
331												0	0					9625	9625	0 0
332												0	0					9625	9625	0 0
333												0	0					9625	9625	0 0
334												0	0					9625	9625	0 0
335												0	0					9625	9625	0 0
336												0	0					9625	9625	0 0
337												0	0					9625	9625	0 0
338												0	0					9625	9625	0 0
339												0	0					9625	9625	0 0
340												0	0					9625	9625	0 0
341												0	0					9625	9625	0 0
342												0	0					9625	9625	0 0
343												0	0					9625	9625	0 0
344												0	0					9625	9625	0 0
345												0	0					9625	9625	0 0
346												0	0					9625	9625	0 0
347												0	0					9625	9625	0 0

Include the „z“ coordinate manually in column N; „0“ for dataset 1 and „1“ for dataset 2

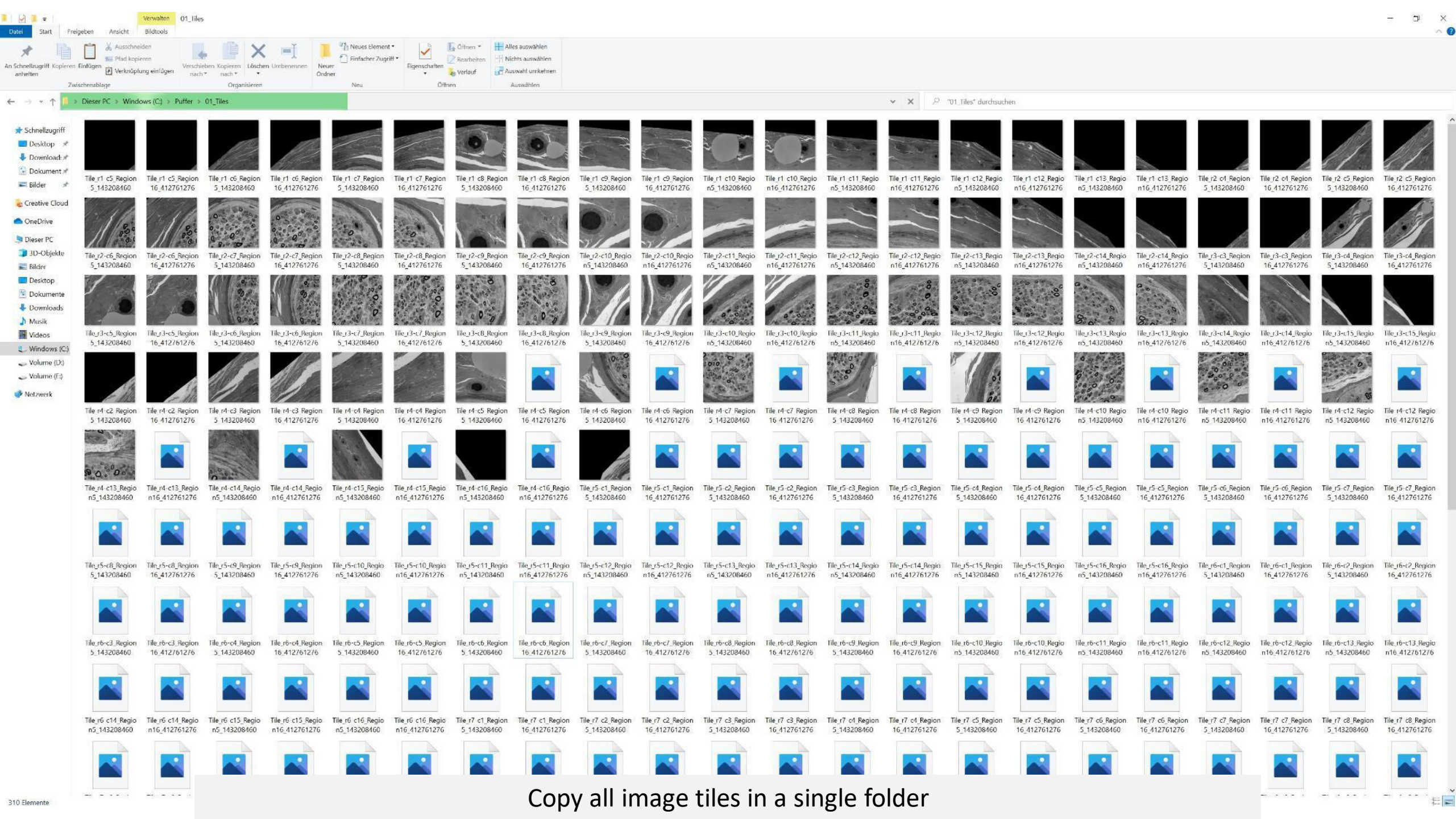
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Tile r1-c5_Region5_143208460.tif	1-	1		c5	R	5		1	5			48125	9625	0	Tile r1-c5_Region5_143208460.tif		9625	9625	Tile r1-c5_Region5_143208460.tif 48125 9625 0
2	Tile r1-c6_Region5_143208460.tif	1-	1		c6	R	6		1	6			57750	9625	0	Tile r1-c6_Region5_143208460.tif		9625	9625	Tile r1-c6_Region5_143208460.tif 57750 9625 0
3	Tile r1-c7_Region5_143208460.tif	1-	1		c7	R	7		1	7			67375	9625	0	Tile r1-c7_Region5_143208460.tif		9625	9625	Tile r1-c7_Region5_143208460.tif 67375 9625 0
4	Tile r1-c8_Region5_143208460.tif	1-	1		c8	R	8		1	8			77000	9625	0	Tile r1-c8_Region5_143208460.tif		9625	9625	Tile r1-c8_Region5_143208460.tif 77000 9625 0
5	Tile r1-c9_Region5_143208460.tif	1-	1		c9	R	9		1	9			86625	9625	0	Tile r1-c9_Region5_143208460.tif		9625	9625	Tile r1-c9_Region5_143208460.tif 86625 9625 0
6	Tile r1-c10_Region5_143208460.tif	1-	1		c10	R	10		1	10			96250	9625	0	Tile r1-c10_Region5_143208460.tif		9625	9625	Tile r1-c10_Region5_143208460.tif 96250 9625 0
7	Tile r1-c11_Region5_143208460.tif	1-	1		c11	R	11		1	11			105875	9625	0	Tile r1-c11_Region5_143208460.tif		9625	9625	Tile r1-c11_Region5_143208460.tif 105875 9625 0
8	Tile r1-c12_Region5_143208460.tif	1-	1		c12	R	12		1	12			115500	9625	0	Tile r1-c12_Region5_143208460.tif		9625	9625	Tile r1-c12_Region5_143208460.tif 115500 9625 0
9	Tile r1-c13_Region5_143208460.tif	1-	1		c13	R	13		1	13			125125	9625	0	Tile r1-c13_Region5_143208460.tif		9625	9625	Tile r1-c13_Region5_143208460.tif 125125 9625 0
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13	Tile r2-c7_Region5_143208460.tif	2-	2		c7	R	7		2	7			67375	19250	0	Tile r2-c7_Region5_143208460.tif		9625	9625	Tile r2-c7_Region5_143208460.tif 67375 19250 0
14	Tile r2-c8_Region5_143208460.tif	2-	2		c8	R	8		2	8			77000	19250	0	Tile r2-c8_Region5_143208460.tif		9625	9625	Tile r2-c8_Region5_143208460.tif 77000 19250 0
15	Tile r2-c9_Region5_143208460.tif	2-	2		c9	R	9		2	9			86625	19250	0	Tile r2-c9_Region5_143208460.tif		9625	9625	Tile r2-c9_Region5_143208460.tif 86625 19250 0
16	Tile r2-c10_Region5_143208460.tif	2-	2		c10	R	10		2	10			96250	19250	0	Tile r2-c10_Region5_143208460.tif		9625	9625	Tile r2-c10_Region5_143208460.tif 96250 19250 0
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23	Tile r3-c5_Region5_143208460.tif	3-	3		c5	R	5		3	5			48125	28875	0	Tile r3-c5_Region5_143208460.tif		9625	9625	Tile r3-c5_Region5_143208460.tif 48125 28875 0
24	Tile r3-c6_Region5_143208460.tif	3-	3		c6	R	6		3	6			57750	28875	0	Tile r3-c6_Region5_143208460.tif		9625	9625	Tile r3-c6_Region5_143208460.tif 57750 28875 0
25	Tile r3-c7_Region5_143208460.tif	3-	3		c7	R	7		3	7			67375	28875	0	Tile r3-c7_Region5_143208460.tif		9625	9625	Tile r3-c7_Region5_143208460.tif 67375 28875 0
26	Tile r3-c8_Region5_143208460.tif	3-	3		c8	R	8		3	8			77000	28875	0	Tile r3-c8_Region5_143208460.tif		9625	9625	Tile r3-c8_Region5_143208460.tif 77000 28875 0
27	Tile r3-c9_Region5_143208460.tif	3-	3		c9	R	9		3	9			86625	28875	0	Tile r3-c9_Region5_143208460.tif		9625	9625	Tile r3-c9_Region5_143208460.tif 86625 28875 0
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34	Tile r4-c2_Region5_143208460.tif	4-	4		c2	R	2		4	2			19250	38500	0	Tile r4-c2_Region5_143208460.tif		9625	9625	Tile r4-c2_Region5_143208460.tif 19250 38500 0
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39	Tile r4-c7_Region5_143208460.tif	4-	4		c7	R	7		4	7			67375	38500	0	Tile r4-c7_Region5_143208460.tif		9625	9625	Tile r4-c7_Region5_143208460.tif 67375 38500 0
40	Tile r4-c8_Region5_143208460.tif	4-	4		c8	R	8		4	8			77000	38500	0	Tile r4-c8_Region5_143208460.tif		9625	9625	Tile r4-c8_Region5_143208460.tif 77000 38500 0
41	Tile r4-c9_Region5_143208460.tif	4-	4		c9	R	9		4	9			86625	38500	0	Tile r4-c9_Region5_143208460.tif		9625	9625	Tile r4-c9_Region5_143208460.tif 86625 38500 0
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44	Tile r4-c12_Region5_143208460.tif	4-	4		c12	R	12		4	12			115500	38500	0	Tile r4-c12_Region5_143208460.tif		9625	9625	Tile r4-c12_Region5_143208460.tif 115500 38500 0
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46	Tile r4-c14_Region5_143208460.tif	4-	4		c14	R	14		4	14			134750	38500	0	Tile r4-c14_Region5_143208460.tif		9625	9625	Tile r4-c14_Region5_143208460.tif 134750 38500 0
47	Tile r4-c15_Region5_143208460.tif	4-	4		c15	R	15		4	15			144375	38500	0	Tile r4-c15_Region5_143208460.tif		9625	9625	Tile r4-c15_Region5_143208460.tif 144375 38500 0
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58	Tile r5-c10_Region5_143208460.tif	5-	5		c10	R	10		5	10			96250	48125	0	Tile r5-c10_Region5_143208460.tif		9625	9625	Tile r5-c10_Region5_143208460.tif 96250 48125 0
59	Tile r5-c11_Region5_143208460.tif	5-	5		c11	R	11		5	11			105875	48125	0	Tile r5-c11_Region5_143208460.tif		9625	9625	Tile r5-c11_Region5_143208460.tif 105875 48125 0
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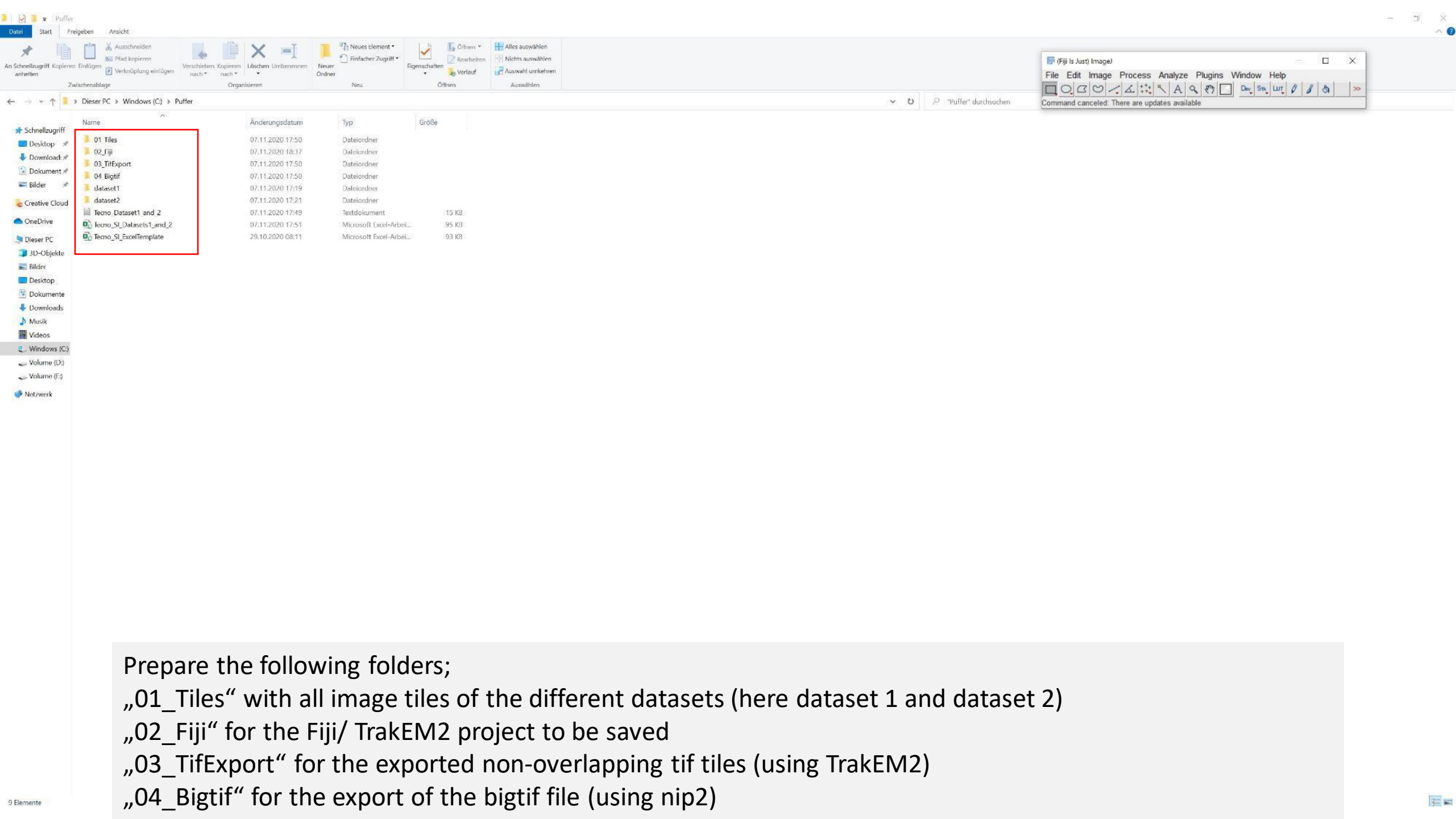
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File Edit View Tools Help
An Schnellzugriff anheften Kopieren Einfügen Verknüpfung einfügen Zwischenablage
Ausschneiden Kopieren nach Verschieben nach Löschen Umbenennen Neu Neues Element Einfacher Zugriff Eigenschaften Öffnen Alles auswählen Nichts auswählen Auswahl umkehren
Datei Start Freigeben Ansicht
Dieser PC > Windows (C:) > Puffer "Puffer" durchsuchen
Name
dataset1
dataset2
Tecno_Dataset1_and_2
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Datei Bearbeiten Format Ansicht Hilfe
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Tile_r2-c13_Region16_412761276.tif 125125 19250 1
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Copy all image tile coordinates into a separate text file
Delete the empty row between the coordinates of dataset 1 and dataset 2 (arrow; result)



Copy all image tiles in a single folder



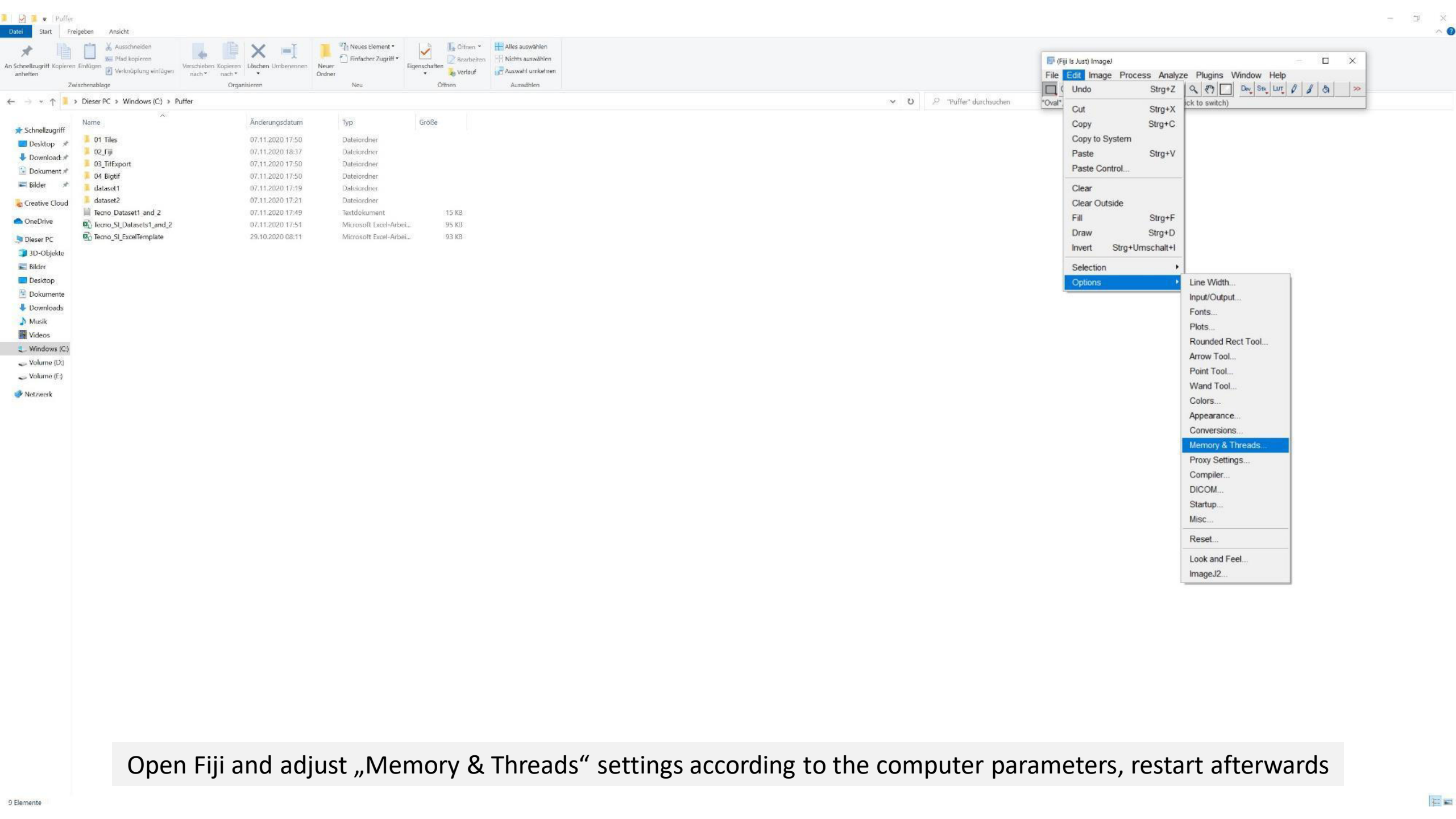
Prepare the following folders;

„01_Tiles“ with all image tiles of the different datasets (here dataset 1 and dataset 2)

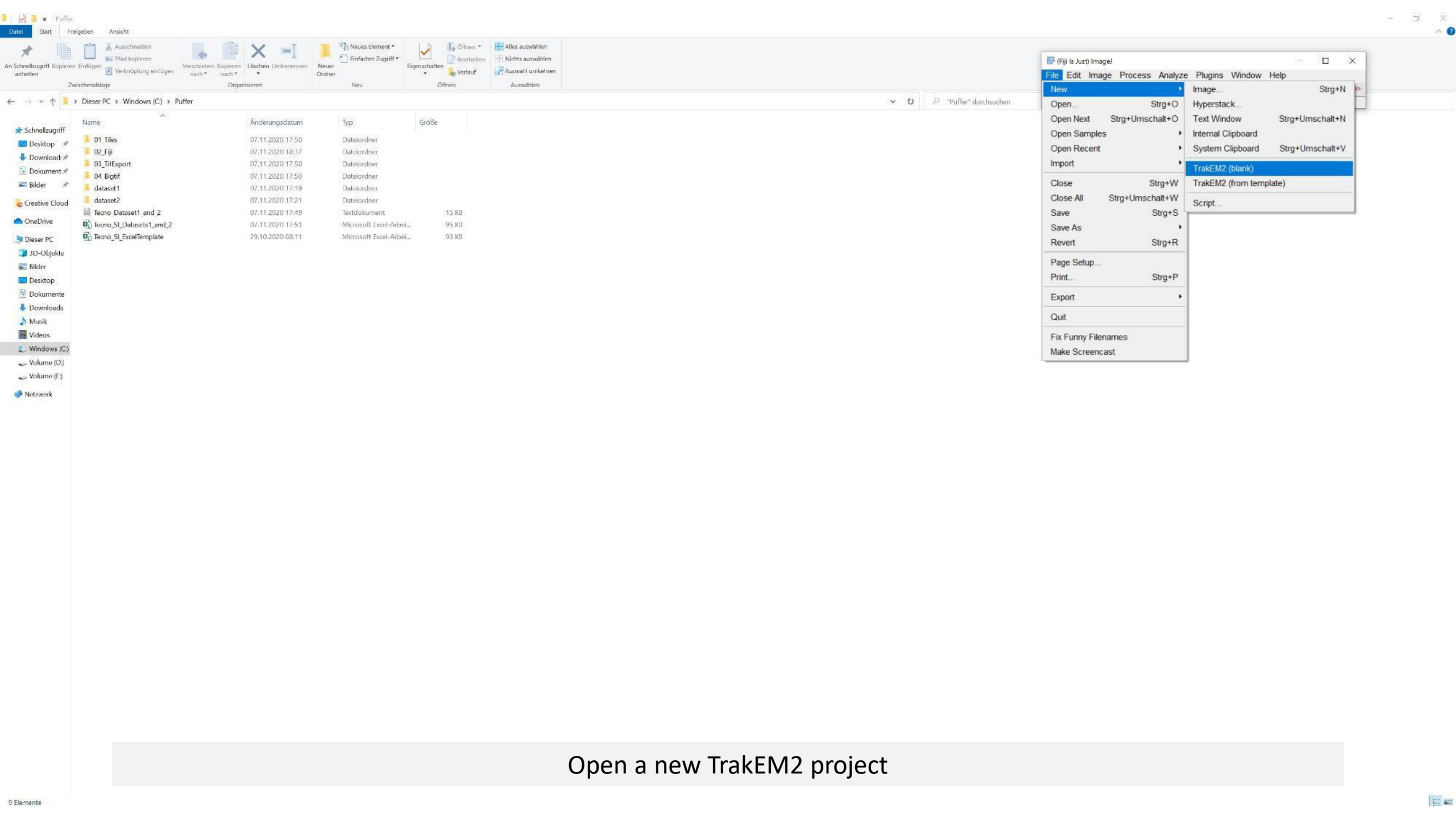
„02_Fiji“ for the Fiji/ TrakEM2 project to be saved

„03_TifExport“ for the exported non-overlapping tif tiles (using TrakEM2)

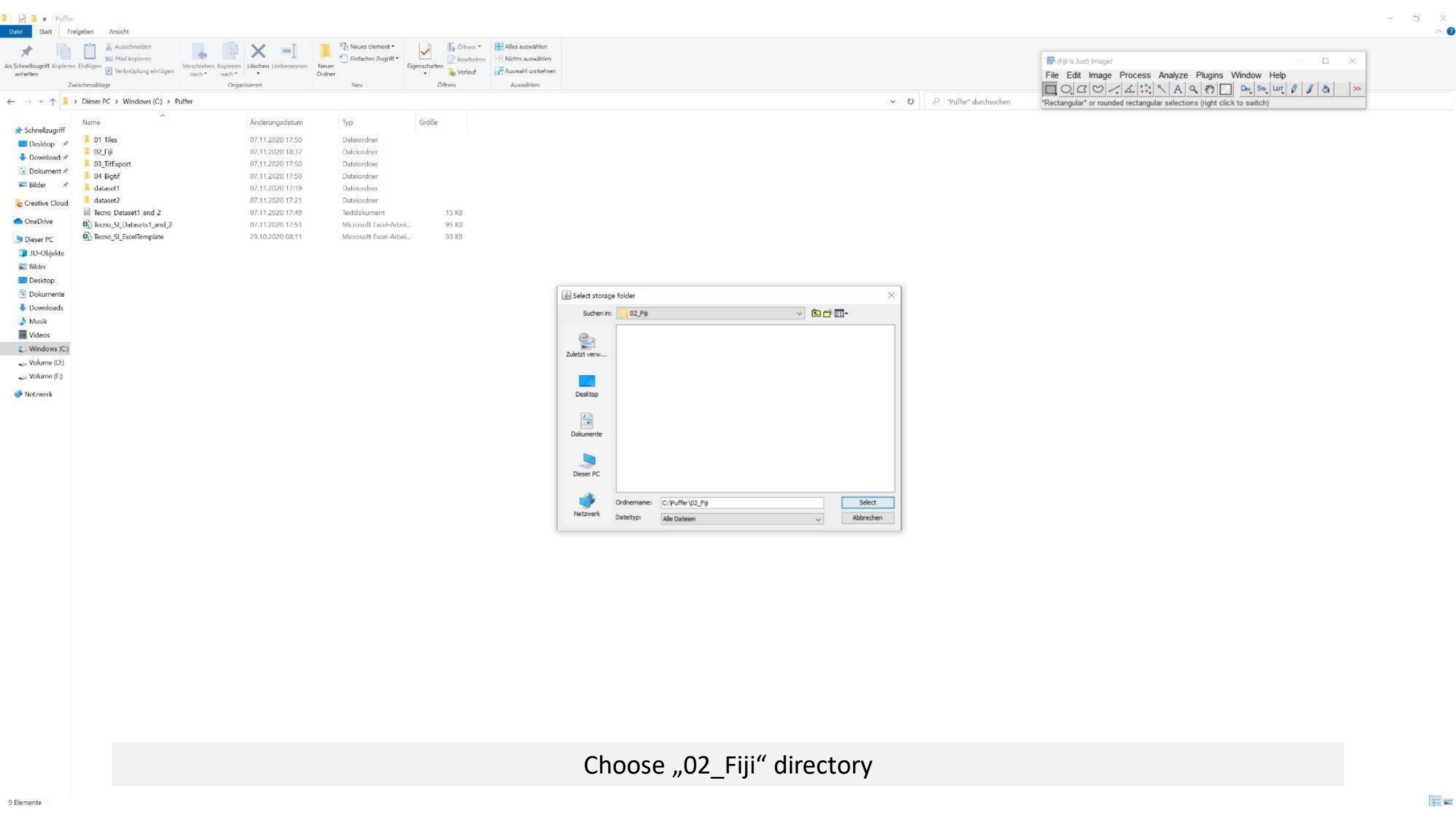
„04_Bigtif“ for the export of the bigtif file (using nip2)



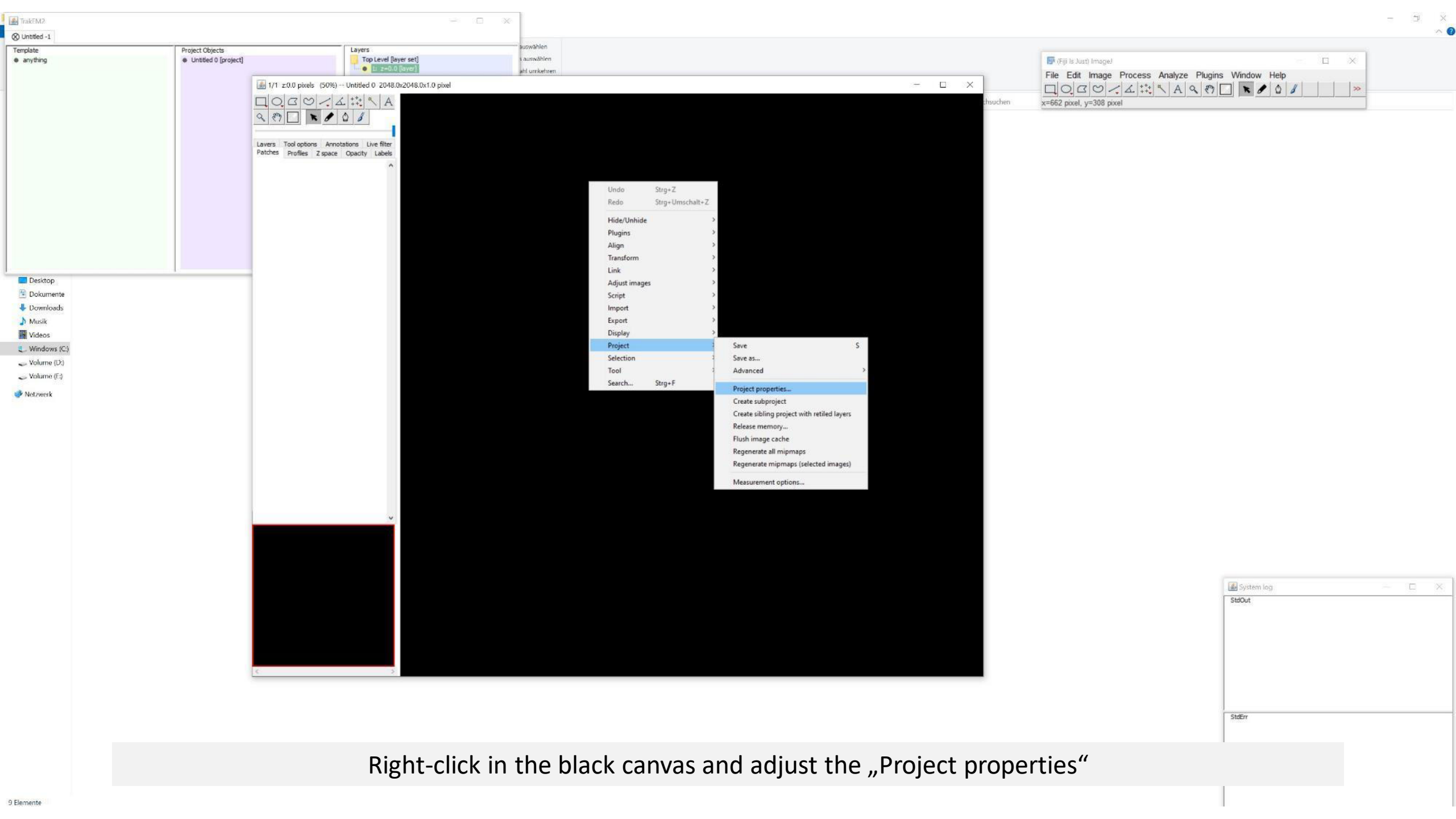
Open Fiji and adjust „Memory & Threads“ settings according to the computer parameters, restart afterwards



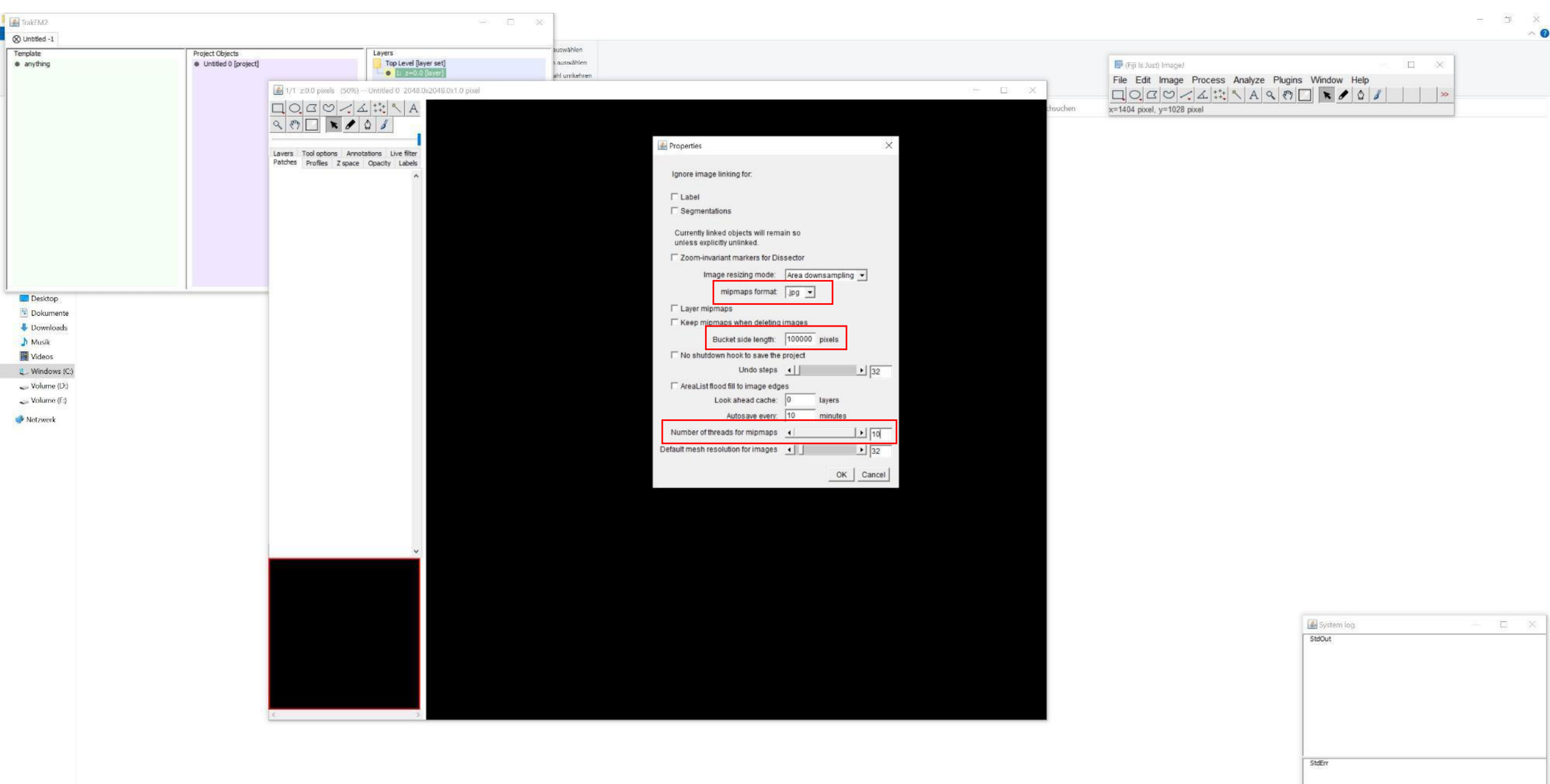
Open a new TrakEM2 project



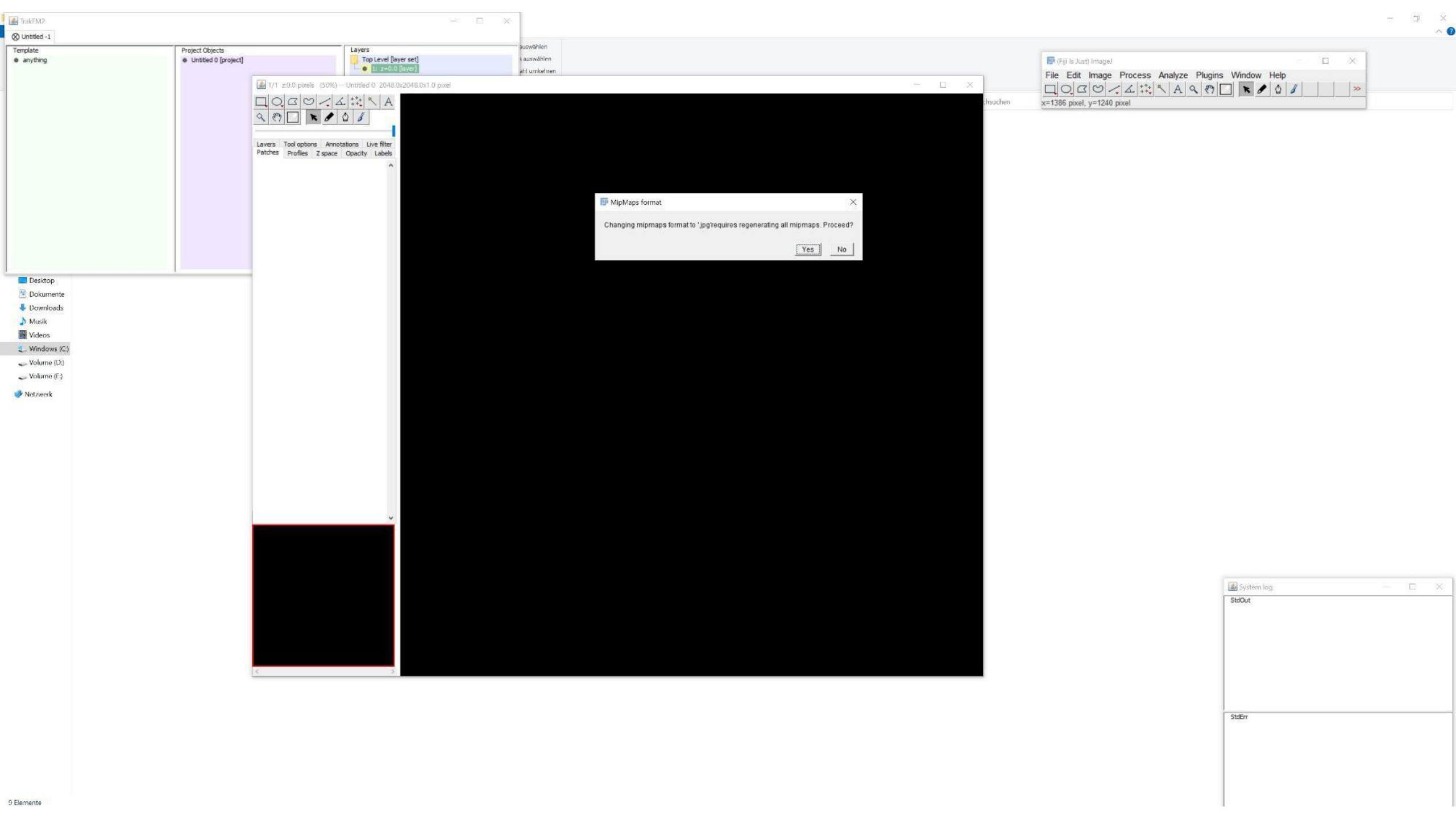
Choose „02_Fiji“ directory



Right-click in the black canvas and adjust the „Project properties“



Change „mipmaps format“ to „.jpg“, the „Bucket side length“ to „100000“ and adjust the „Number of threads for mipmaps“



MipMaps format

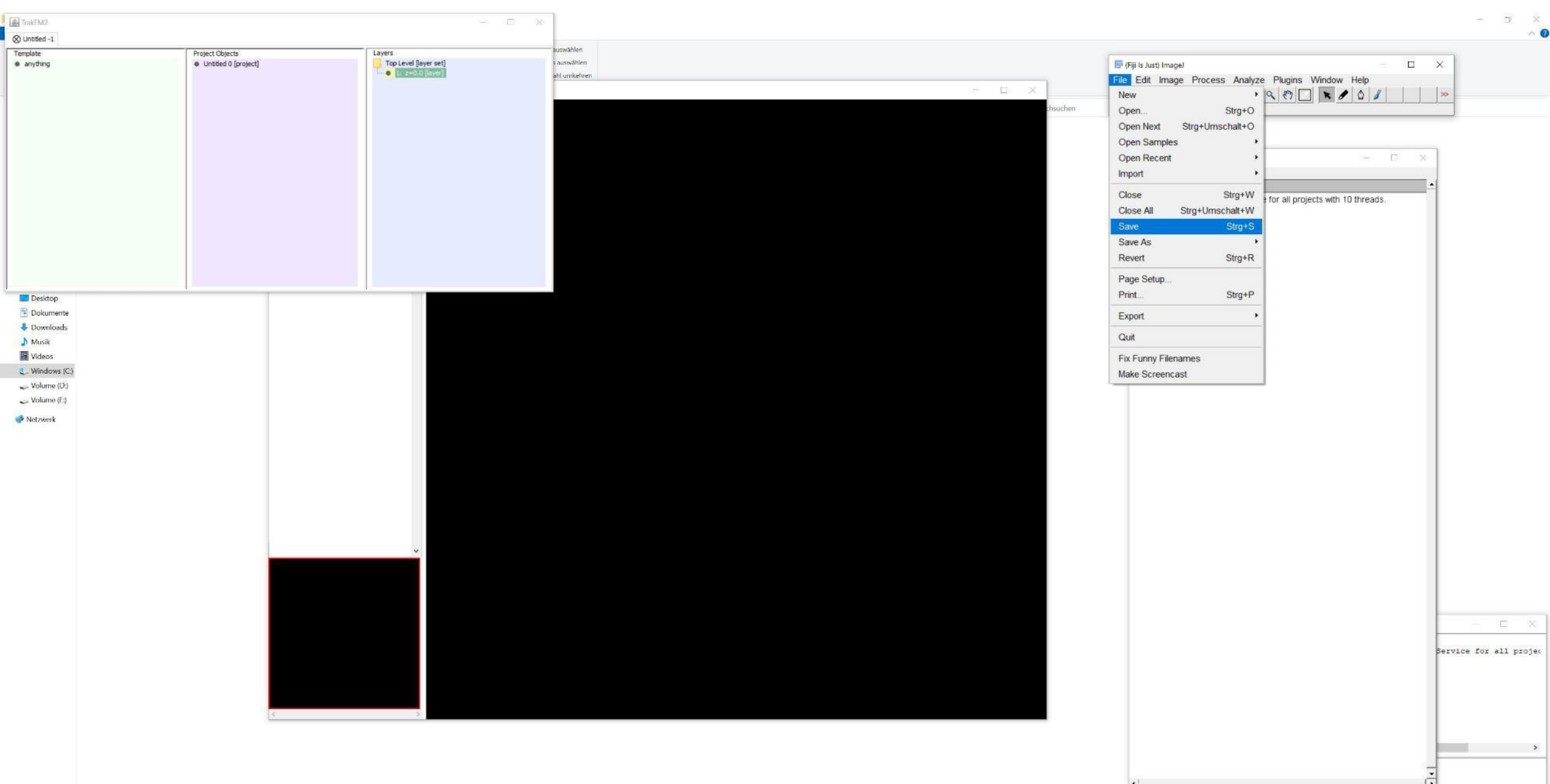
Changing mipmaps format to '.jpg' requires regenerating all mipmaps. Proceed?

Yes No

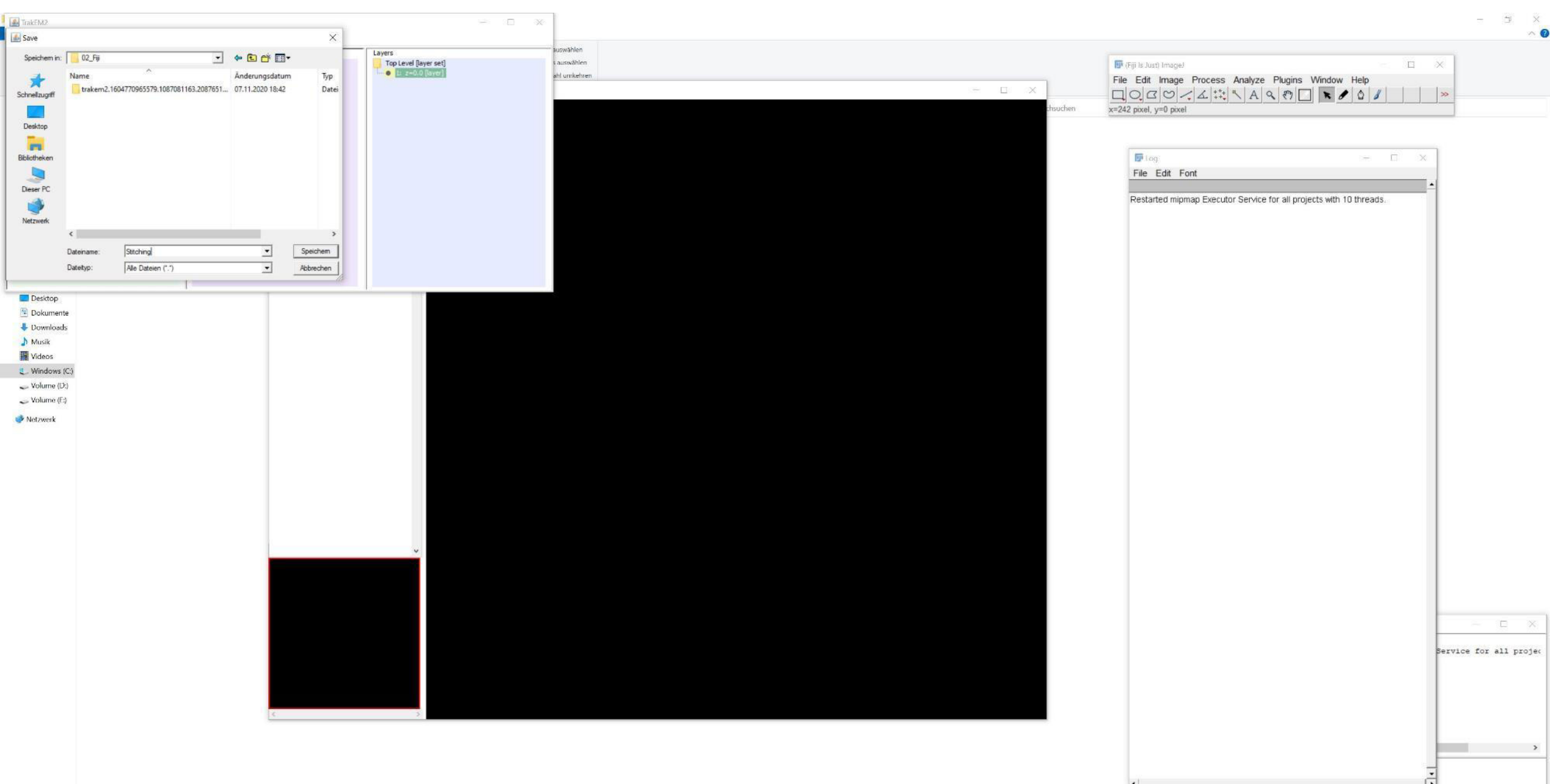
System log

StdOut

StdErr



Save the TrakEM2 project



A separate file (.xml.gz) will be generated below the „trakem2. ...“ folder
(The TrakEM2 project can be opened in a new session via drag&drop of this xml file on the small Fiji menu)

TrakEM2

Stitching.xml.gz

Template

- anything

Project Objects

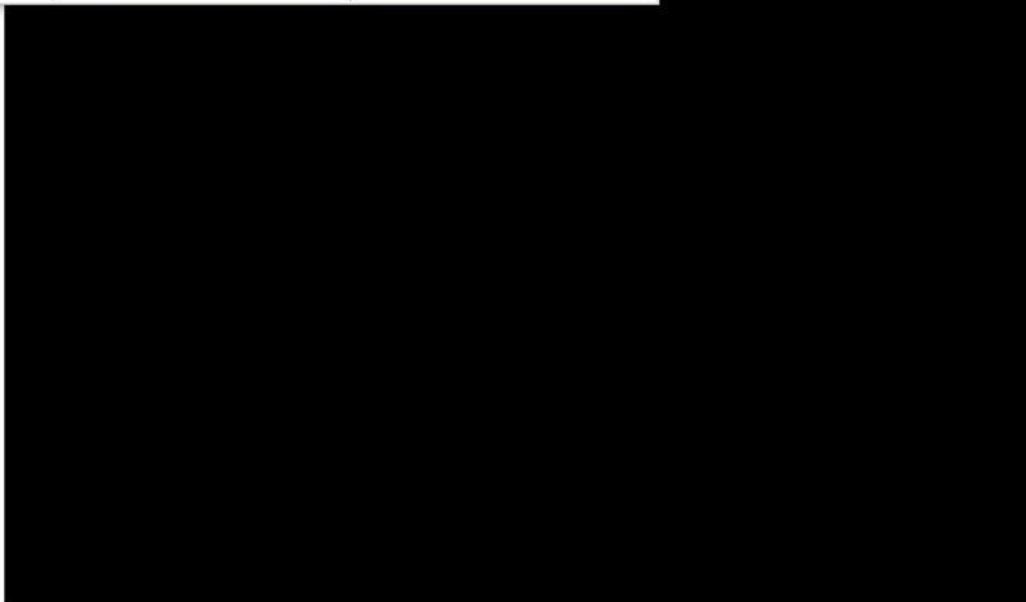
- Stitching.xml.gz ...

Layers

- Top Level [layer set]
 - z=0.0 [layer]

Stitching.xml.gz

anything



(Fiji Is Just) ImageJ

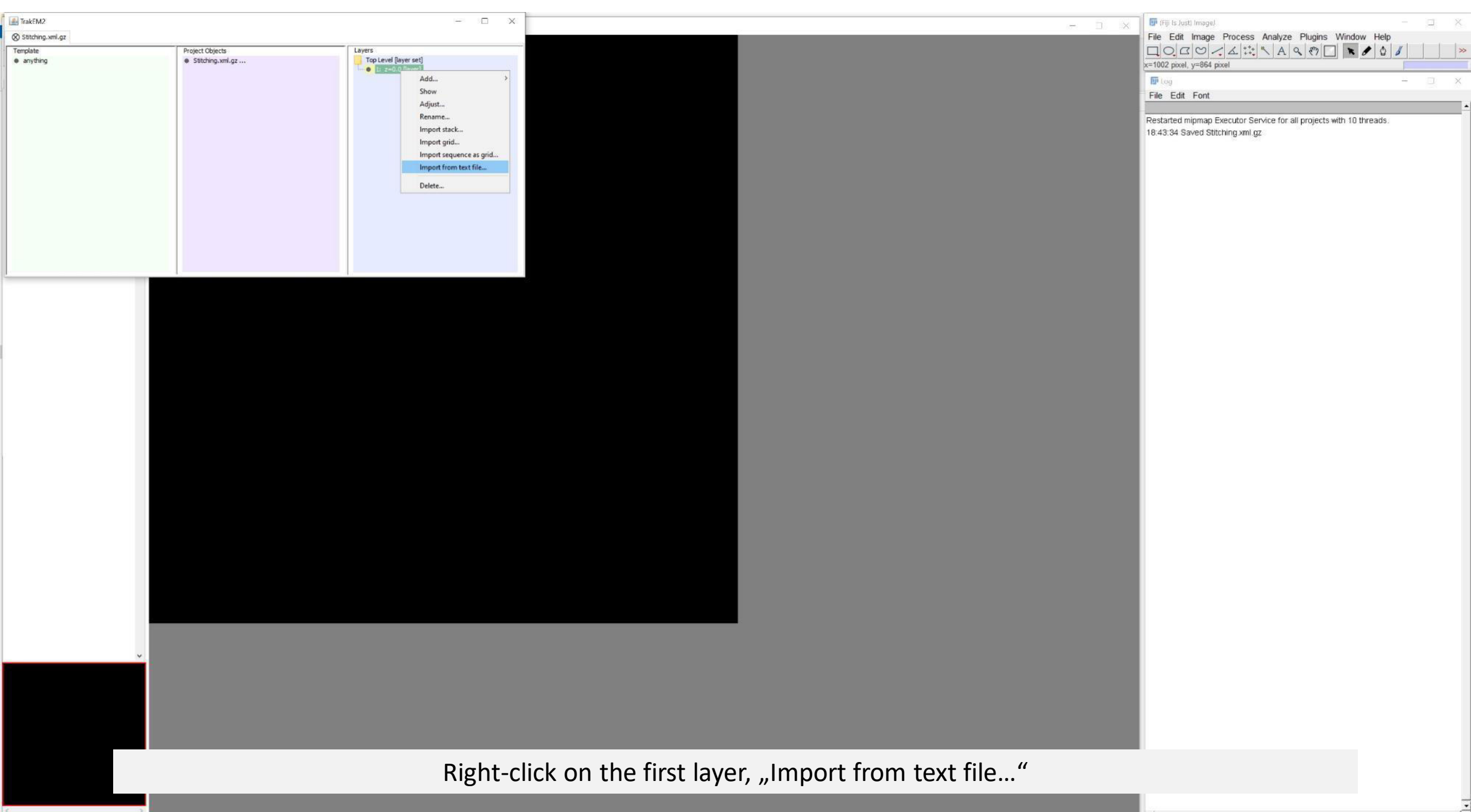
File Edit Image Process Analyze Plugins Window Help

x=1326 pixel, y=1688 pixel

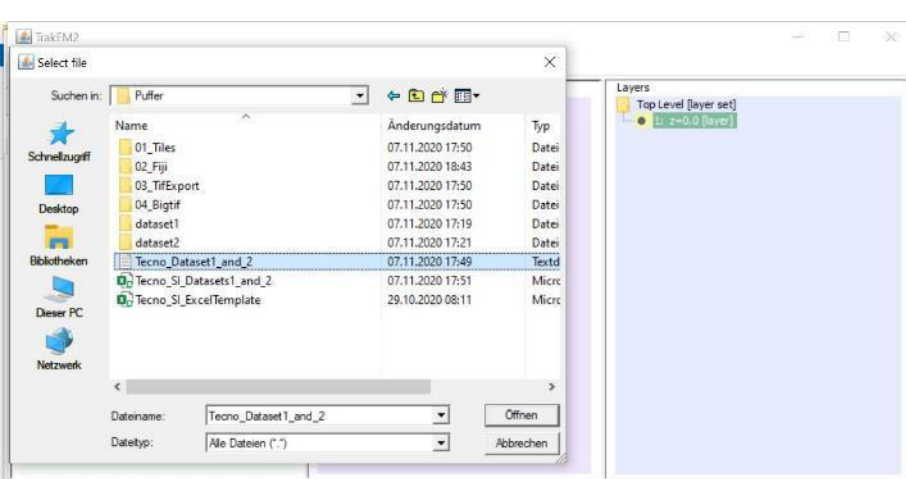
Log

File Edit Font

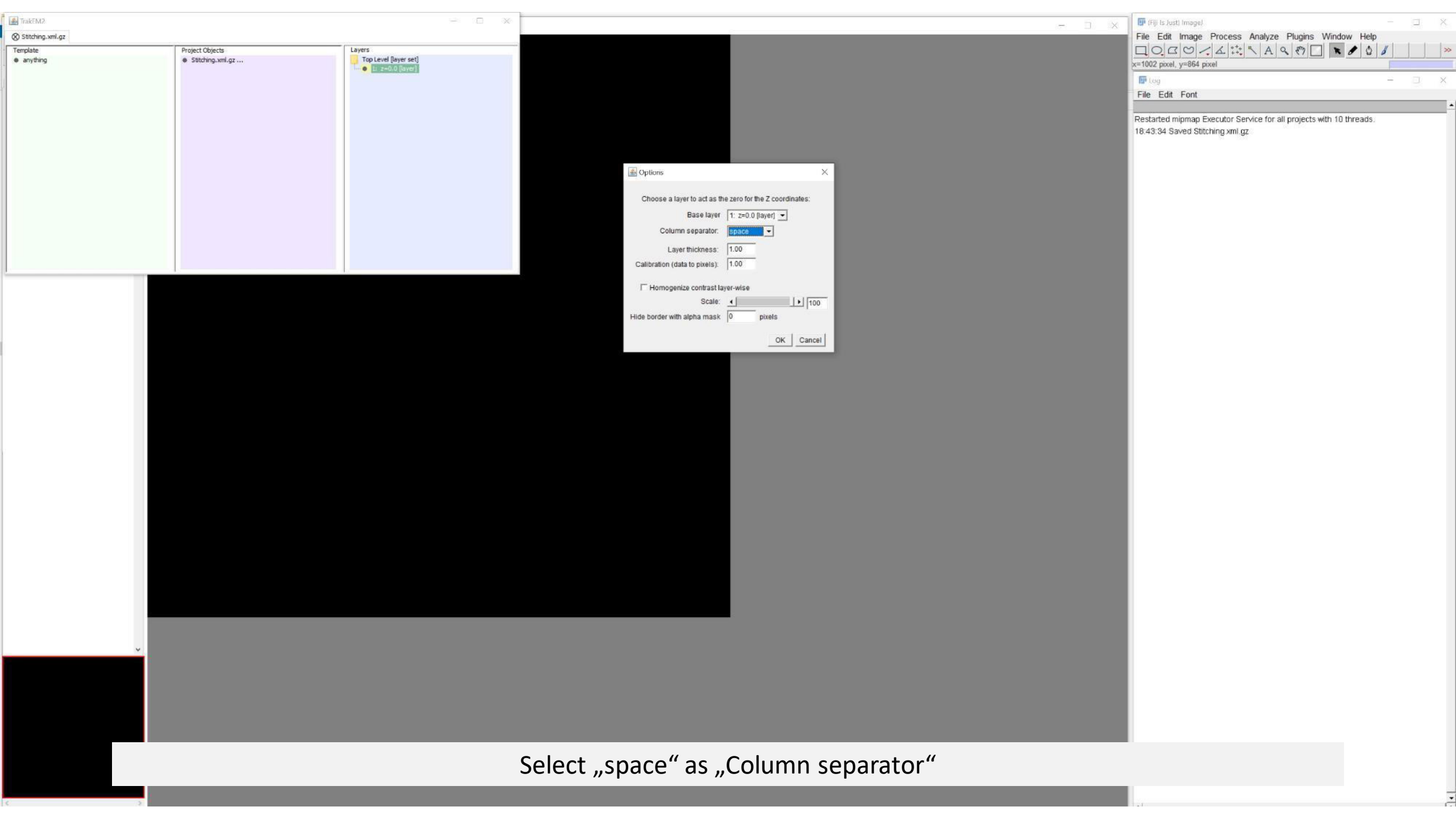
Restarted mipmap Executor Service for all projects with 10 threads.
18:43:34 Saved Stitching.xml.gz



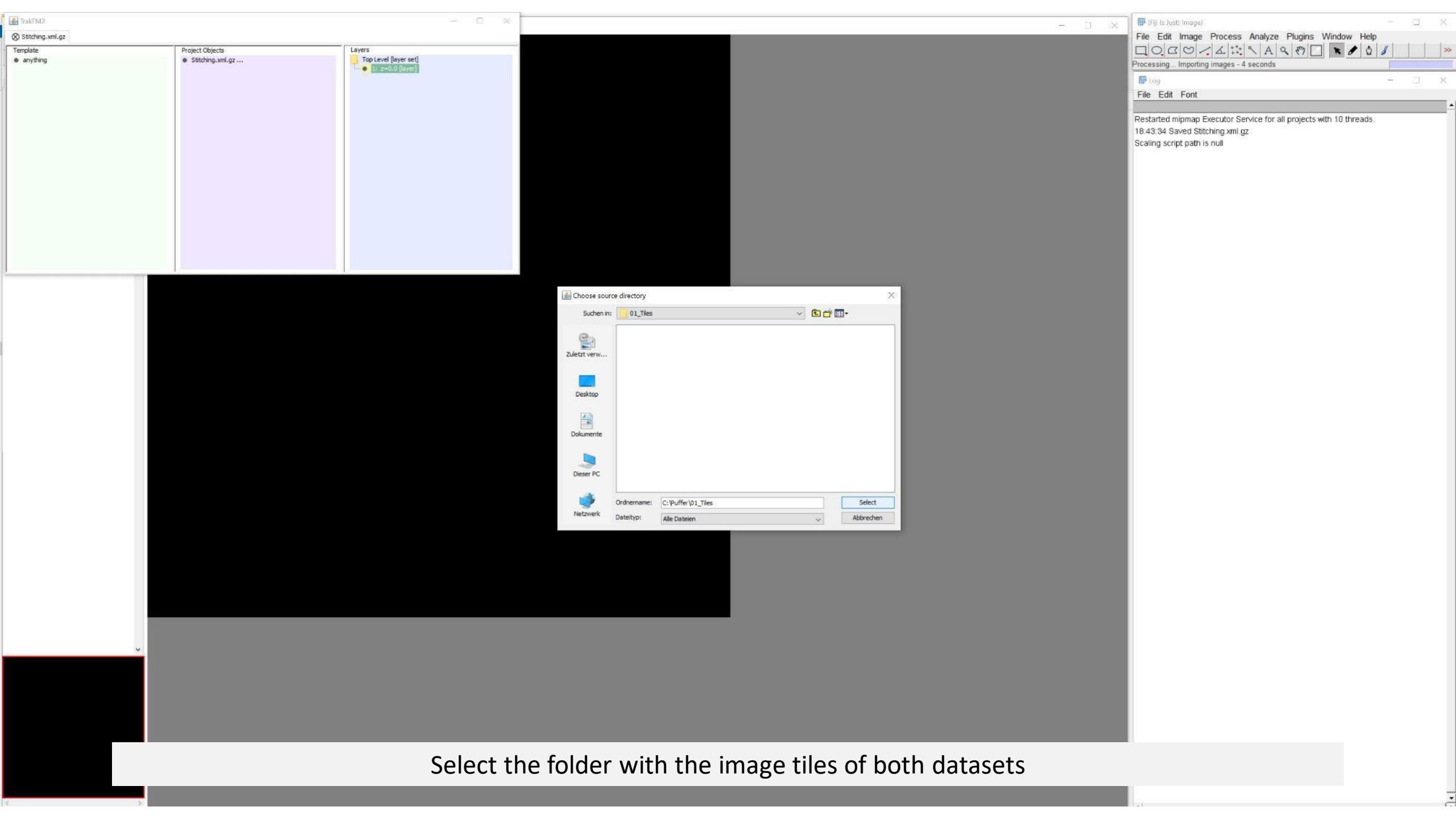
Right-click on the first layer, „Import from text file...“



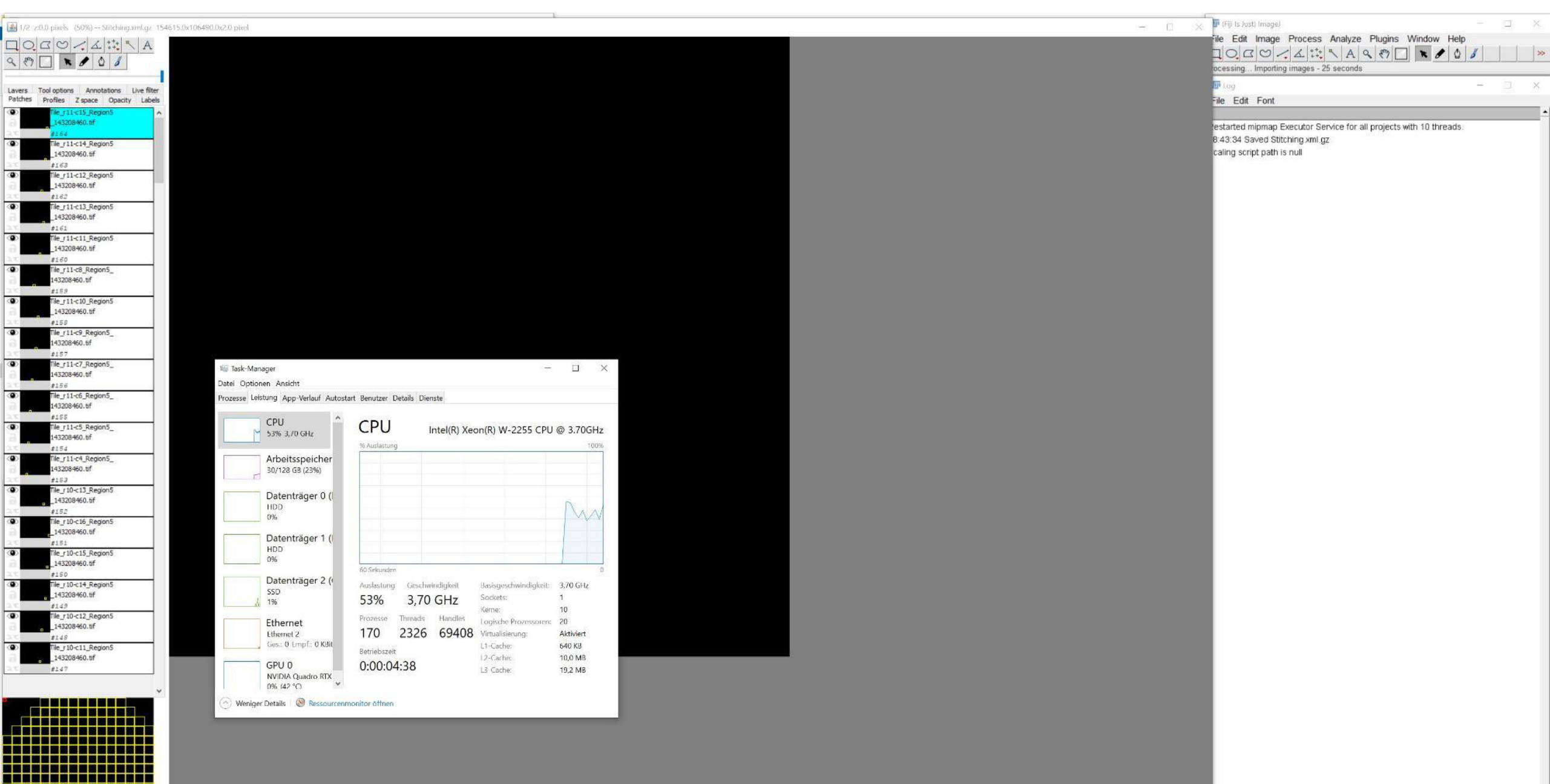
Select the text file with the calculated image file coordinates



Select „space“ as „Column separator“



Select the folder with the image tiles of both datasets



All 310 image tiles will be imported based on the calculated coordinates
See Task Manager for workstation performance



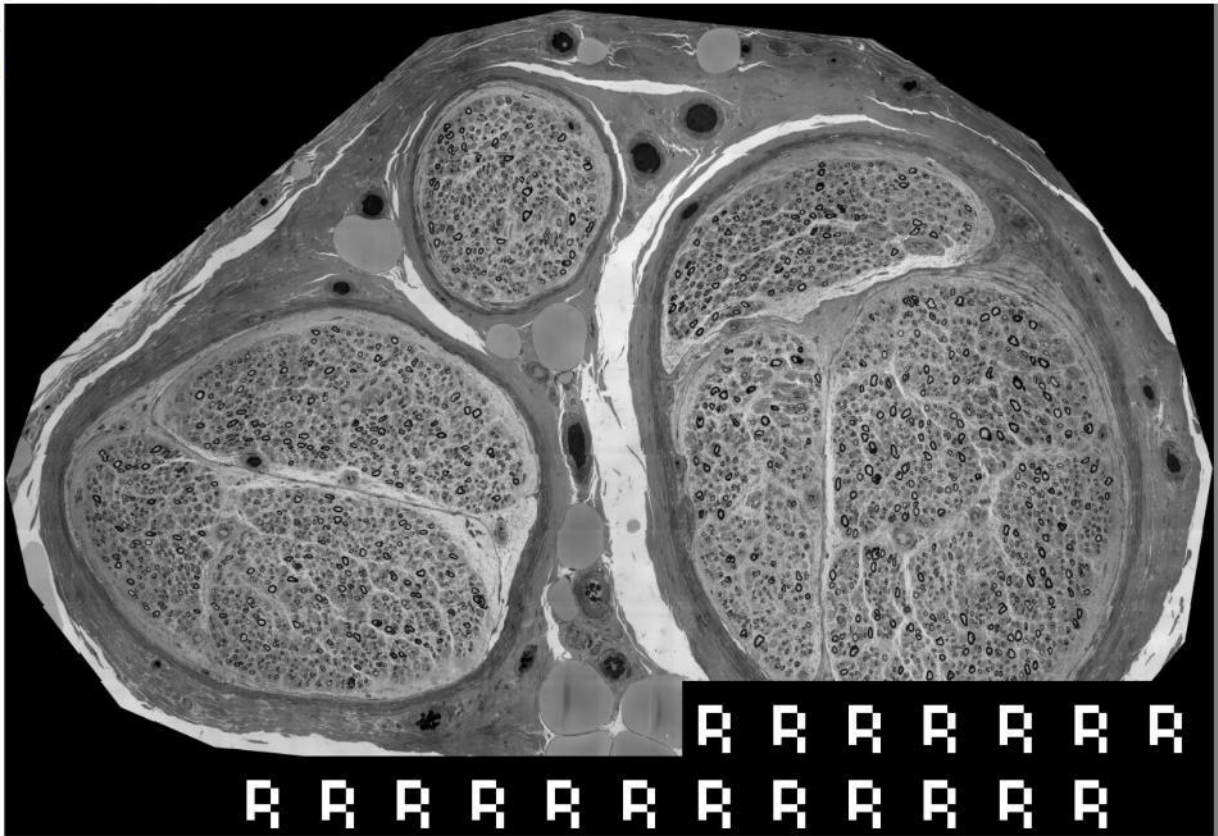
(Fiji) Is Just ImageJ
File Edit Image Process Analyze Plugins Window Help
 restarted mipmap Executor Service for all projects with 10 threads.
 8:43:34 Saved Stitching.xml.gz
 calling script path is null

Mipmaps are generated

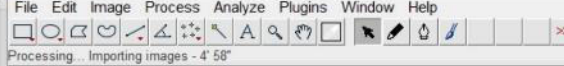
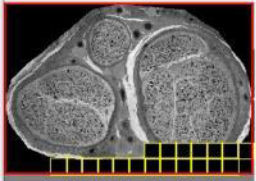


Layers Tool options Annotations Live filter

- File_r11-c15_Region1_412761276.tif #319
- File_r11-c14_Region1_412761276.tif #318
- File_r11-c13_Region1_412761276.tif #317
- File_r11-c12_Region1_412761276.tif #316
- File_r11-c11_Region1_412761276.tif #315
- File_r11-c10_Region1_412761276.tif #314
- File_r11-c9_Region16_412761276.tif #313
- File_r11-c8_Region16_412761276.tif #312
- File_r11-c7_Region16_412761276.tif #311
- File_r11-c6_Region16_412761276.tif #310
- File_r11-c5_Region16_412761276.tif #309
- File_r11-c4_Region16_412761276.tif #308
- File_r10-c16_Region1_412761276.tif #307
- File_r10-c14_Region1_412761276.tif #306
- File_r10-c15_Region1_412761276.tif #305
- File_r10-c13_Region1_412761276.tif #304
- File_r10-c12_Region1_412761276.tif #303
- File_r10-c11_Region1_412761276.tif #302



RRRRRRRR
RRRRRRRRRRRRRRRR



Processing... Importing images - 4' 58"

Log

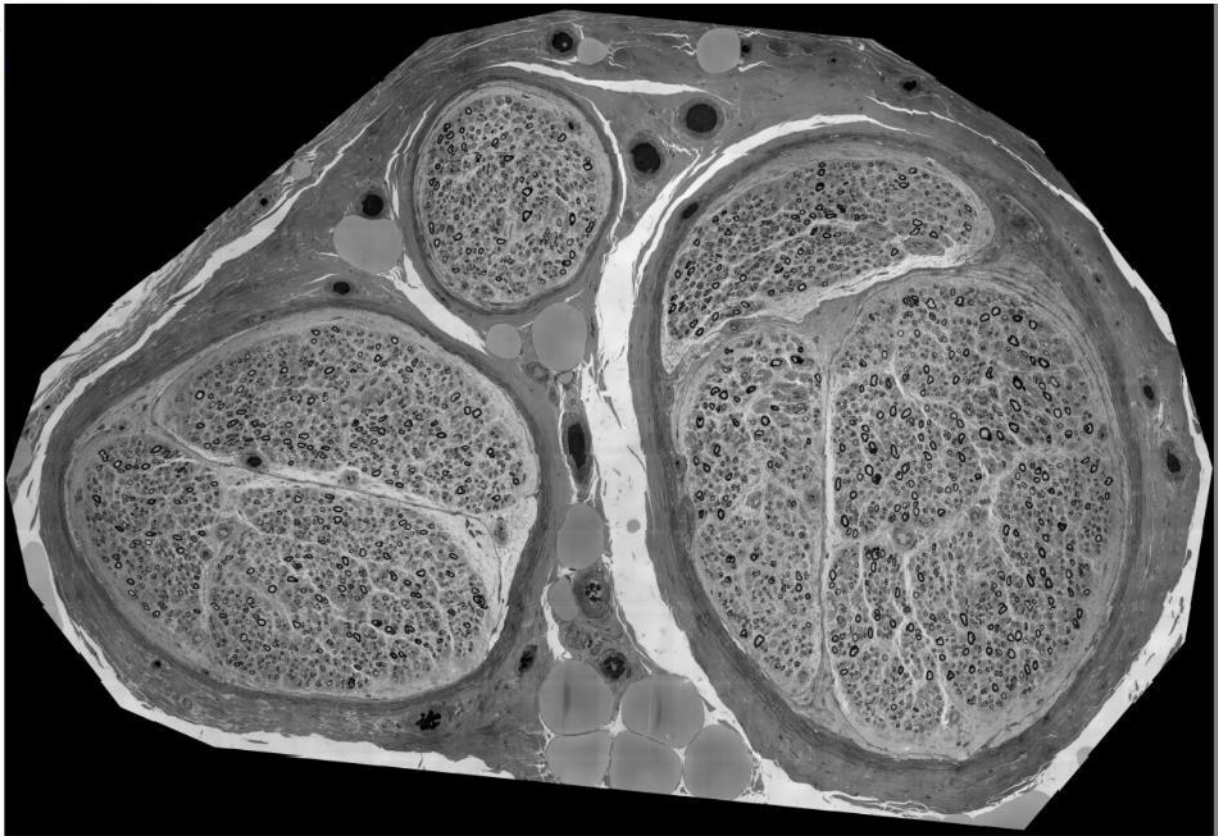
File Edit Font

Restarted mipmap Executor Service for all projects with 10 threads.
18:43:34 Saved Stitching.xml.gz
Scaling script path is null



Layers Tool options Annotations Live filter

- File_r11-c15_Region1_412761276.tif #319
- File_r11-c14_Region1_412761276.tif #318
- File_r11-c13_Region1_412761276.tif #317
- File_r11-c12_Region1_412761276.tif #316
- File_r11-c11_Region1_412761276.tif #315
- File_r11-c10_Region1_412761276.tif #314
- File_r11-c9_Region16_412761276.tif #313
- File_r11-c8_Region16_412761276.tif #312
- File_r11-c7_Region16_412761276.tif #311
- File_r11-c6_Region16_412761276.tif #310
- File_r11-c5_Region16_412761276.tif #309
- File_r11-c4_Region16_412761276.tif #308
- File_r10-c16_Region1_412761276.tif #307
- File_r10-c14_Region1_412761276.tif #306
- File_r10-c15_Region1_412761276.tif #305
- File_r10-c13_Region1_412761276.tif #304
- File_r10-c12_Region1_412761276.tif #303
- File_r10-c11_Region1_412761276.tif #302



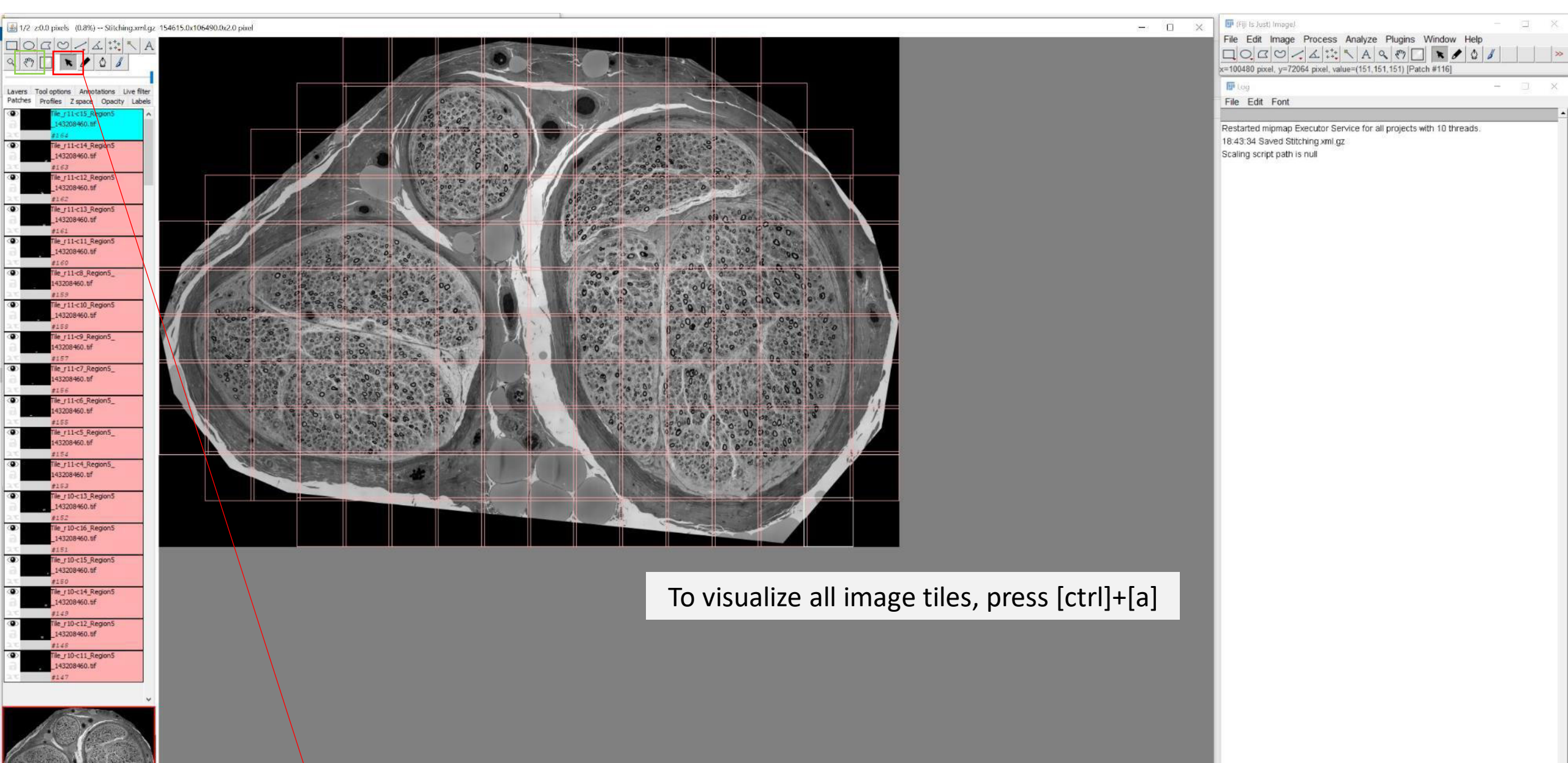
File Edit Image Process Analyze Plugins Window Help

Done Imported 311/310 (316.07s approx.)

Log

File Edit Font

Restarted mipmap Executor Service for all projects with 10 threads.
18:43:34 Saved Stitching.xml.gz
Scaling script path is null



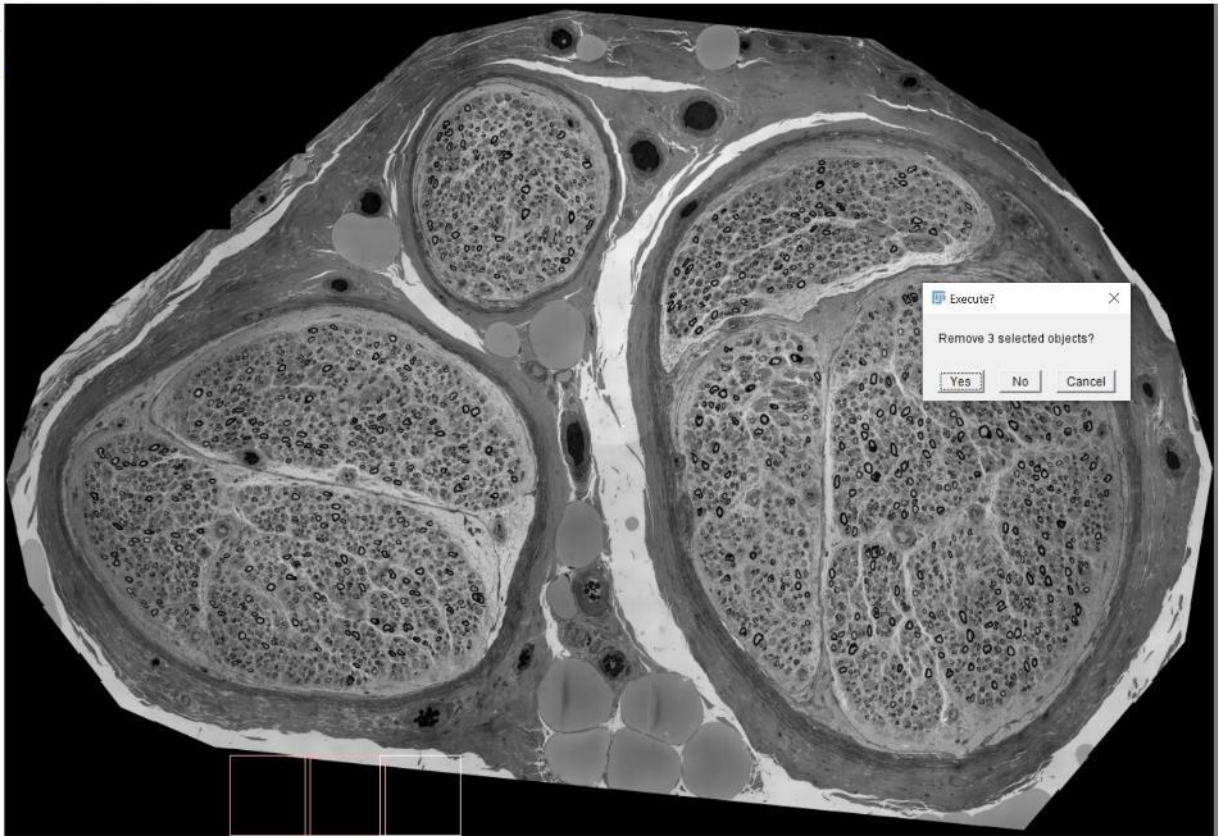
To visualize all image tiles, press [ctrl]+[a]

Manually delete image tiles with very low amount of information
Use „cursor“, left-click to select a tile and press [delete], multiple tiles might be selected by holding [shift]
To avoid accidental displacement of tiles while using the cursor afterwards, select the „hand“ tool (green)



Layers Tool options Annotations Live filter

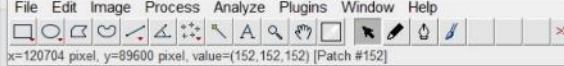
- File_r11-c15_Region5_143208460.tif #154
- File_r11-c14_Region5_143208460.tif #153
- File_r11-c12_Region5_143208460.tif #152
- File_r11-c13_Region5_143208460.tif #151
- File_r11-c11_Region5_143208460.tif #150
- File_r11-c8_Region5_143208460.tif #149
- File_r11-c10_Region5_143208460.tif #148
- File_r11-c9_Region5_143208460.tif #147
- File_r11-c7_Region5_143208460.tif #146
- File_r11-c6_Region5_143208460.tif #145
- File_r11-c5_Region5_143208460.tif #144
- File_r11-c4_Region5_143208460.tif #143
- File_r10-c13_Region5_143208460.tif #142
- File_r10-c16_Region5_143208460.tif #141
- File_r10-c15_Region5_143208460.tif #140
- File_r10-c14_Region5_143208460.tif #139
- File_r10-c12_Region5_143208460.tif #138
- File_r10-c11_Region5_143208460.tif #137



Execute?

Remove 3 selected objects?

Yes No Cancel



x=120704 pixel, y=89600 pixel, value=(152,152,152) [Patch #152]

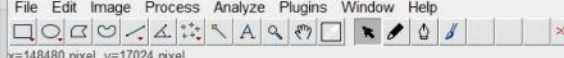
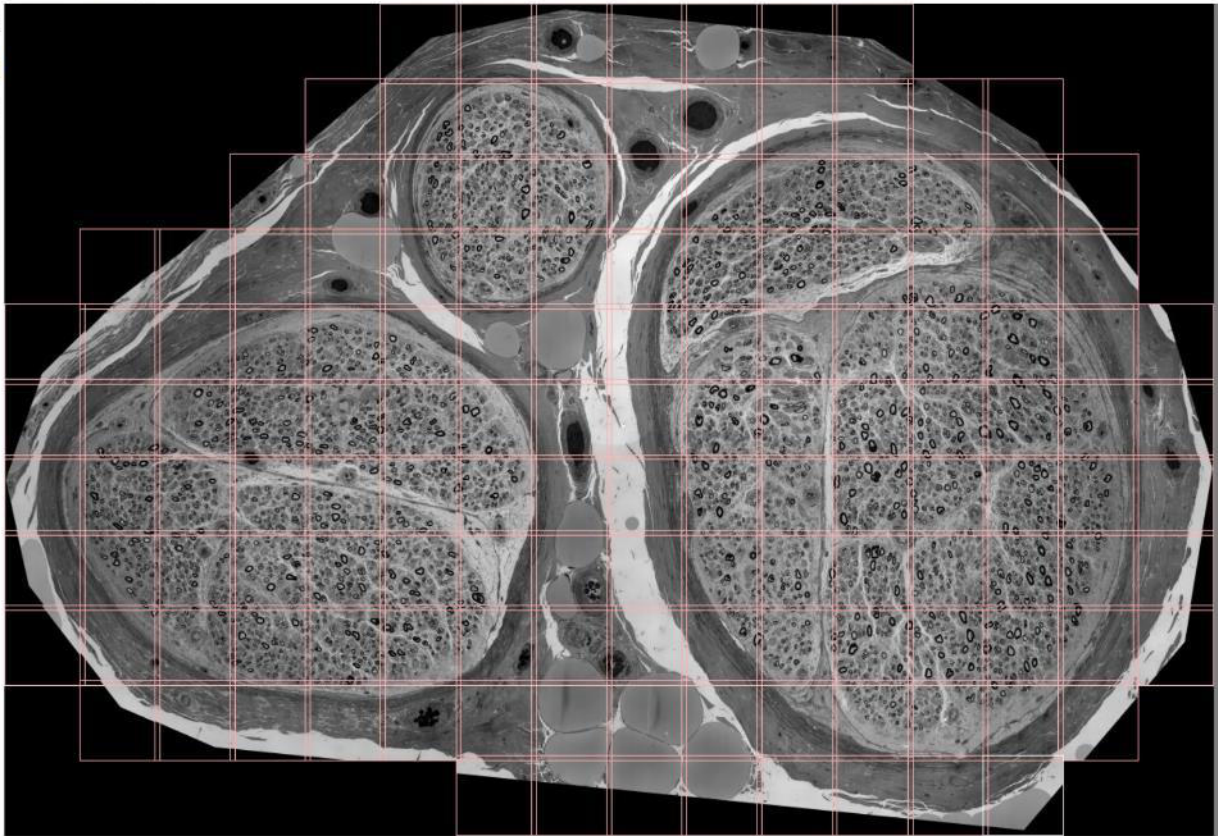
Log

Restarted mipmap Executor Service for all projects with 10 threads.
 18:43:34 Saved Stitching.xml.gz
 Scaling script path is null



Layers Tool options Annotations Live filter

- #163 Tile_r11-c14_Region5_143208460.tif
- #162 Tile_r11-c12_Region5_143208460.tif
- #161 Tile_r11-c13_Region5_143208460.tif
- #160 Tile_r11-c11_Region5_143208460.tif
- #159 Tile_r11-c8_Region5_143208460.tif
- #158 Tile_r11-c10_Region5_143208460.tif
- #157 Tile_r11-c9_Region5_143208460.tif
- #156 Tile_r11-c7_Region5_143208460.tif
- #155 Tile_r10-c13_Region5_143208460.tif
- #154 Tile_r10-c15_Region5_143208460.tif
- #153 Tile_r10-c14_Region5_143208460.tif
- #152 Tile_r10-c12_Region5_143208460.tif
- #151 Tile_r10-c11_Region5_143208460.tif
- #150 Tile_r10-c9_Region5_143208460.tif
- #149 Tile_r10-c10_Region5_143208460.tif
- #148 Tile_r10-c8_Region5_143208460.tif
- #147 Tile_r10-c7_Region5_143208460.tif
- #146 Tile_r10-c4_Region5_143208460.tif



x=148480 pixel, y=17024 pixel

Log

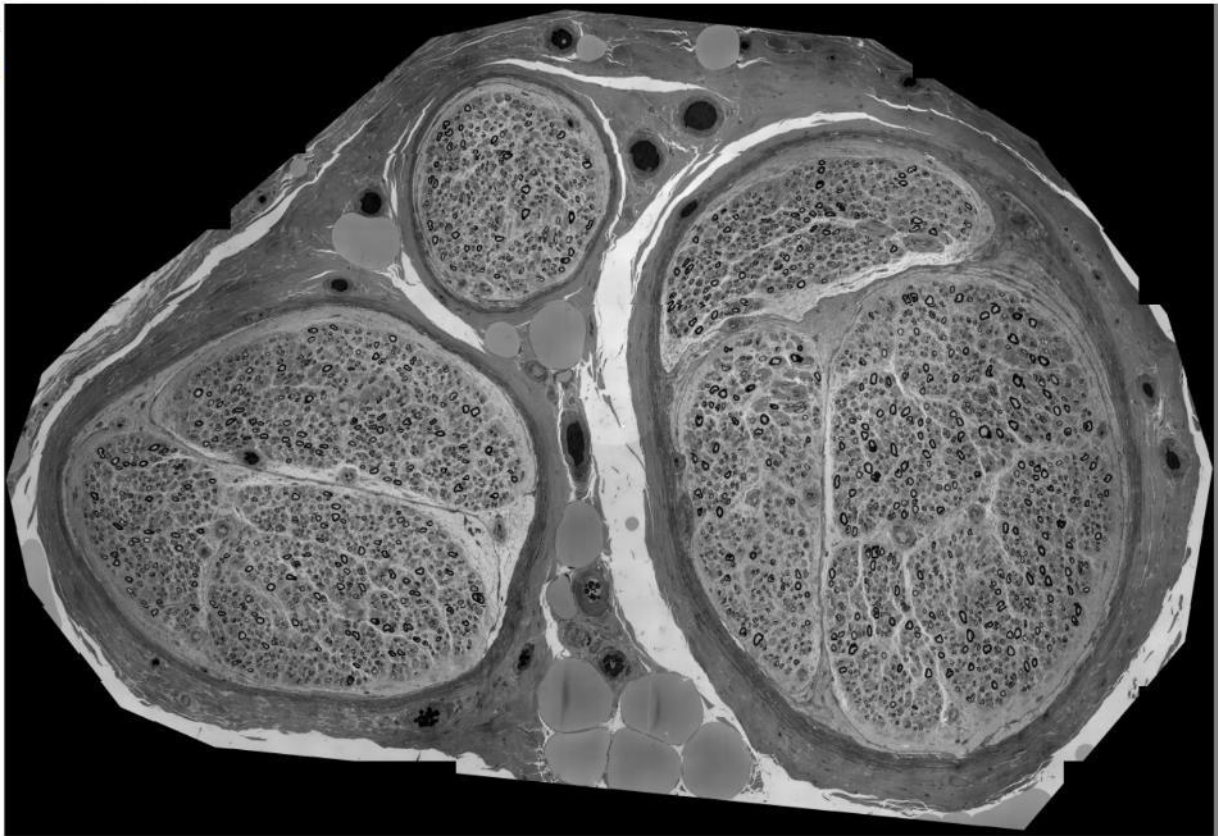
Restarted mipmap Executor Service for all projects with 10 threads.
 18:43:34 Saved Stitching.xml.gz
 Scaling script path is null



Layers Tool options Annotations Live filter

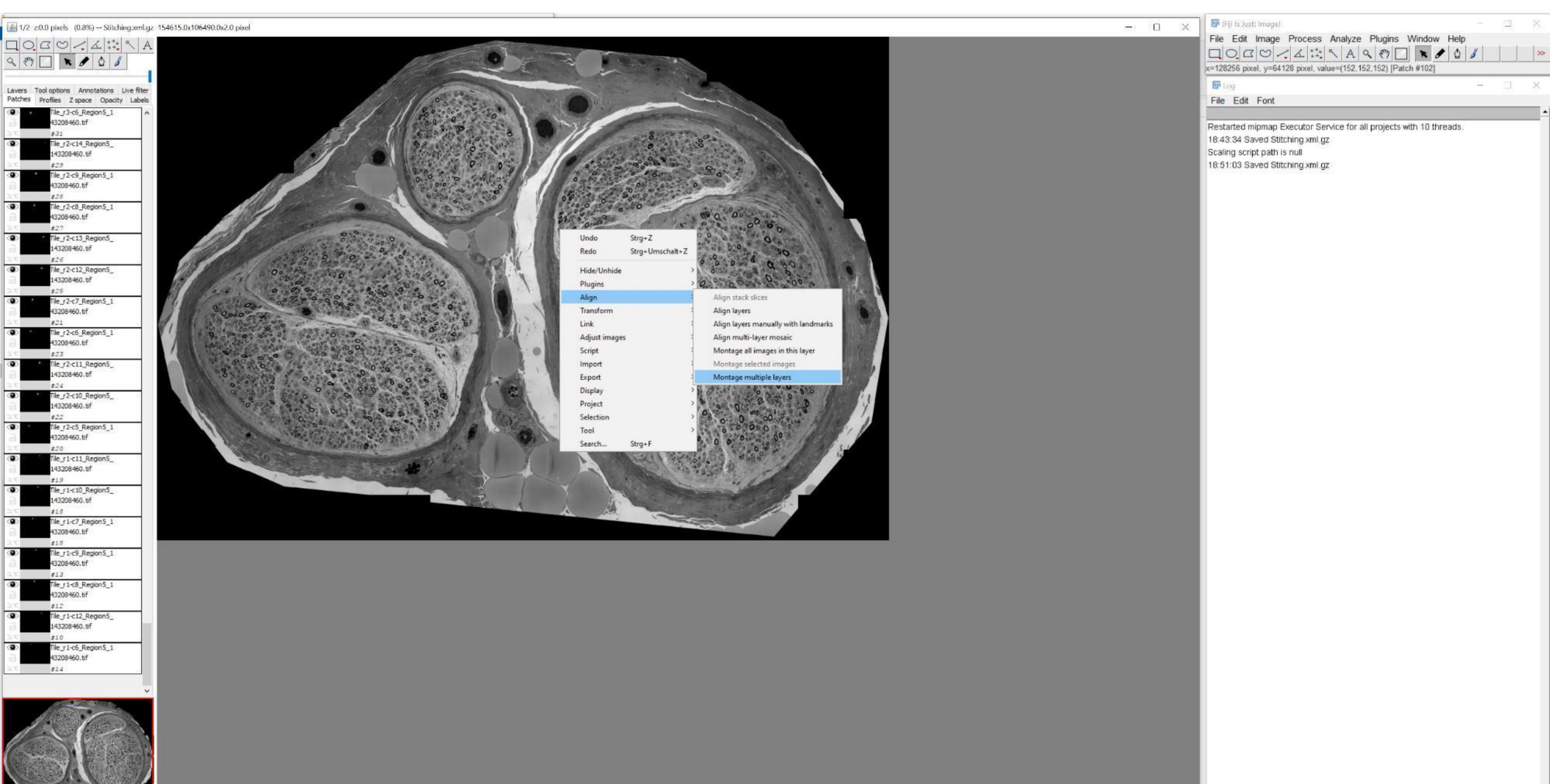
Patches Profiles Z space Opacity Labels

- File_r3-c6_Region5_1 43208460.tif #31
- File_r2-c14_Region5_1 43208460.tif #29
- File_r2-c9_Region5_1 43208460.tif #28
- File_r2-c8_Region5_1 43208460.tif #27
- File_r2-c13_Region5_1 43208460.tif #26
- File_r2-c12_Region5_1 43208460.tif #25
- File_r2-c7_Region5_1 43208460.tif #21
- File_r2-c6_Region5_1 43208460.tif #23
- File_r2-c11_Region5_1 43208460.tif #24
- File_r2-c10_Region5_1 43208460.tif #22
- File_r2-c5_Region5_1 43208460.tif #20
- File_r1-c11_Region5_1 43208460.tif #19
- File_r1-c10_Region5_1 43208460.tif #18
- File_r1-c7_Region5_1 43208460.tif #15
- File_r1-c9_Region5_1 43208460.tif #13
- File_r1-c8_Region5_1 43208460.tif #12
- File_r1-c12_Region5_1 43208460.tif #10
- File_r1-c6_Region5_1 43208460.tif #14



File Edit Image Process Analyze Plugins Window Help

- New
- Open... Strg+O
- Open Next Strg+Umschalt+O
- Open Samples
- Open Recent
- Import all projects with 10 threads.
- Close Strg+W
- Close All Strg+Umschalt+W
- Save Strg+S**
- Save As
- Revert Strg+R
- Page Setup...
- Print... Strg+P
- Export
- Quit
- Fix Funny Filenames
- Make Screencast



Right-click on the canvas, align images in both layers

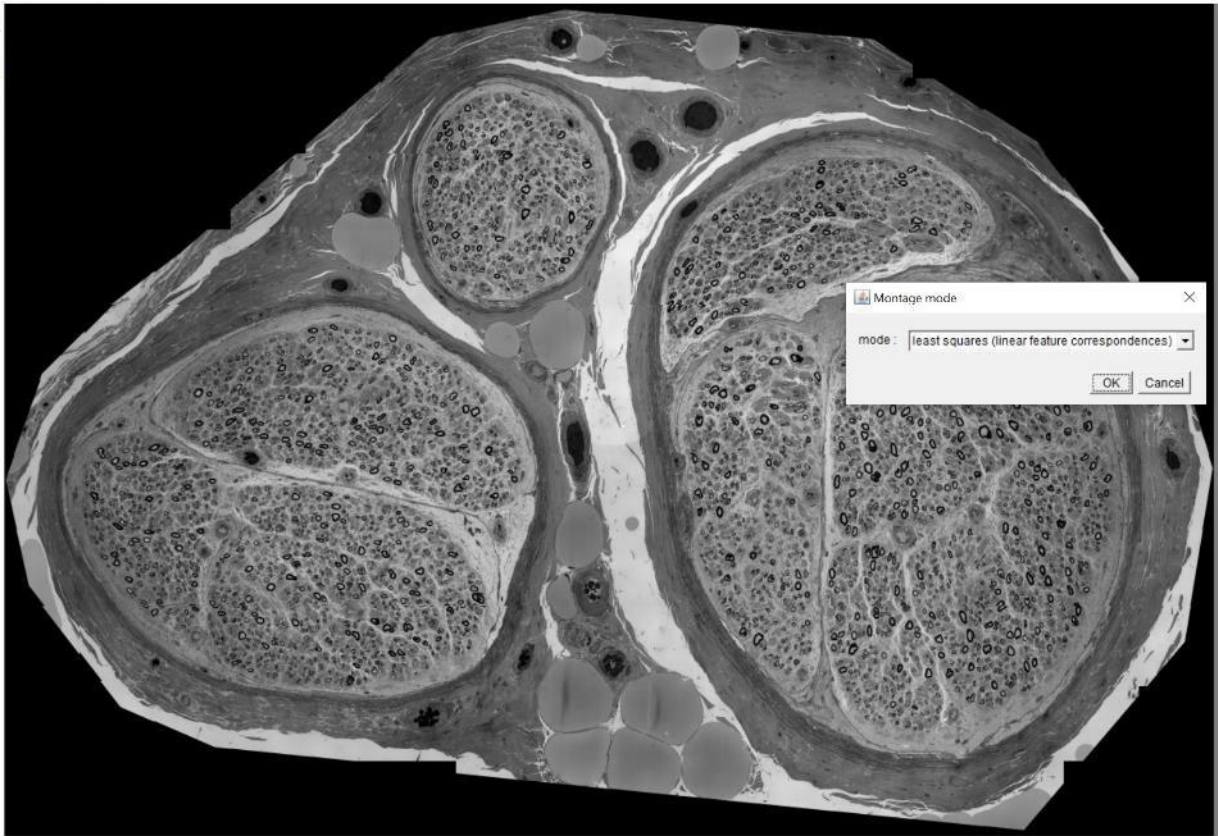


Select Start and End layer



Layers Tool options Annotations Live filter

- Tile_f3-c6_Region5_1 43208460.tif #31
- Tile_f2-c14_Region5_1 43208460.tif #29
- Tile_f2-c9_Region5_1 43208460.tif #28
- Tile_f2-c8_Region5_1 43208460.tif #27
- Tile_f2-c13_Region5_1 43208460.tif #26
- Tile_f2-c12_Region5_1 43208460.tif #25
- Tile_f2-c7_Region5_1 43208460.tif #21
- Tile_f2-c6_Region5_1 43208460.tif #23
- Tile_f2-c11_Region5_1 43208460.tif #24
- Tile_f2-c10_Region5_1 43208460.tif #22
- Tile_f2-c5_Region5_1 43208460.tif #20
- Tile_f1-c11_Region5_1 43208460.tif #19
- Tile_f1-c10_Region5_1 43208460.tif #18
- Tile_f1-c7_Region5_1 43208460.tif #15
- Tile_f1-c9_Region5_1 43208460.tif #13
- Tile_f1-c8_Region5_1 43208460.tif #12
- Tile_f1-c12_Region5_1 43208460.tif #10
- Tile_f1-c6_Region5_1 43208460.tif #14



Montage mode

mode: least squares (linear feature correspondences)

OK Cancel

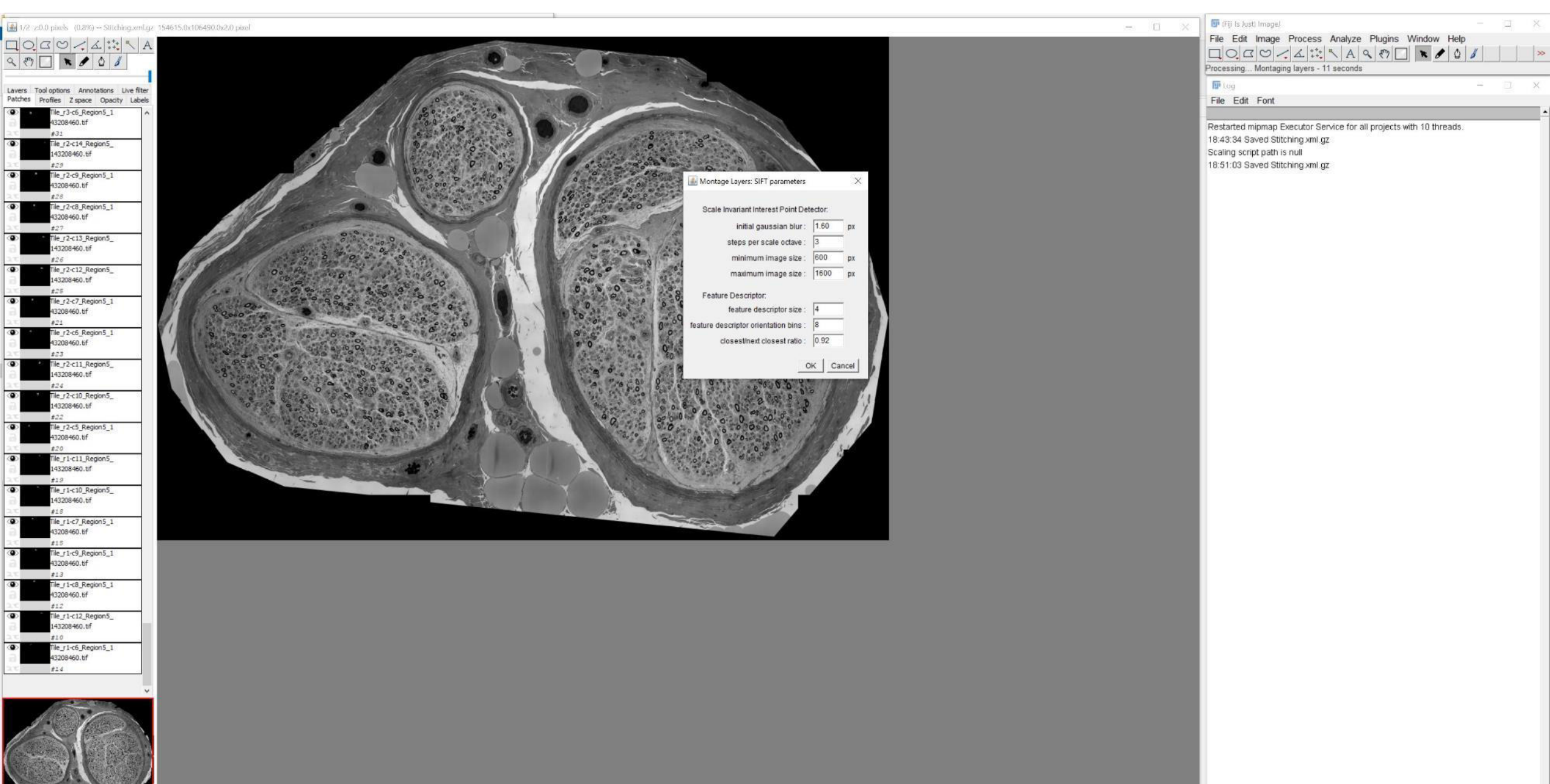


Processing... Montaging layers - 2 seconds

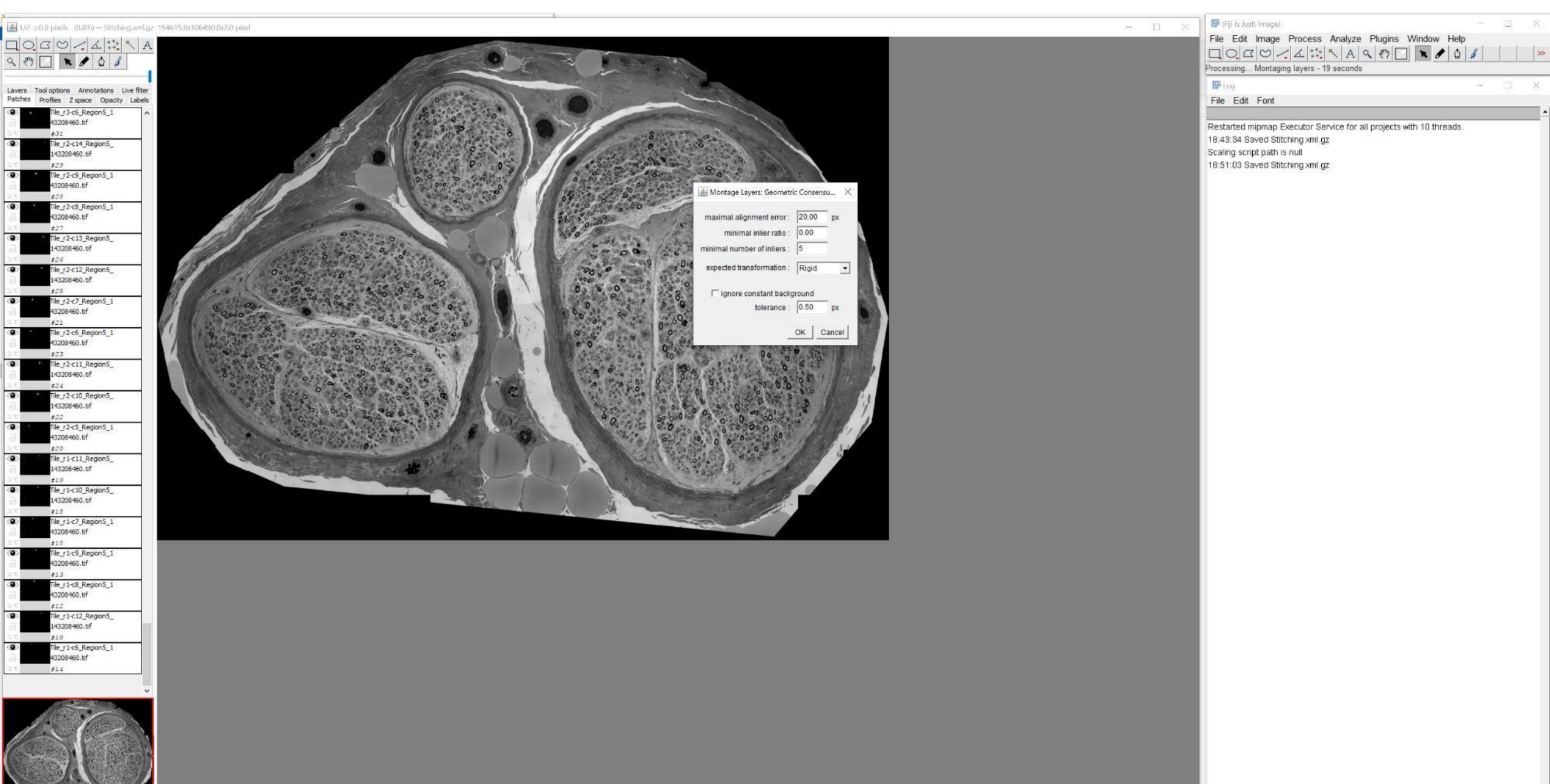
Log

File Edit Font

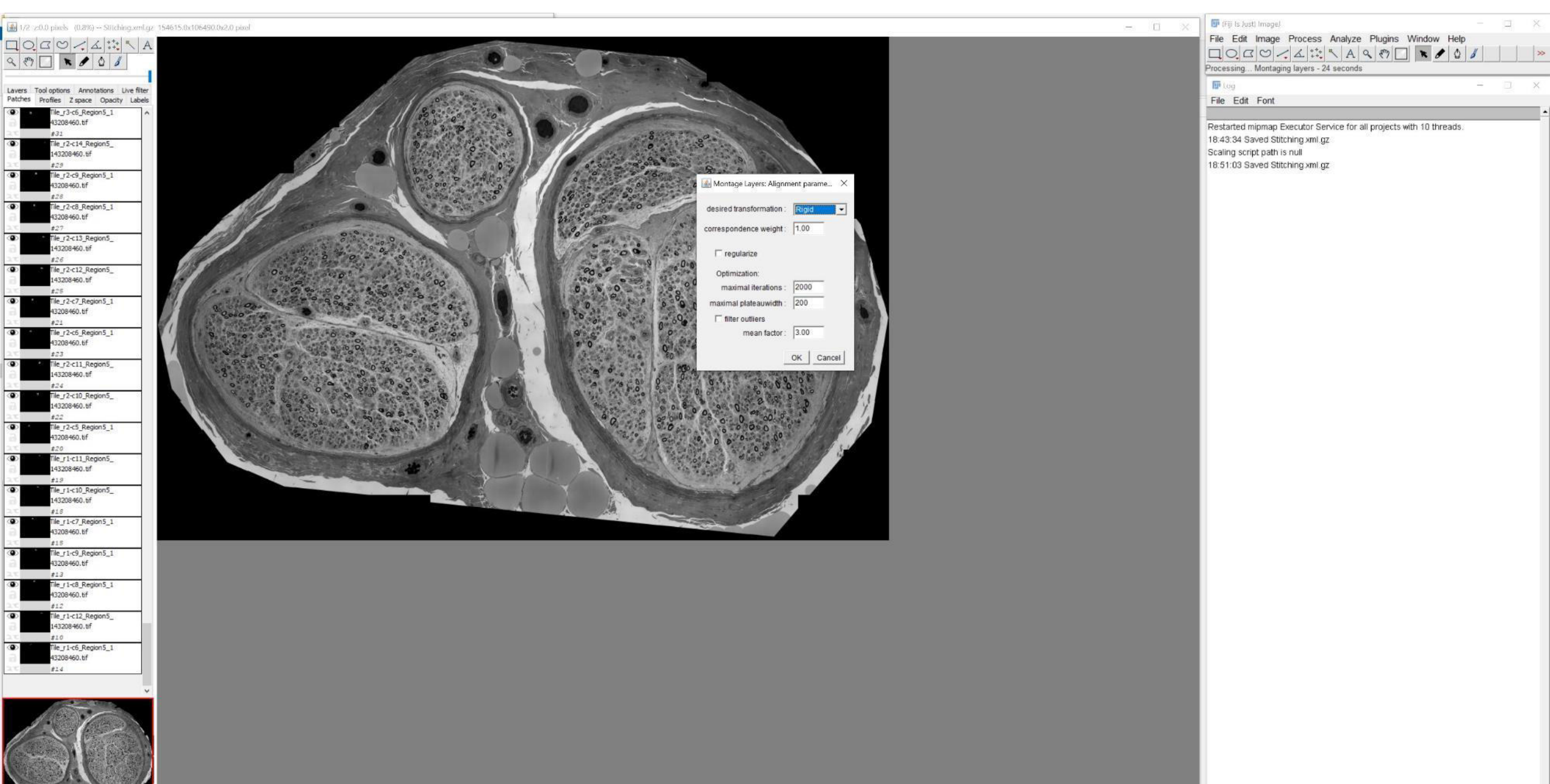
Restarted mipmap Executor Service for all projects with 10 threads.
 18:43:34 Saved Stitching.xml.gz
 Scaling script path is null
 18:51:03 Saved Stitching.xml.gz



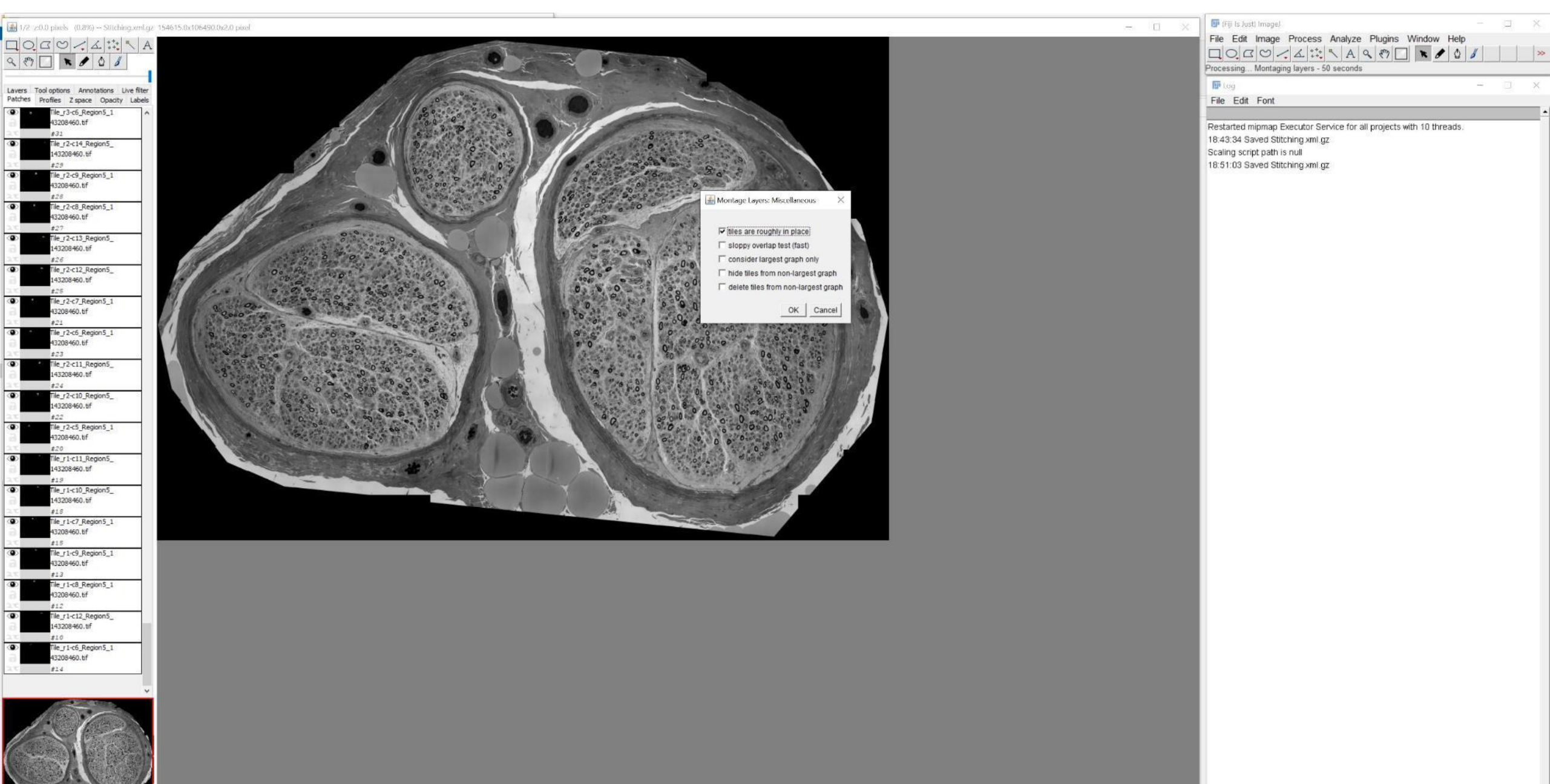
The demonstrated parameters mostly show good stitching results



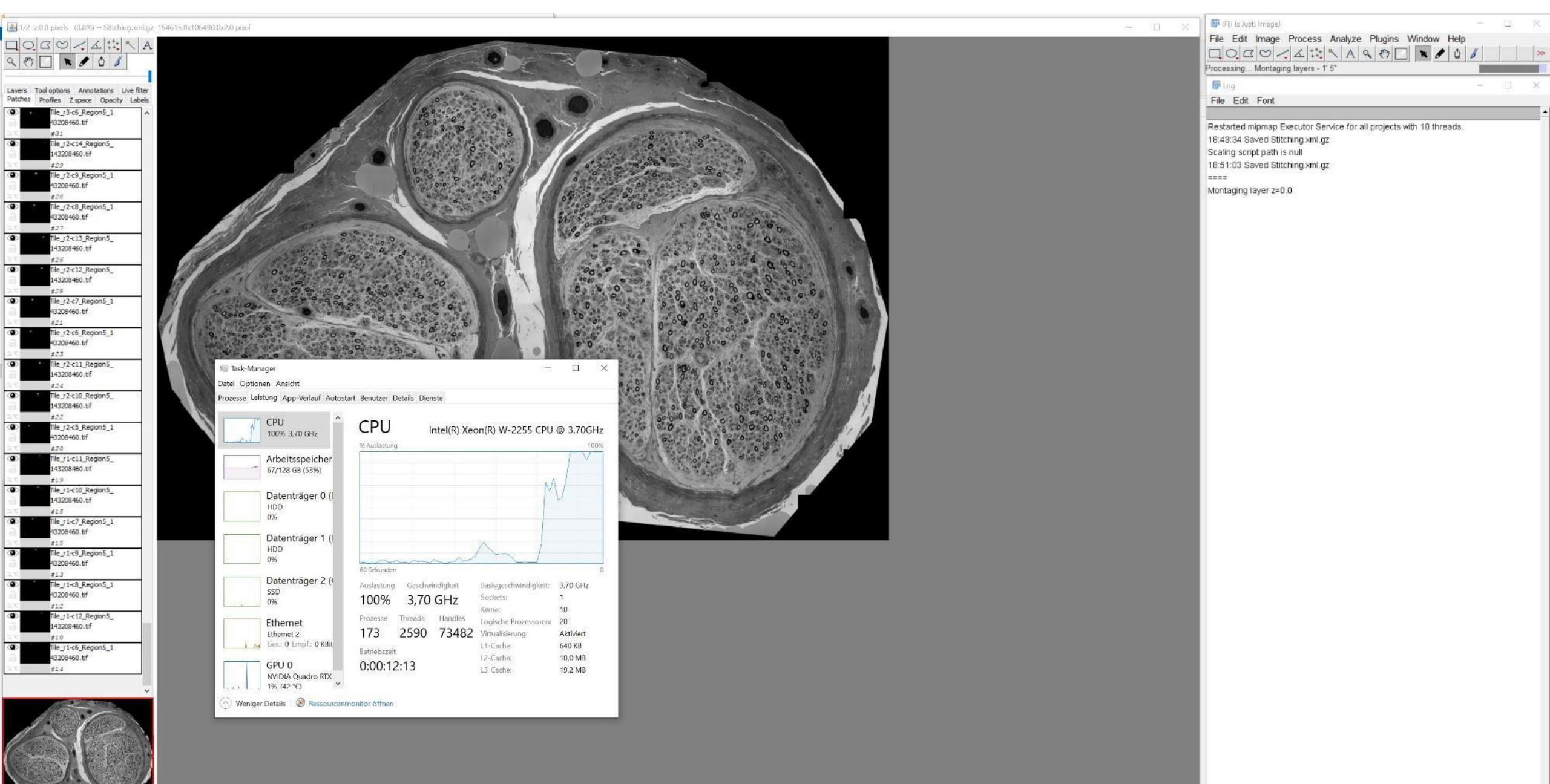
The demonstrated parameters mostly show good stitching results



The demonstrated parameters mostly show good stitching results

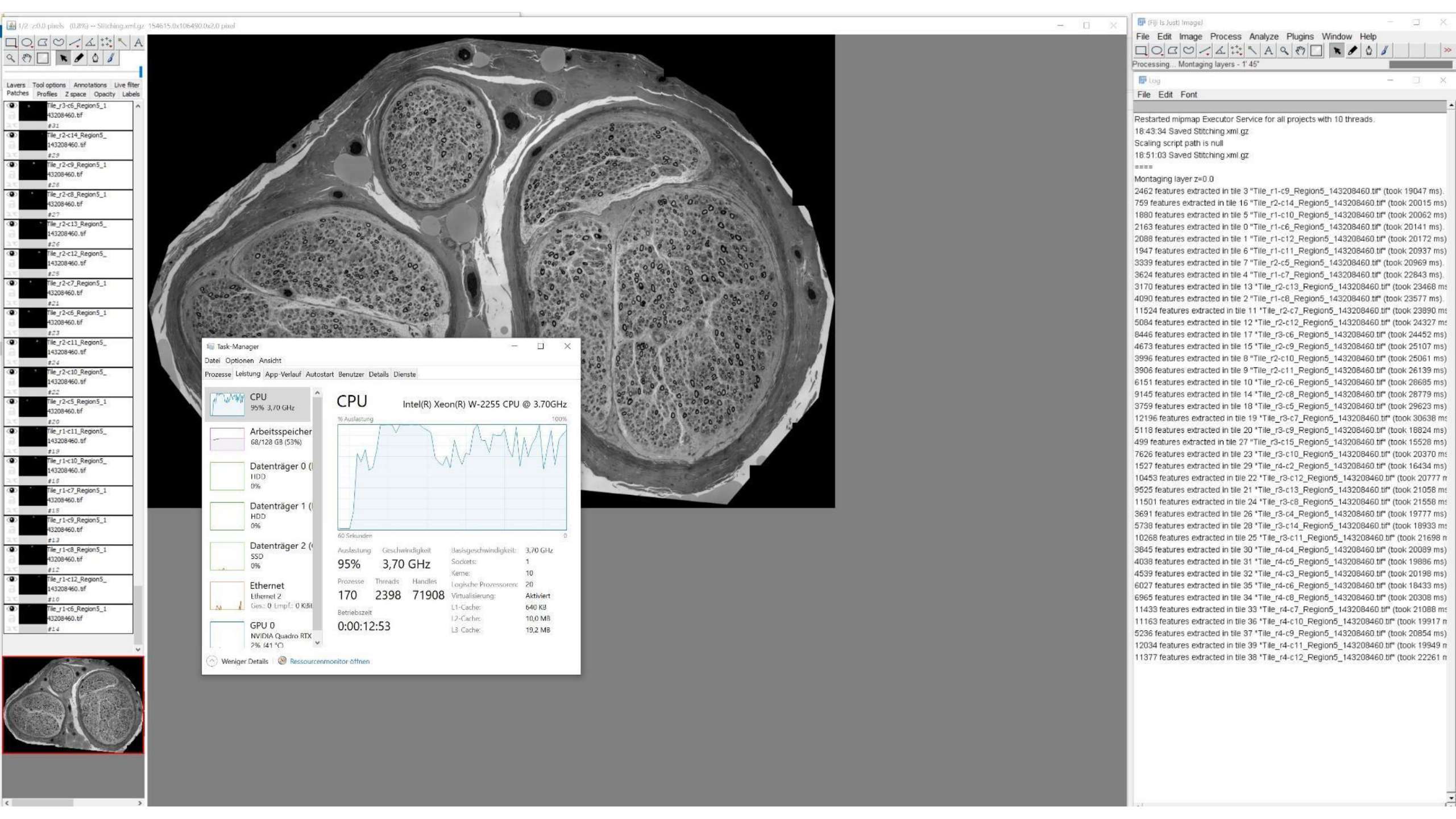


The demonstrated parameters mostly show good stitching results



See information in Log

See Task Manager for workstation performance (multiple cores can be used for stitching)



Task-Manager

Datei Optionen Ansicht

Prozesse Leistung App-Verlauf Autostart Benutzer Details Dienste

CPU
95% 3,70 GHz

Arbeitsspeicher
68/128 GB (53%)

Datenträger 0 (HDD)
0%

Datenträger 1 (HDD)
0%

Datenträger 2 (SSD)
0%

Ethernet
Ethernet 2
Ges.: 0 Umpf.: 0 KBit/s

GPU 0
NVIDIA Quadro RTX
2% (41 °C)

CPU Intel(R) Xeon(R) W-2255 CPU @ 3.70GHz

% Auslastung

60 Sekunden

Auslastung: 95%
Geschwindigkeit: 3,70 GHz
Basissgeschwindigkeit: 1
Sockets: 1
Kerne: 10
Logische Prozessoren: 20
Virtualisierung: Aktiviert

Prozesse: 170
Threads: 2398
Handler: 71908

Betriebszeit: 0:00:12:53

L1-Cache: 640 KB
L2-Cache: 10,0 MB
L3-Cache: 19,2 MB

Weniger Details Ressourcenmonitor öffnen

(Fiji) Is Just Images

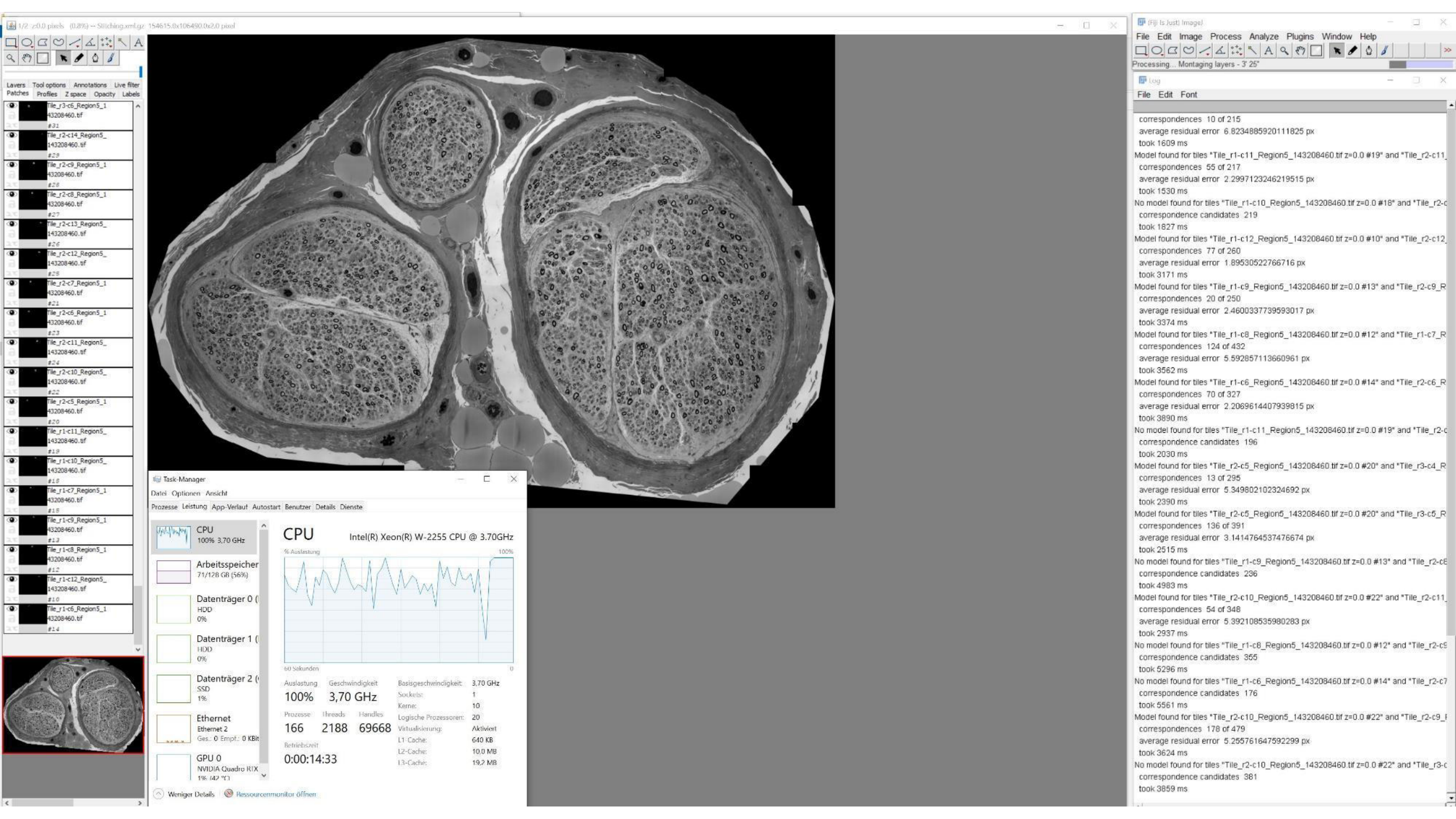
File Edit Image Process Analyze Plugins Window Help

Processing... Montaging layers - 1'45"

Log

File Edit Font

Restarted mipmap Executor Service for all projects with 10 threads.
18:43:34 Saved Stitching.xml.gz
Scaling script path is null
18:51:03 Saved Stitching.xml.gz
====
Montaging layer z=0
2462 features extracted in tile 3 "Tile_r1-c9_Region5_143208460.tif" (took 19047 ms).
759 features extracted in tile 16 "Tile_r2-c14_Region5_143208460.tif" (took 20015 ms)
1880 features extracted in tile 5 "Tile_r1-c10_Region5_143208460.tif" (took 20062 ms)
2163 features extracted in tile 0 "Tile_r1-c6_Region5_143208460.tif" (took 20141 ms).
2088 features extracted in tile 1 "Tile_r1-c12_Region5_143208460.tif" (took 20172 ms)
1947 features extracted in tile 6 "Tile_r1-c11_Region5_143208460.tif" (took 20937 ms)
3339 features extracted in tile 7 "Tile_r2-c5_Region5_143208460.tif" (took 20969 ms).
3624 features extracted in tile 4 "Tile_r1-c7_Region5_143208460.tif" (took 22843 ms).
3170 features extracted in tile 13 "Tile_r2-c13_Region5_143208460.tif" (took 23468 ms)
4090 features extracted in tile 2 "Tile_r1-c8_Region5_143208460.tif" (took 23577 ms).
11524 features extracted in tile 11 "Tile_r2-c7_Region5_143208460.tif" (took 23890 ms)
5084 features extracted in tile 12 "Tile_r2-c12_Region5_143208460.tif" (took 24327 ms)
8446 features extracted in tile 17 "Tile_r3-c6_Region5_143208460.tif" (took 24452 ms)
4673 features extracted in tile 15 "Tile_r2-c9_Region5_143208460.tif" (took 25107 ms)
3996 features extracted in tile 8 "Tile_r2-c10_Region5_143208460.tif" (took 25061 ms)
3906 features extracted in tile 9 "Tile_r2-c11_Region5_143208460.tif" (took 26139 ms)
6151 features extracted in tile 10 "Tile_r2-c6_Region5_143208460.tif" (took 26685 ms)
9145 features extracted in tile 14 "Tile_r2-c8_Region5_143208460.tif" (took 28779 ms)
3759 features extracted in tile 18 "Tile_r3-c5_Region5_143208460.tif" (took 29623 ms)
12196 features extracted in tile 19 "Tile_r3-c7_Region5_143208460.tif" (took 30638 ms)
5118 features extracted in tile 20 "Tile_r3-c9_Region5_143208460.tif" (took 18824 ms)
499 features extracted in tile 27 "Tile_r3-c15_Region5_143208460.tif" (took 15528 ms)
7626 features extracted in tile 23 "Tile_r3-c10_Region5_143208460.tif" (took 20370 ms)
1527 features extracted in tile 29 "Tile_r4-c2_Region5_143208460.tif" (took 16434 ms)
10453 features extracted in tile 22 "Tile_r3-c12_Region5_143208460.tif" (took 20777 ms)
9525 features extracted in tile 21 "Tile_r3-c13_Region5_143208460.tif" (took 21058 ms)
11501 features extracted in tile 24 "Tile_r3-c8_Region5_143208460.tif" (took 21558 ms)
3691 features extracted in tile 26 "Tile_r3-c4_Region5_143208460.tif" (took 19777 ms)
5738 features extracted in tile 28 "Tile_r3-c14_Region5_143208460.tif" (took 18933 ms)
10268 features extracted in tile 25 "Tile_r3-c11_Region5_143208460.tif" (took 21698 ms)
3845 features extracted in tile 30 "Tile_r4-c4_Region5_143208460.tif" (took 20089 ms)
4038 features extracted in tile 31 "Tile_r4-c5_Region5_143208460.tif" (took 19886 ms)
4539 features extracted in tile 32 "Tile_r4-c3_Region5_143208460.tif" (took 20198 ms)
6027 features extracted in tile 35 "Tile_r4-c6_Region5_143208460.tif" (took 18433 ms)
6965 features extracted in tile 34 "Tile_r4-c8_Region5_143208460.tif" (took 20308 ms)
11433 features extracted in tile 33 "Tile_r4-c7_Region5_143208460.tif" (took 21088 ms)
11163 features extracted in tile 36 "Tile_r4-c10_Region5_143208460.tif" (took 19917 ms)
5236 features extracted in tile 37 "Tile_r4-c9_Region5_143208460.tif" (took 20854 ms)
12034 features extracted in tile 39 "Tile_r4-c11_Region5_143208460.tif" (took 19949 ms)
11377 features extracted in tile 38 "Tile_r4-c12_Region5_143208460.tif" (took 22261 ms)



1/2 z=0 pixels (0.8%) -- Stitching.xml.gz 154615.0x106490.0x2.0 pixel

- Tile_r3-c6_Region5_143208460.tif #31
- Tile_r2-c14_Region5_143208460.tif #29
- Tile_r2-c9_Region5_143208460.tif #28
- Tile_r2-c8_Region5_143208460.tif #27
- Tile_r2-c13_Region5_143208460.tif #26
- Tile_r2-c12_Region5_143208460.tif #25
- Tile_r2-c7_Region5_143208460.tif #21
- Tile_r2-c6_Region5_143208460.tif #23
- Tile_r2-c11_Region5_143208460.tif #24
- Tile_r2-c10_Region5_143208460.tif #22
- Tile_r2-c5_Region5_143208460.tif #20
- Tile_r1-c11_Region5_143208460.tif #19
- Tile_r1-c10_Region5_143208460.tif #18
- Tile_r1-c7_Region5_143208460.tif #15
- Tile_r1-c9_Region5_143208460.tif #13
- Tile_r1-c8_Region5_143208460.tif #12
- Tile_r1-c12_Region5_143208460.tif #10
- Tile_r1-c6_Region5_143208460.tif #14

Task-Manager

Datei Optionen Ansicht

Prozesse Leistung App-Verlauf Autostart Benutzer Details Dienste

CPU 100% 3,70 GHz

Arbeitsspeicher 73/128 GB (56%)

Datenträger 0 (HDD) 0%

Datenträger 1 (HDD) 0%

Datenträger 2 (SSD) 1%

Ethernet Ethernet 2 Ges.: 0 Empf.: 0 KBit

GPU 0 NVIDIA Quadro RTX 1% (42 °C)

Weniger Details Ressourcenmonitor öffnen

CPU Intel(R) Xeon(R) W-2255 CPU @ 3.70GHz

% Auslastung

60 Sekunden

Auslastung: 100% Geschwindigkeit: 3,70 GHz Basisgeschwindigkeit: 3,70 GHz Sockets: 1

Prozesse: 166 Threads: 2188 Handles: 69668 Logische Prozessoren: 20 Kerne: 10

Retriebszeit: 0:00:14:33

Virtualisierung: Aktiviert L1-Cache: 640 KB L2-Cache: 10,0 MB L3-Cache: 19,2 MB

Log

File Edit Font

correspondences 10 of 215
average residual error 6.8234885920111825 px
took 1609 ms

Model found for tiles *Tile_r1-c11_Region5_143208460.tif z=0.0 #19* and *Tile_r2-c11_Region5_143208460.tif z=0.0 #19*
correspondences 55 of 217
average residual error 2.2997123246219515 px
took 1530 ms

No model found for tiles *Tile_r1-c10_Region5_143208460.tif z=0.0 #18* and *Tile_r2-c10_Region5_143208460.tif z=0.0 #18*
correspondence candidates 219
took 1827 ms

Model found for tiles *Tile_r1-c12_Region5_143208460.tif z=0.0 #10* and *Tile_r2-c12_Region5_143208460.tif z=0.0 #10*
correspondences 77 of 260
average residual error 1.89530522766716 px
took 3171 ms

Model found for tiles *Tile_r1-c9_Region5_143208460.tif z=0.0 #13* and *Tile_r2-c9_Region5_143208460.tif z=0.0 #13*
correspondences 20 of 250
average residual error 2.4600337739593017 px
took 3374 ms

Model found for tiles *Tile_r1-c8_Region5_143208460.tif z=0.0 #12* and *Tile_r2-c8_Region5_143208460.tif z=0.0 #12*
correspondences 124 of 432
average residual error 5.592857113660961 px
took 3562 ms

Model found for tiles *Tile_r1-c6_Region5_143208460.tif z=0.0 #14* and *Tile_r2-c6_Region5_143208460.tif z=0.0 #14*
correspondences 70 of 327
average residual error 2.2069614407939815 px
took 3890 ms

No model found for tiles *Tile_r1-c11_Region5_143208460.tif z=0.0 #19* and *Tile_r2-c11_Region5_143208460.tif z=0.0 #19*
correspondence candidates 196
took 2030 ms

Model found for tiles *Tile_r2-c5_Region5_143208460.tif z=0.0 #20* and *Tile_r3-c4_Region5_143208460.tif z=0.0 #20*
correspondences 13 of 295
average residual error 5.349802102324692 px
took 2390 ms

Model found for tiles *Tile_r2-c5_Region5_143208460.tif z=0.0 #20* and *Tile_r3-c5_Region5_143208460.tif z=0.0 #20*
correspondences 136 of 391
average residual error 3.1414764537476674 px
took 2515 ms

No model found for tiles *Tile_r1-c9_Region5_143208460.tif z=0.0 #13* and *Tile_r2-c9_Region5_143208460.tif z=0.0 #13*
correspondence candidates 236
took 4983 ms

Model found for tiles *Tile_r2-c10_Region5_143208460.tif z=0.0 #22* and *Tile_r2-c11_Region5_143208460.tif z=0.0 #22*
correspondences 54 of 348
average residual error 5.392108535980283 px
took 2937 ms

No model found for tiles *Tile_r1-c8_Region5_143208460.tif z=0.0 #12* and *Tile_r2-c8_Region5_143208460.tif z=0.0 #12*
correspondence candidates 355
took 5296 ms

No model found for tiles *Tile_r1-c6_Region5_143208460.tif z=0.0 #14* and *Tile_r2-c7_Region5_143208460.tif z=0.0 #14*
correspondence candidates 176
took 5561 ms

Model found for tiles *Tile_r2-c10_Region5_143208460.tif z=0.0 #22* and *Tile_r2-c9_Region5_143208460.tif z=0.0 #22*
correspondences 178 of 479
average residual error 5.255761647592299 px
took 3624 ms

No model found for tiles *Tile_r2-c10_Region5_143208460.tif z=0.0 #22* and *Tile_r3-c10_Region5_143208460.tif z=0.0 #22*
correspondence candidates 381
took 3859 ms

- Tile_r3-c6_Region5_1 43208460.tif #31
- Tile_r2-c14_Region5_1 43208460.tif #29
- Tile_r2-c9_Region5_1 43208460.tif #28
- Tile_r2-c8_Region5_1 43208460.tif #27
- Tile_r2-c13_Region5_1 43208460.tif #26
- Tile_r2-c12_Region5_1 43208460.tif #25
- Tile_r2-c7_Region5_1 43208460.tif #21
- Tile_r2-c6_Region5_1 43208460.tif #23
- Tile_r2-c11_Region5_1 43208460.tif #24
- Tile_r2-c10_Region5_1 43208460.tif #22
- Tile_r2-c5_Region5_1 43208460.tif #20
- Tile_r1-c11_Region5_1 43208460.tif #19
- Tile_r1-c10_Region5_1 43208460.tif #18
- Tile_r1-c7_Region5_1 43208460.tif #15
- Tile_r1-c9_Region5_1 43208460.tif #13
- Tile_r1-c8_Region5_1 43208460.tif #12
- Tile_r1-c12_Region5_1 43208460.tif #10
- Tile_r1-c6_Region5_1 43208460.tif #14



Task-Manager

Datei Optionen Ansicht

Prozesse Leistung App-Verlauf Autostart Benutzer Details Dienste

CPU 21% 3,70 GHz

Arbeitsspeicher 73/128 GB (56%)

Datenträger 0 (HDD) 1%

Datenträger 1 (HDD) 1%

Datenträger 2 (SSD) 2%

Ethernet Ethernet 2 Ges.: 0 Empf.: 8,0 KB

GPU 0 NVIDIA Quadro RTX 3% (43 °C)

CPU Intel(R) Xeon(R) W-2255 CPU @ 3.70GHz

% Auslastung

60 Sekunden

Auslastung:	Geschwindigkeit:	Basisgeschwindigkeit:	3,70 GHz
21%	3,70 GHz	Sockets:	1
Prozesse:	Threads:	Kerne:	10
163	2273	Logische Prozessoren:	20
Handles:	Virtualisierung:	Aktiviert:	
69517	L1-Cache:	640 KB	
Retriebszeit:	L2-Cache:	10,0 MB	
0:00:20:48	L3-Cache:	19,2 MB	

Weniger Details Ressourcenmonitor öffnen

(Fiji) Is Just Image

File Edit Image Process Analyze Plugins Window Help

Processing... Montaging layers - 9' 39"

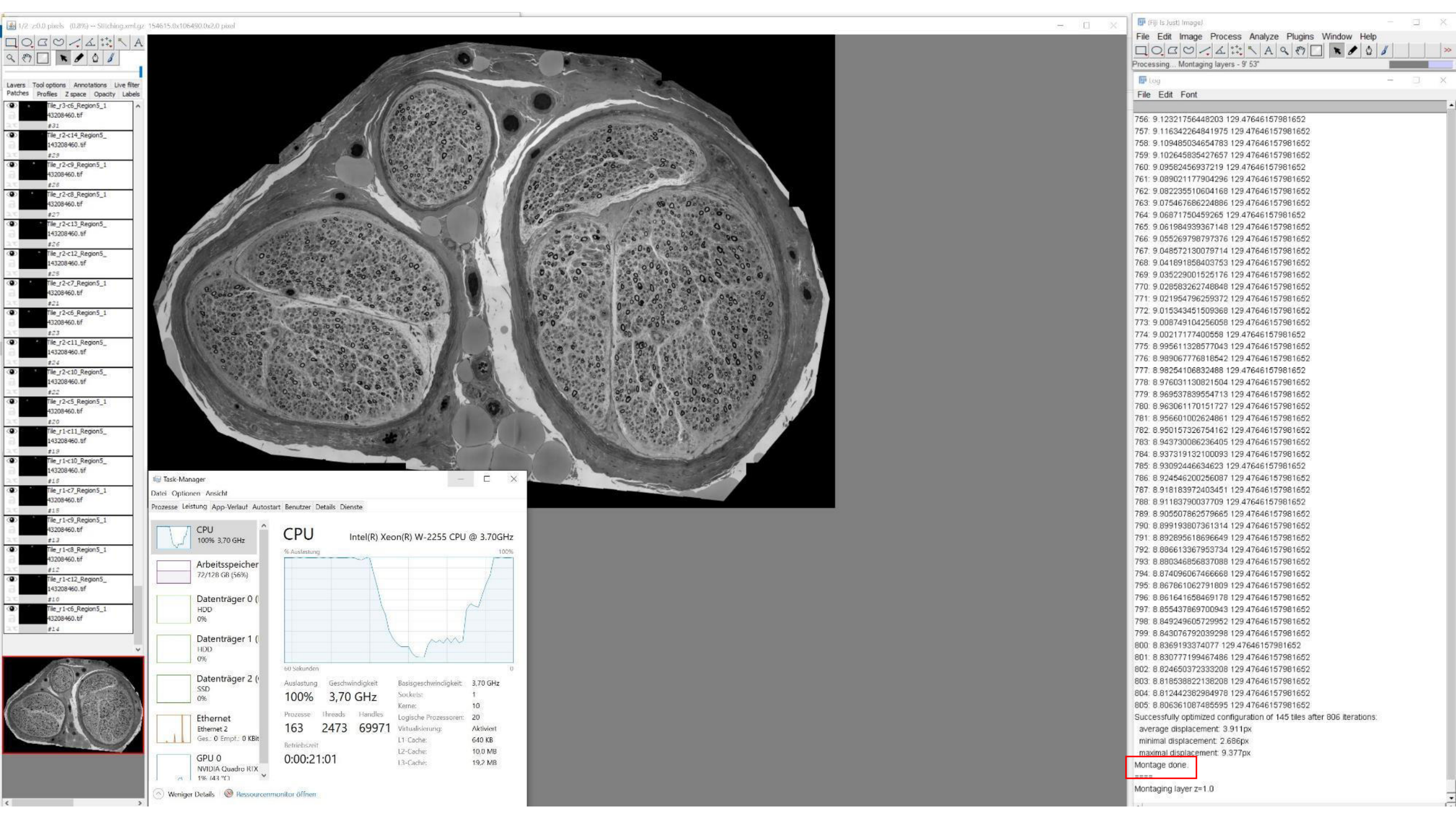
Log

File Edit Font

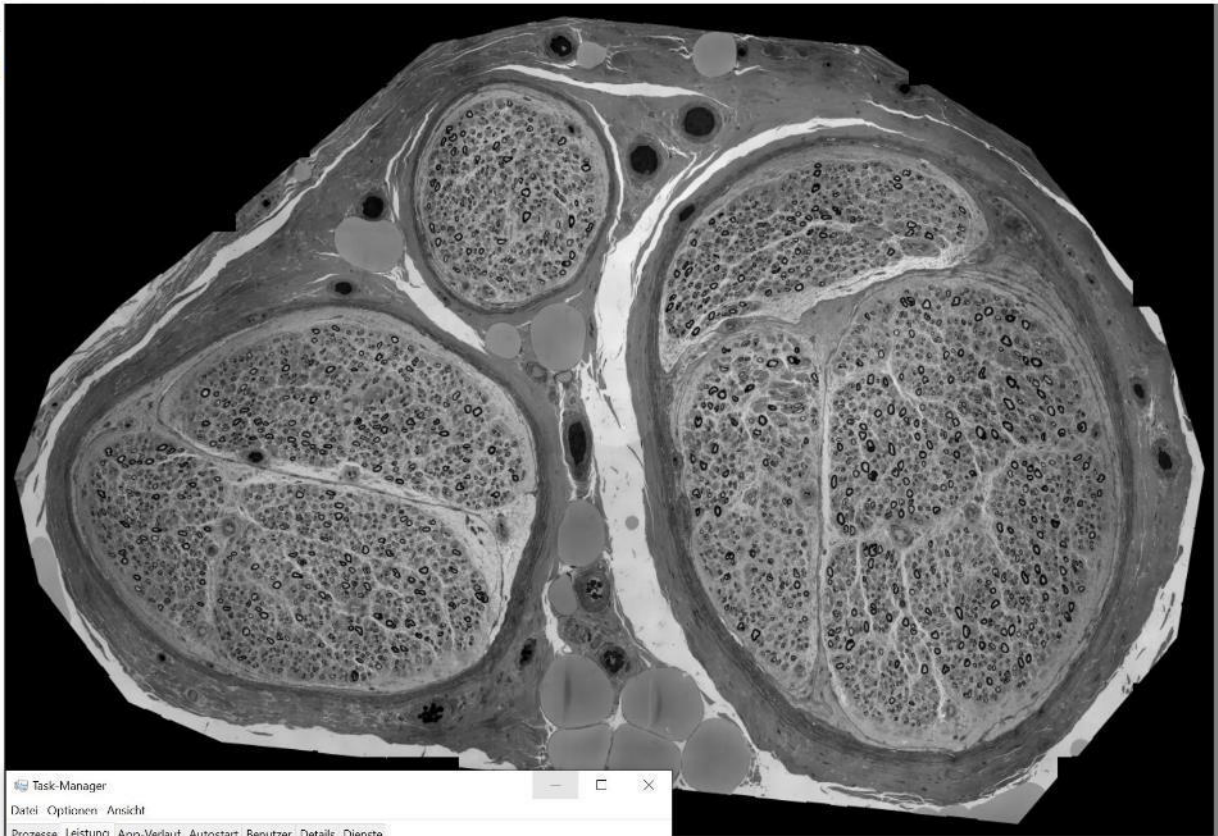
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753 9 14395268043772 129 47646157981652
754 9 137022737490877 129 47646157981652
755 9 130111036498537 129 47646157981652
756 9 12321756448203 129 47646157981652
757 9 116342264841975 129 47646157981652
758 9 109485034654783 129 47646157981652
759 9 102645835427657 129 47646157981652
760 9 09582456937219 129 47646157981652
761 9 089021177904296 129 47646157981652
762 9 082235510604168 129 47646157981652
763 9 075467686224886 129 47646157981652
764 9 06871750459265 129 47646157981652
765 9 061984939367148 129 47646157981652
766 9 055269798797376 129 47646157981652
767 9 048572130079714 129 47646157981652
768 9 041891858403753 129 47646157981652
769 9 035229001525176 129 47646157981652
770 9 028583262748848 129 47646157981652
771 9 021954796259372 129 47646157981652
772 9 015343451509368 129 47646157981652
773 9 008749104256058 129 47646157981652
774 9 00217177400558 129 47646157981652
775 8 995611328577043 129 47646157981652
776 8 989067776818542 129 47646157981652
777 8 98254106832488 129 47646157981652
778 8 976031130821504 129 47646157981652
779 8 969537839554713 129 47646157981652
780 8 963061170151727 129 47646157981652
781 8 956601002624861 129 47646157981652
782 8 950157326754162 129 47646157981652
783 8 943730086236405 129 47646157981652
784 8 937319132100093 129 47646157981652
785 8 93092446634623 129 47646157981652
786 8 924546200256087 129 47646157981652
787 8 918183972403451 129 47646157981652
788 8 91183790037709 129 47646157981652
789 8 905507862579665 129 47646157981652
790 8 899193807361314 129 47646157981652
791 8 892895618696649 129 47646157981652
792 8 886613367953734 129 47646157981652
793 8 880346856837088 129 47646157981652
794 8 874096067466688 129 47646157981652
795 8 867861062791809 129 47646157981652
796 8 861641658469178 129 47646157981652
797 8 855437869700943 129 47646157981652
798 8 849249605729952 129 47646157981652
799 8 843076792039298 129 47646157981652
800 8 8369193374077 129 47646157981652
801 8 830777199467486 129 47646157981652
802 8 824650372333208 129 47646157981652
803 8 818538822138208 129 47646157981652
804 8 812442382984978 129 47646157981652
805 8 806361087485595 129 47646157981652
Successfully optimized configuration of 145 tiles after 806 iterations.
average displacement: 3.911px
minimal displacement: 2.686px
maximal displacement: 9.377px

```

- Tile_r3-c6_Region5_1 43208460.tif #31
- Tile_r2-c14_Region5_1 43208460.tif #29
- Tile_r2-c9_Region5_1 43208460.tif #28
- Tile_r2-c8_Region5_1 43208460.tif #27
- Tile_r2-c13_Region5_1 43208460.tif #26
- Tile_r2-c12_Region5_1 43208460.tif #25
- Tile_r2-c7_Region5_1 43208460.tif #21
- Tile_r2-c6_Region5_1 43208460.tif #23
- Tile_r2-c11_Region5_1 43208460.tif #24
- Tile_r2-c10_Region5_1 43208460.tif #22
- Tile_r2-c5_Region5_1 43208460.tif #20
- Tile_r1-c11_Region5_1 43208460.tif #19
- Tile_r1-c10_Region5_1 43208460.tif #18
- Tile_r1-c7_Region5_1 43208460.tif #15
- Tile_r1-c9_Region5_1 43208460.tif #13
- Tile_r1-c8_Region5_1 43208460.tif #12
- Tile_r1-c12_Region5_1 43208460.tif #10
- Tile_r1-c6_Region5_1 43208460.tif #14



Task-Manager

Datei Optionen Ansicht

Prozesse Leistung App-Verlauf Autostart Benutzer Details Dienste

CPU 100% 3,70 GHz

Arbeitsspeicher 72/128 GB (56%)

Datenträger 0 (HDD) 0%

Datenträger 1 (HDD) 0%

Datenträger 2 (SSD) 0%

Ethernet Ethernet 2 Ges.: 0 Empf.: 0 KBit

GPU 0 NVIDIA Quadro RTX 1% (43 °C)

Weniger Details Ressourcenmonitor öffnen

CPU Intel(R) Xeon(R) W-2255 CPU @ 3.70GHz

% Auslastung

60 Sekunden

Auslastung: 100% Geschwindigkeit: 3,70 GHz Basisgeschwindigkeit: 3,70 GHz

100% 3,70 GHz Sockets: 1

Prozesse: 163 Threads: 2473 Handles: 69971 Logische Prozessoren: 20

Retriebszeit: 0:00:21:01

Kerne: 10

Logische Prozessoren: 20

Virtualisierung: Aktiviert

L1-Cache: 640 KB

L2-Cache: 10,0 MB

L3-Cache: 19,2 MB

(Fiji) Is Just Image

File Edit Image Process Analyze Plugins Window Help

Processing... Montaging layers - 9' 53"

Log

File Edit Font

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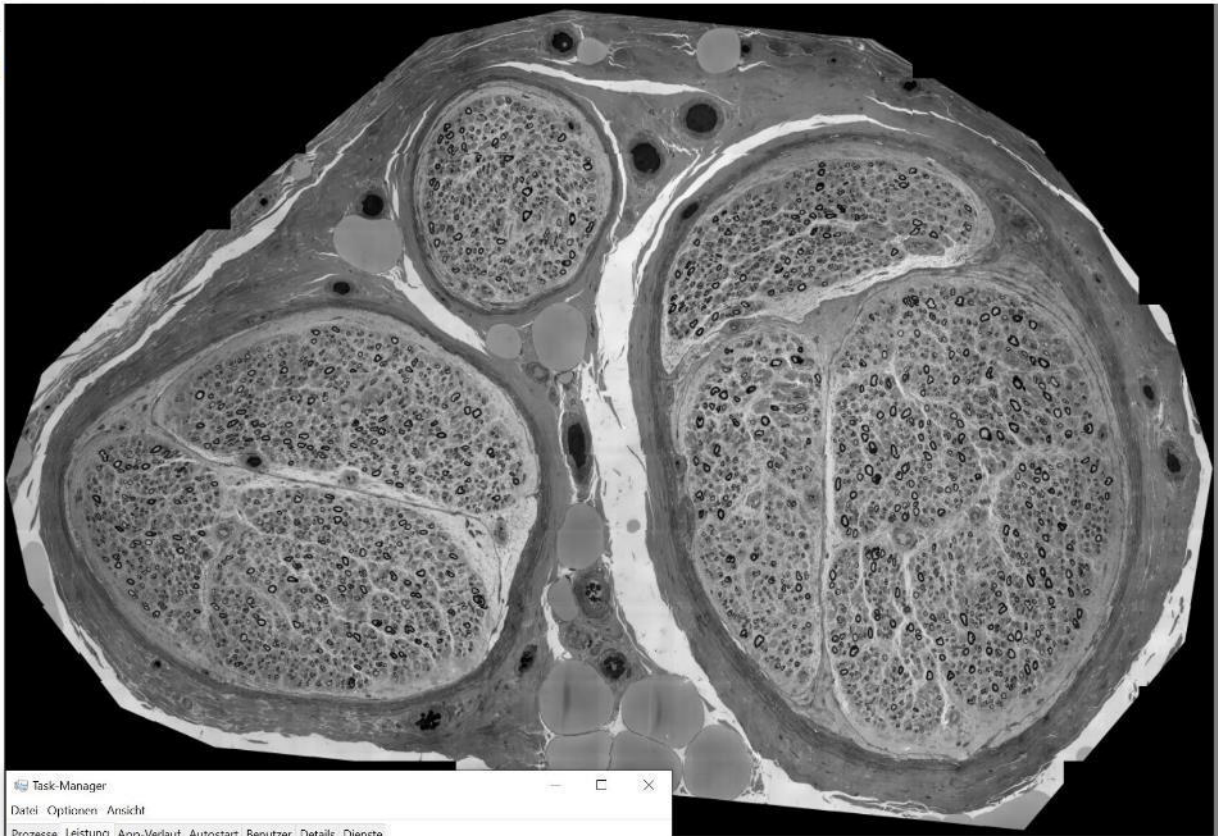
756 9 12321756448203 129 47646157981652
757 9 116342264841975 129 47646157981652
758 9 109485034654783 129 47646157981652
759 9 102645835427657 129 47646157981652
760 9 09562456937219 129 47646157981652
761 9 089021177904296 129 47646157981652
762 9 082235510604168 129 47646157981652
763 9 075467686224886 129 47646157981652
764 9 06871750459265 129 47646157981652
765 9 061984939367148 129 47646157981652
766 9 055269798797376 129 47646157981652
767 9 048572130079714 129 47646157981652
768 9 041891858403753 129 47646157981652
769 9 035229001526176 129 47646157981652
770 9 028583262748848 129 47646157981652
771 9 021954796259372 129 47646157981652
772 9 015343451509368 129 47646157981652
773 9 008749104256058 129 47646157981652
774 9 00217177400558 129 47646157981652
775 8 995611328577043 129 47646157981652
776 8 989067776818542 129 47646157981652
777 8 98254106832488 129 47646157981652
778 8 976031130821504 129 47646157981652
779 8 969537839554713 129 47646157981652
780 8 963061170151727 129 47646157981652
781 8 956601002624861 129 47646157981652
782 8 950157326754162 129 47646157981652
783 8 943730086236405 129 47646157981652
784 8 937319132100093 129 47646157981652
785 8 93092446634623 129 47646157981652
786 8 924546200256087 129 47646157981652
787 8 918183972403451 129 47646157981652
788 8 91183790037709 129 47646157981652
789 8 905507862579665 129 47646157981652
790 8 899193807361314 129 47646157981652
791 8 892895618696649 129 47646157981652
792 8 886613367953734 129 47646157981652
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794 8 874096067466668 129 47646157981652
795 8 867861062791809 129 47646157981652
796 8 861641658469178 129 47646157981652
797 8 855437869700943 129 47646157981652
798 8 849249605729952 129 47646157981652
799 8 843076792039298 129 47646157981652
800 8 8369193374077 129 47646157981652
801 8 830777199467486 129 47646157981652
802 8 824650372333208 129 47646157981652
803 8 818538822138208 129 47646157981652
804 8 812442382984978 129 47646157981652
805 8 806361087485595 129 47646157981652
Successfully optimized configuration of 145 tiles after 806 iterations.
average displacement: 3.911px
minimal displacement: 2.686px
maximal displacement: 9.377px
Montage done.
Montaging layer z=1.0

```


Layers: Tool options Annotations Live filter

Patches Profiles Z space Opacity Labels

- Tile_r3-c4_Region16_412761276.tif #186
- Tile_r2-c12_Region16_412761276.tif #184
- Tile_r2-c13_Region16_412761276.tif #183
- Tile_r2-c14_Region16_412761276.tif #182
- Tile_r2-c11_Region16_412761276.tif #181
- Tile_r2-c10_Region16_412761276.tif #180
- Tile_r2-c9_Region16_412761276.tif #179
- Tile_r2-c8_Region16_412761276.tif #178
- Tile_r2-c7_Region16_412761276.tif #177
- Tile_r2-c6_Region16_412761276.tif #176
- Tile_r2-c5_Region16_412761276.tif #175
- Tile_r1-c12_Region16_412761276.tif #172
- Tile_r1-c11_Region16_412761276.tif #171
- Tile_r1-c10_Region16_412761276.tif #170
- Tile_r1-c9_Region16_412761276.tif #169
- Tile_r1-c8_Region16_412761276.tif #168
- Tile_r1-c7_Region16_412761276.tif #167
- Tile_r1-c6_Region16_412761276.tif #166

Task-Manager

Daten Optionen Ansicht

Prozesse Leistung App-Verlauf Autostart Benutzer Details Dienste

CPU
48% 3,70 GHz

Arbeitsspeicher
73/128 GB (56%)

Datenträger 0 (HDD)
2%

Datenträger 1 (HDD)
2%

Datenträger 2 (SSD)
2%

Ethernet Ethernet 2
Ges.: 0 Empf.: 0 KBit

GPU 0
NVIDIA Quadro RTX 19% 43 °C

CPU Intel(R) Xeon(R) W-2255 CPU @ 3.70GHz

% Auslastung

60 Sekunden 100%

Auslastung:	Geschwindigkeit:	Basisgeschwindigkeit:	3,70 GHz
48%	3,70 GHz	Sockets:	1
Prozesse:	Threads:	Kerne:	10
163	2274	Logische Prozessoren:	20
Retriebszeit:	Virtualisierung:	Aktiviert:	
0:00:21:33	L1-Cache:	640 KB	
	L2-Cache:	10,0 MB	
	L3-Cache:	19,2 MB	

Weniger Details Ressourcenmonitor öffnen

File Edit Image Process Analyze Plugins Window Help

Processing... Montaging layers - 10' 26"

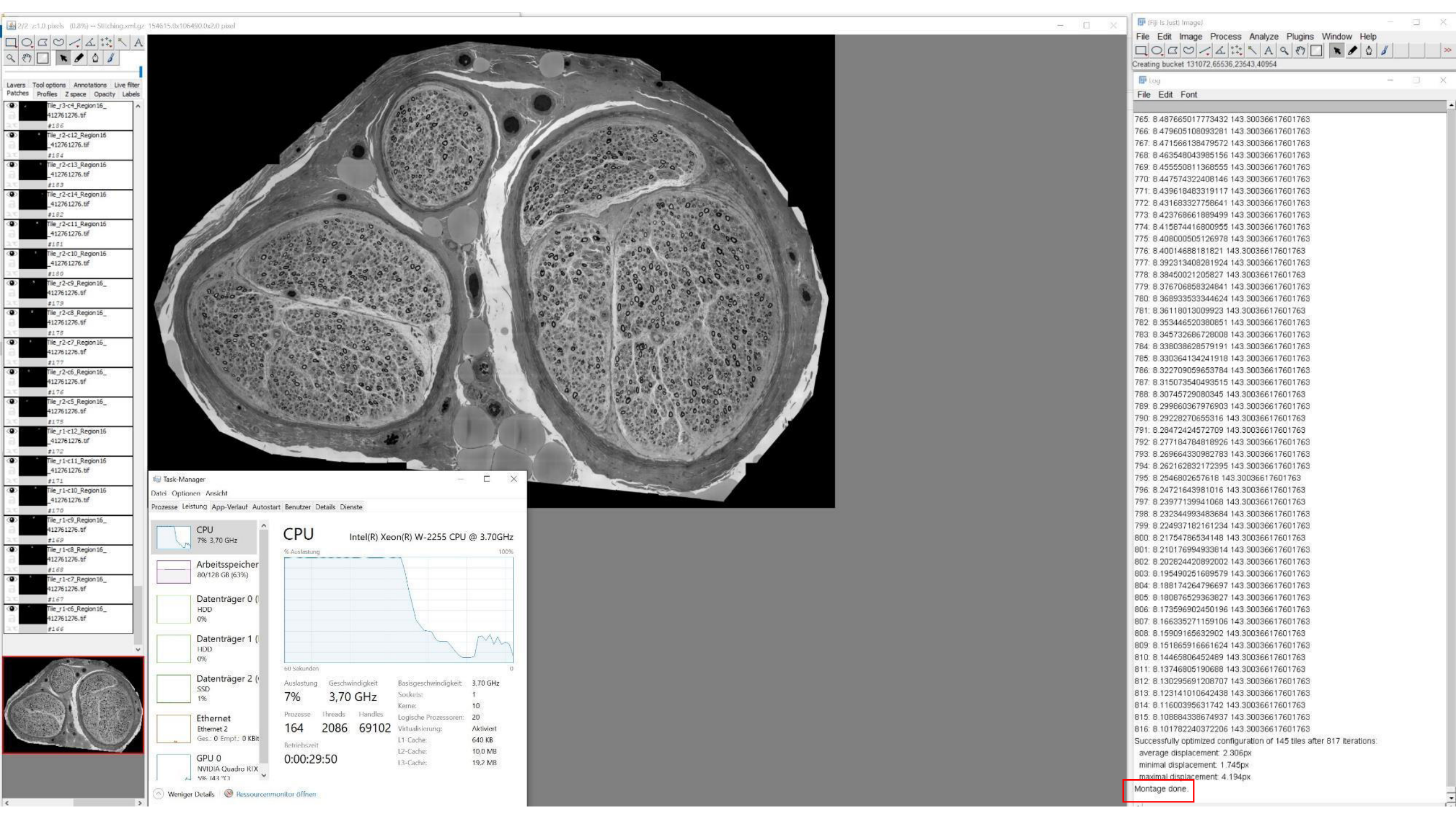
Log

File Edit Font

```

790 8 899193807361314 129.47646157981652
791 8 892895618696649 129.47646157981652
792 8 886613367953734 129.47646157981652
793 8 880346856837088 129.47646157981652
794 8 874096067466668 129.47646157981652
795 8 867861062791809 129.47646157981652
796 8 861641658469178 129.47646157981652
797 8 855437869700943 129.47646157981652
798 8 849249605729952 129.47646157981652
799 8 843076792039298 129.47646157981652
800 8 8369193374077 129.47646157981652
801 8 830777199467486 129.47646157981652
802 8 82465037233208 129.47646157981652
803 8 81853882138208 129.47646157981652
804 8 812442382984978 129.47646157981652
805 8 806361087485595 129.47646157981652
Successfully optimized configuration of 145 tiles after 806 iterations:
average displacement: 3.911px
minimal displacement: 2.686px
maximal displacement: 9.377px
Montage done:
====
Montaging layer z=1.0
2233 features extracted in tile 6 "Tile_r1-c12_Region16_412761276.tif" (took 19137 ms)
1835 features extracted in tile 4 "Tile_r1-c10_Region16_412761276.tif" (took 19902 ms)
2297 features extracted in tile 0 "Tile_r1-c6_Region16_412761276.tif" (took 20058 ms)
2629 features extracted in tile 3 "Tile_r1-c9_Region16_412761276.tif" (took 20043 ms)
1976 features extracted in tile 5 "Tile_r1-c11_Region16_412761276.tif" (took 20074 ms)
3543 features extracted in tile 7 "Tile_r2-c5_Region16_412761276.tif" (took 20168 ms)
1005 features extracted in tile 14 "Tile_r2-c14_Region16_412761276.tif" (took 19167 ms)
3897 features extracted in tile 17 "Tile_r3-c4_Region16_412761276.tif" (took 22057 ms)
3075 features extracted in tile 15 "Tile_r2-c13_Region16_412761276.tif" (took 22104 ms)
4025 features extracted in tile 2 "Tile_r1-c8_Region16_412761276.tif" (took 22995 ms)
3437 features extracted in tile 1 "Tile_r1-c7_Region16_412761276.tif" (took 23557 ms)
8850 features extracted in tile 10 "Tile_r2-c8_Region16_412761276.tif" (took 23698 ms)
3664 features extracted in tile 13 "Tile_r2-c11_Region16_412761276.tif" (took 22276 ms)
3965 features extracted in tile 12 "Tile_r2-c10_Region16_412761276.tif" (took 23369 ms)
8170 features extracted in tile 19 "Tile_r3-c6_Region16_412761276.tif" (took 23901 ms)
4519 features extracted in tile 11 "Tile_r2-c9_Region16_412761276.tif" (took 24432 ms)
5863 features extracted in tile 8 "Tile_r2-c6_Region16_412761276.tif" (took 25463 ms)
3833 features extracted in tile 18 "Tile_r3-c5_Region16_412761276.tif" (took 24072 ms)
5089 features extracted in tile 16 "Tile_r2-c12_Region16_412761276.tif" (took 24119 ms)
11443 features extracted in tile 9 "Tile_r2-c7_Region16_412761276.tif" (took 29874 ms)
1281 features extracted in tile 29 "Tile_r4-c2_Region16_412761276.tif" (took 13986 ms)
12156 features extracted in tile 20 "Tile_r3-c7_Region16_412761276.tif" (took 19063 ms)
5060 features extracted in tile 22 "Tile_r3-c9_Region16_412761276.tif" (took 18564 ms)
7423 features extracted in tile 23 "Tile_r3-c10_Region16_412761276.tif" (took 19079 ms)
11625 features extracted in tile 21 "Tile_r3-c8_Region16_412761276.tif" (took 19782 ms)
4860 features extracted in tile 30 "Tile_r4-c3_Region16_412761276.tif" (took 16064 ms)
491 features extracted in tile 28 "Tile_r3-c15_Region16_412761276.tif" (took 17095 ms)
9362 features extracted in tile 26 "Tile_r3-c13_Region16_412761276.tif" (took 20360 ms)
5512 features extracted in tile 27 "Tile_r3-c14_Region16_412761276.tif" (took 18892 ms)
10482 features extracted in tile 25 "Tile_r3-c12_Region16_412761276.tif" (took 21579 ms)
10053 features extracted in tile 24 "Tile_r3-c11_Region16_412761276.tif" (took 21876 ms)
3737 features extracted in tile 31 "Tile_r4-c4_Region16_412761276.tif" (took 18376 ms)
5959 features extracted in tile 33 "Tile_r4-c6_Region16_412761276.tif" (took 18376 ms)
3638 features extracted in tile 32 "Tile_r4-c5_Region16_412761276.tif" (took 19313 ms)

```

- Tile_f3-c4_Region16_412761276.tif #186
- Tile_f2-c12_Region16_412761276.tif #184
- Tile_f2-c13_Region16_412761276.tif #183
- Tile_f2-c14_Region16_412761276.tif #182
- Tile_f2-c11_Region16_412761276.tif #181
- Tile_f2-c10_Region16_412761276.tif #180
- Tile_f2-c9_Region16_412761276.tif #179
- Tile_f2-c8_Region16_412761276.tif #178
- Tile_f2-c7_Region16_412761276.tif #177
- Tile_f2-c6_Region16_412761276.tif #176
- Tile_f2-c5_Region16_412761276.tif #175
- Tile_f1-c12_Region16_412761276.tif #172
- Tile_f1-c11_Region16_412761276.tif #171
- Tile_f1-c10_Region16_412761276.tif #170
- Tile_f1-c9_Region16_412761276.tif #169
- Tile_f1-c8_Region16_412761276.tif #168
- Tile_f1-c7_Region16_412761276.tif #167
- Tile_f1-c6_Region16_412761276.tif #166

Task-Manager

Datei Optionen Ansicht

Prozesse Leistung App-Verlauf Autostart Benutzer Details Dienste

CPU
7% 3.70 GHz

Arbeitsspeicher
80/128 GB (63%)

Datenträger 0 (HDD)
0%

Datenträger 1 (HDD)
0%

Datenträger 2 (SSD)
1%

Ethernet Ethernet 2
Ges.: 0 Empf.: 0 KBit

GPU 0
NVIDIA Quadro RTX
5% (43 °C)

CPU Intel(R) Xeon(R) W-2255 CPU @ 3.70GHz

% Auslastung

60 Sekunden

Auslastung:	Geschwindigkeit:	Basisgeschwindigkeit:	3.70 GHz
7%	3,70 GHz	Sockel(s):	1
Prozesse:	Threads:	Kerne:	10
164	2086	Logische Prozessoren:	20
Retriebszeit:	Virtualisierung:	Aktiviert	
0:00:29:50	L1-Cache:	640 KB	
	L2-Cache:	10.0 MB	
	L3-Cache:	19.2 MB	

Weniger Details Ressourcenmonitor öffnen

(F) Is Just Image

File Edit Image Process Analyze Plugins Window Help

Creating bucket 131072.65536.23543.40954

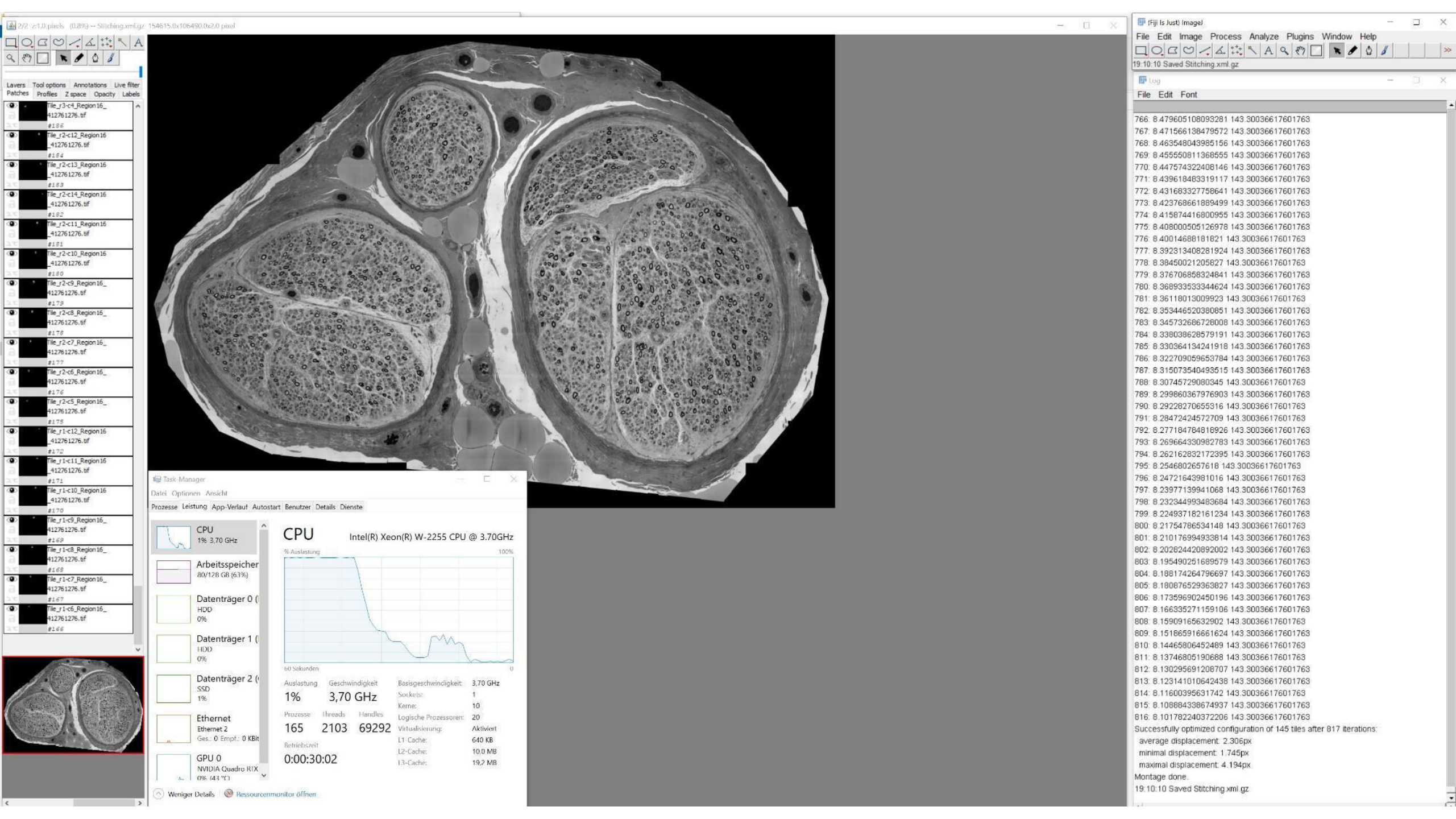
Log

File Edit Font

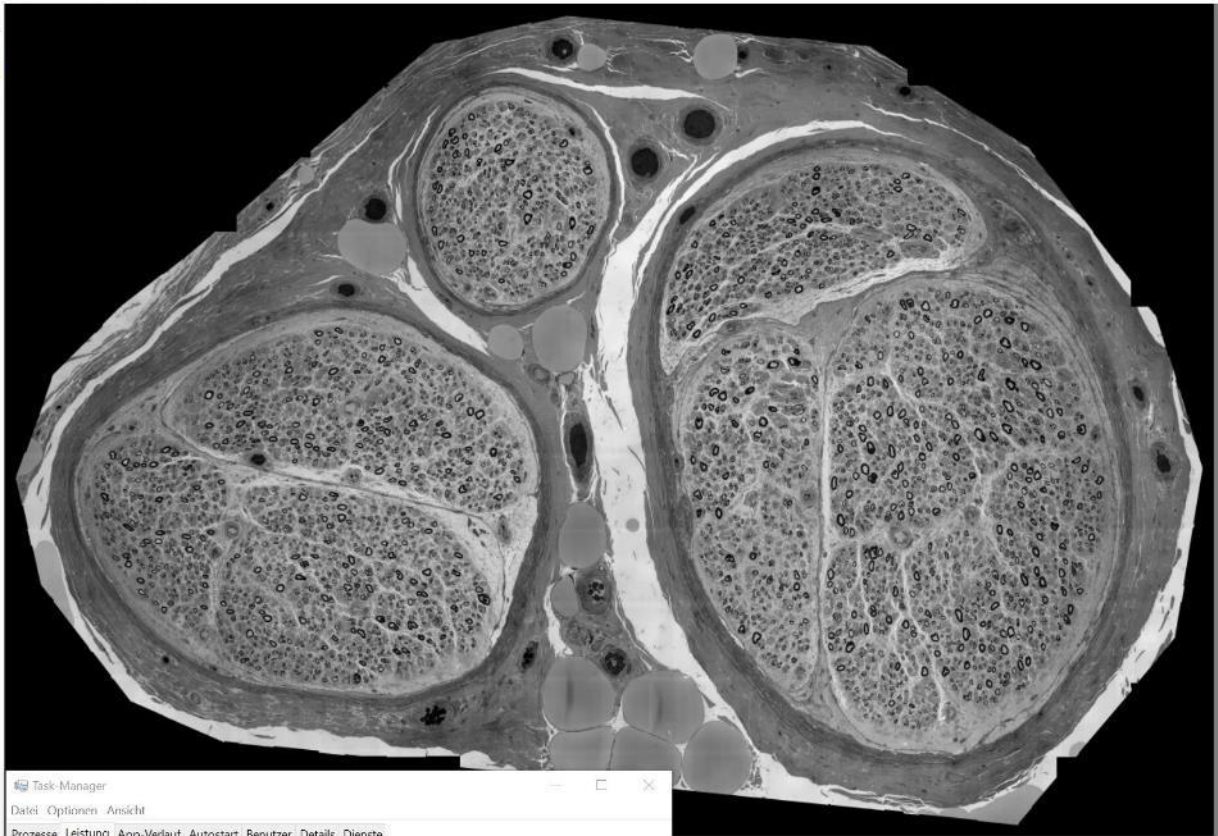
```
765: 8 487665017773432 143.30036617601763
766: 8 479605108093281 143.30036617601763
767: 8 471566138479572 143.30036617601763
768: 8 463548043985156 143.30036617601763
769: 8 455550811368555 143.30036617601763
770: 8 447574322408146 143.30036617601763
771: 8 439618483319117 143.30036617601763
772: 8 431683327758641 143.30036617601763
773: 8 423768661889499 143.30036617601763
774: 8 415874416800955 143.30036617601763
775: 8 408000505126978 143.30036617601763
776: 8 40014688181821 143.30036617601763
777: 8 392313408281924 143.30036617601763
778: 8 38450021205827 143.30036617601763
779: 8 376706858324841 143.30036617601763
780: 8 36893353344624 143.30036617601763
781: 8 36118013009923 143.30036617601763
782: 8 353446520380851 143.30036617601763
783: 8 345732686728008 143.30036617601763
784: 8 338038628579191 143.30036617601763
785: 8 330364134241918 143.30036617601763
786: 8 322709059653784 143.30036617601763
787: 8 315073540493515 143.30036617601763
788: 8 30745729080345 143.30036617601763
789: 8 299860367976903 143.30036617601763
790: 8 29228270655316 143.30036617601763
791: 8 28472424572709 143.30036617601763
792: 8 277184784818926 143.30036617601763
793: 8 269664330982783 143.30036617601763
794: 8 262162832172395 143.30036617601763
795: 8 2546802657618 143.30036617601763
796: 8 24721643981016 143.30036617601763
797: 8 23977139941068 143.30036617601763
798: 8 232344993483684 143.30036617601763
799: 8 224937182161234 143.30036617601763
800: 8 21754786534148 143.30036617601763
801: 8 21017894933814 143.30036617601763
802: 8 202824420892002 143.30036617601763
803: 8 195490251689579 143.30036617601763
804: 8 188174264796697 143.30036617601763
805: 8 180876529363827 143.30036617601763
806: 8 173596902450196 143.30036617601763
807: 8 166335271159106 143.30036617601763
808: 8 15909165632902 143.30036617601763
809: 8 151865916661624 143.30036617601763
810: 8 14465806452489 143.30036617601763
811: 8 13746805190688 143.30036617601763
812: 8 130295691208707 143.30036617601763
813: 8 123141010642438 143.30036617601763
814: 8 11600395631742 143.30036617601763
815: 8 108884338674937 143.30036617601763
816: 8 101782240372206 143.30036617601763
```

Successfully optimized configuration of 145 tiles after 817 iterations:
average displacement: 2.306px
minimal displacement: 1.745px
maximal displacement: 4.194px

Montage done.



- Layers: Tool options Annotations Live filter
Patches Profiles Z space Opacity Labels
- Tile_f3-c4_Region16_412761276.tif #186
 - Tile_f2-c12_Region16_412761276.tif #184
 - Tile_f2-c13_Region16_412761276.tif #183
 - Tile_f2-c14_Region16_412761276.tif #182
 - Tile_f2-c11_Region16_412761276.tif #181
 - Tile_f2-c10_Region16_412761276.tif #180
 - Tile_f2-c9_Region16_412761276.tif #179
 - Tile_f2-c8_Region16_412761276.tif #178
 - Tile_f2-c7_Region16_412761276.tif #177
 - Tile_f2-c6_Region16_412761276.tif #176
 - Tile_f2-c5_Region16_412761276.tif #175
 - Tile_f1-c12_Region16_412761276.tif #172
 - Tile_f1-c11_Region16_412761276.tif #171
 - Tile_f1-c10_Region16_412761276.tif #170
 - Tile_f1-c9_Region16_412761276.tif #169
 - Tile_f1-c8_Region16_412761276.tif #168
 - Tile_f1-c7_Region16_412761276.tif #167
 - Tile_f1-c6_Region16_412761276.tif #166



Task-Manager

Dateti Optionen Ansicht

Prozesse Leistung App-Verlauf Autostart Benutzer Details Dienste

CPU
1% 3.70 GHz

Arbeitsspeicher
80/128 GB (63%)

Datenträger 0 (HDD)
0%

Datenträger 1 (HDD)
0%

Datenträger 2 (SSD)
1%

Ethernet Ethernet 2
Ges.: 0 Empf.: 0 KBit

GPU 0
NVIDIA Quadro RTX
0% (43 °C)

CPU Intel(R) Xeon(R) W-2255 CPU @ 3.70GHz

% Auslastung

60 Sekunden

Auslastung: 1% Geschwindigkeit: 3,70 GHz Basisgeschwindigkeit: 3,70 GHz
Prozesse: 165 Threads: 2103 Handles: 69292 Sockets: 1
Kerne: 10 Logische Prozessoren: 20 Virtuosisierung: Aktiviert
Betriebszeit: 0:00:30:02 L1-Cache: 640 KB L2-Cache: 10.0 MB L3-Cache: 19.2 MB

Weniger Details Ressourcenmonitor öffnen

(Fiji Is Just) Image

File Edit Image Process Analyze Plugins Window Help

19:10:10 Saved Stitching.xml.gz

Log

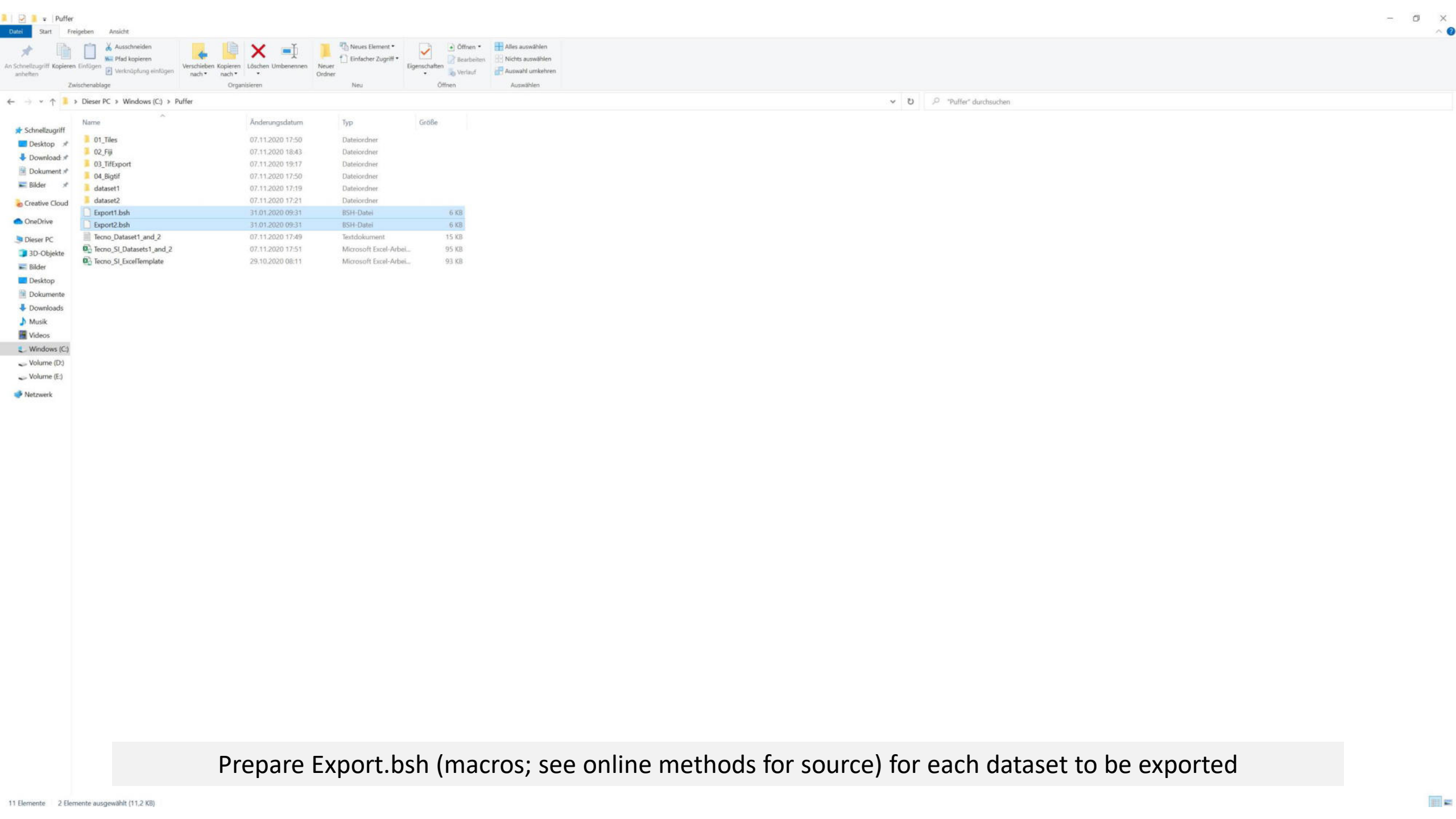
File Edit Font

```

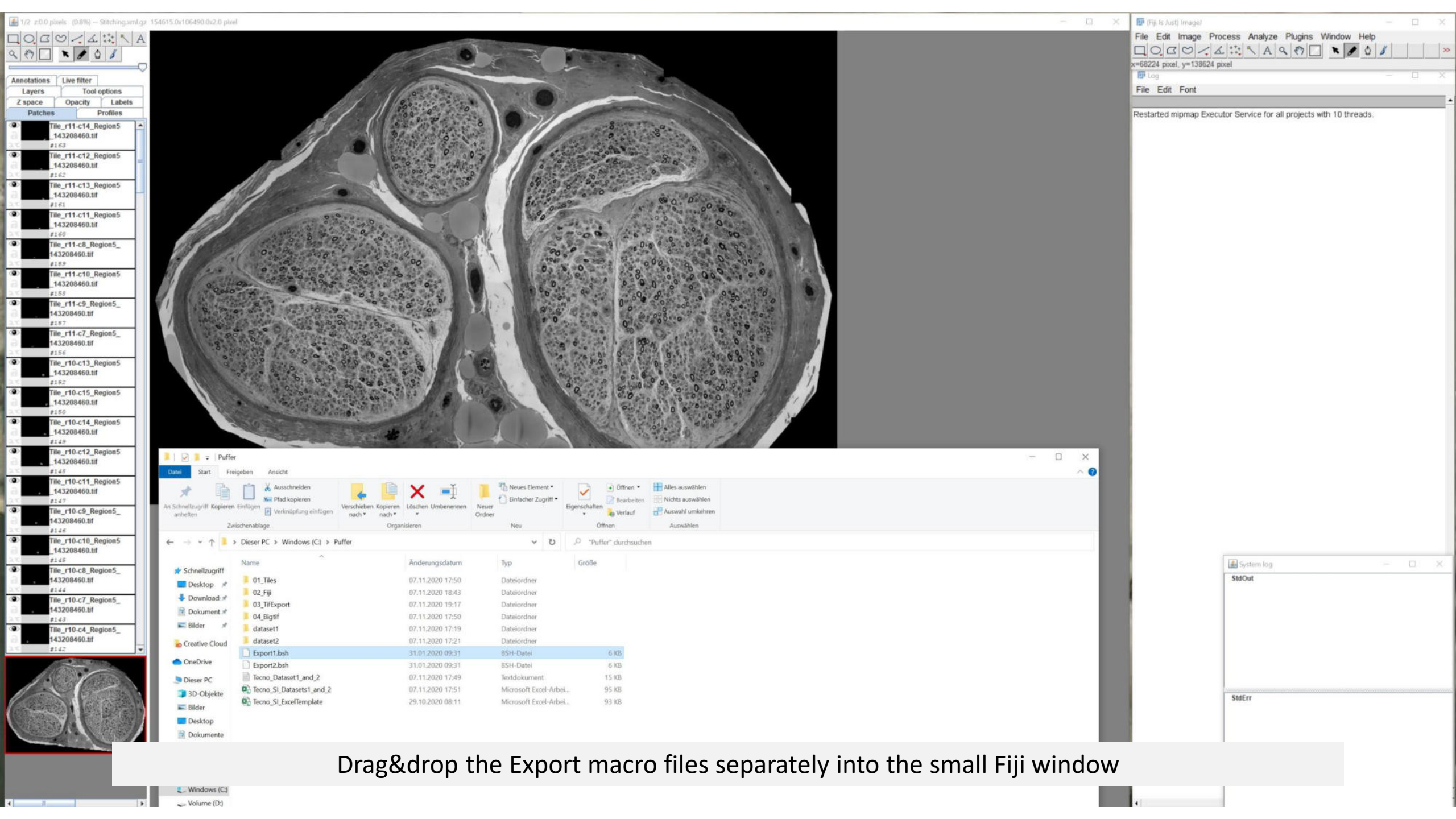
766: 8 479605108093281 143 30036617601763
767: 8 471566138479572 143 30036617601763
768: 8 463548043985156 143 30036617601763
769: 8 455550811368555 143 30036617601763
770: 8 447574322408146 143 30036617601763
771: 8 439618483319117 143 30036617601763
772: 8 431683327758641 143 30036617601763
773: 8 423768661889499 143 30036617601763
774: 8 415874416800955 143 30036617601763
775: 8 408000505126978 143 30036617601763
776: 8 40014688181821 143 30036617601763
777: 8 392313408281924 143 30036617601763
778: 8 38450021205827 143 30036617601763
779: 8 376706858324841 143 30036617601763
780: 8 368933533344624 143 30036617601763
781: 8 36118013009923 143 30036617601763
782: 8 353446520380851 143 30036617601763
783: 8 345732686728008 143 30036617601763
784: 8 338038628579191 143 30036617601763
785: 8 330364134241918 143 30036617601763
786: 8 322709059653784 143 30036617601763
787: 8 315073540493515 143 30036617601763
788: 8 30745729080345 143 30036617601763
789: 8 299860367976903 143 30036617601763
790: 8 29228270655316 143 30036617601763
791: 8 28472424572709 143 30036617601763
792: 8 277184784818926 143 30036617601763
793: 8 269664330982783 143 30036617601763
794: 8 262162832172395 143 30036617601763
795: 8 2546802657618 143 30036617601763
796: 8 24721643981016 143 30036617601763
797: 8 23977139941068 143 30036617601763
798: 8 232344993483684 143 30036617601763
799: 8 224937182161234 143 30036617601763
800: 8 21754786534148 143 30036617601763
801: 8 210176994933814 143 30036617601763
802: 8 202824420892002 143 30036617601763
803: 8 195490251689579 143 30036617601763
804: 8 188174264796697 143 30036617601763
805: 8 180876529363827 143 30036617601763
806: 8 173596902450196 143 30036617601763
807: 8 166335271159106 143 30036617601763
808: 8 15909165632902 143 30036617601763
809: 8 151865916661624 143 30036617601763
810: 8 14465806452489 143 30036617601763
811: 8 13746805190688 143 30036617601763
812: 8 130295691208707 143 30036617601763
813: 8 123141010642438 143 30036617601763
814: 8 11600395631742 143 30036617601763
815: 8 10888438674937 143 30036617601763
816: 8 101782240372206 143 30036617601763

```

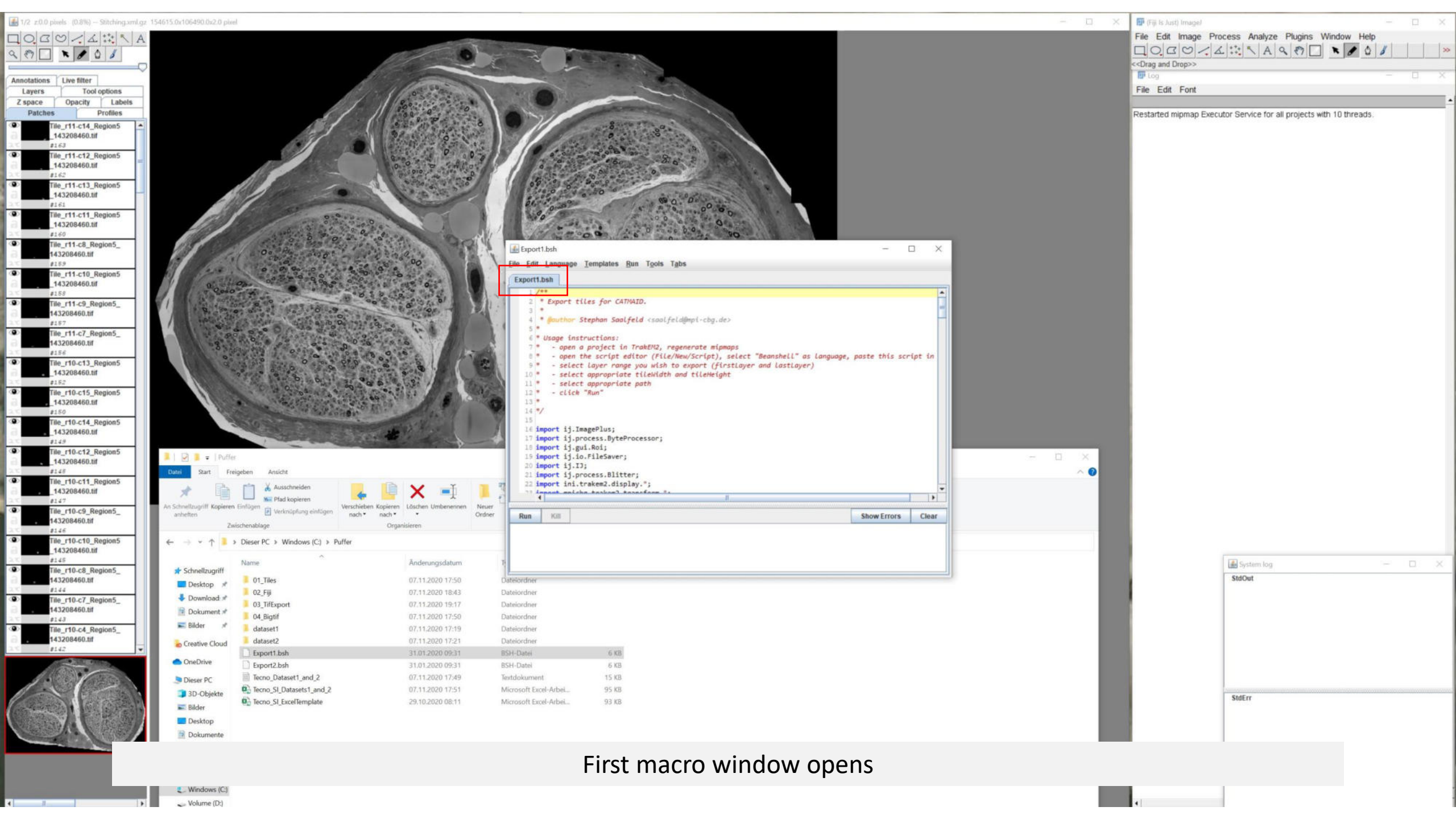
Successfully optimized configuration of 145 tiles after 817 iterations:
average displacement: 2.306px
minimal displacement: 1.745px
maximal displacement: 4.194px
Montage done.
19:10:10 Saved Stitching.xml.gz



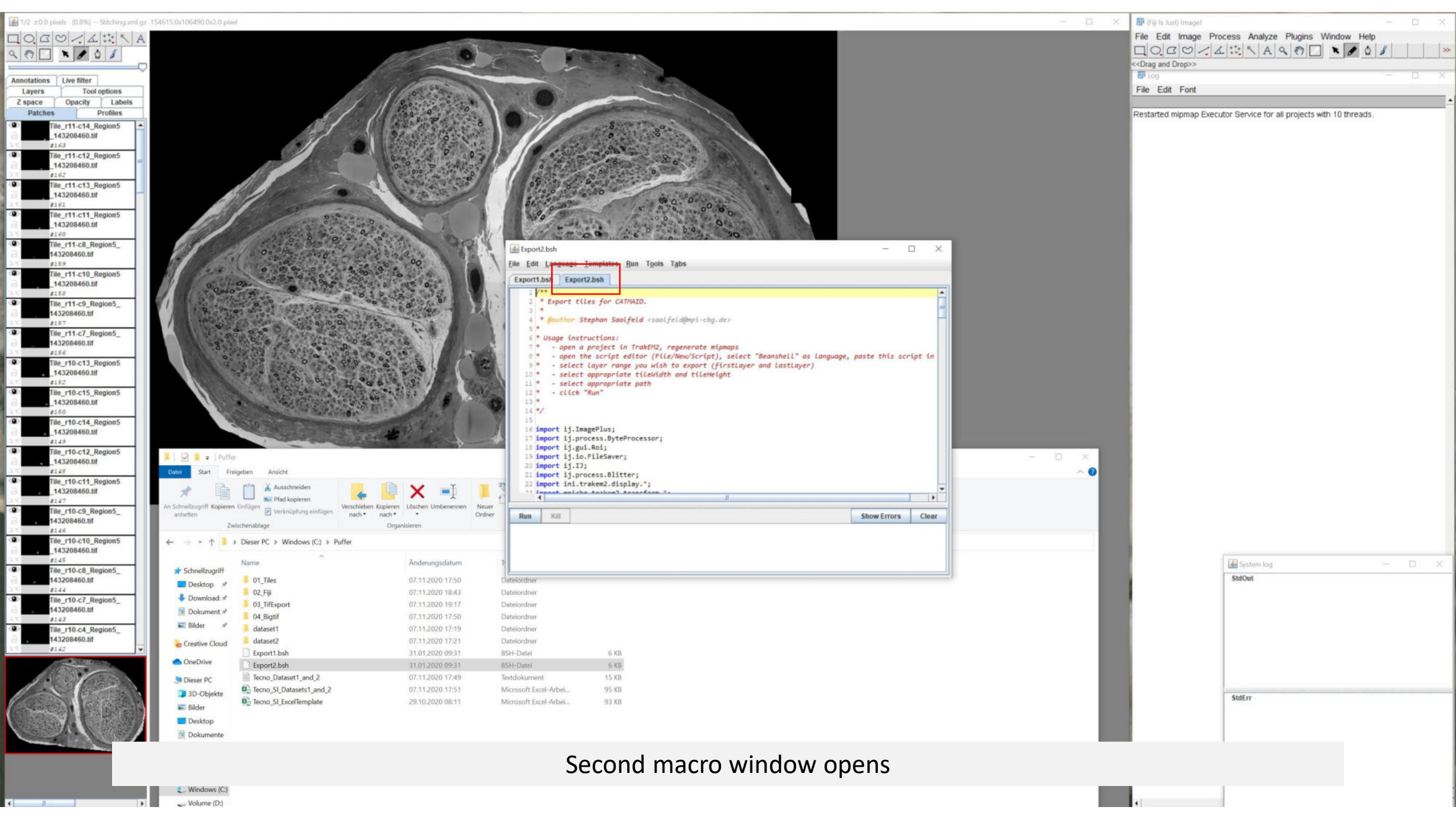
Prepare Export.bsh (macros; see online methods for source) for each dataset to be exported



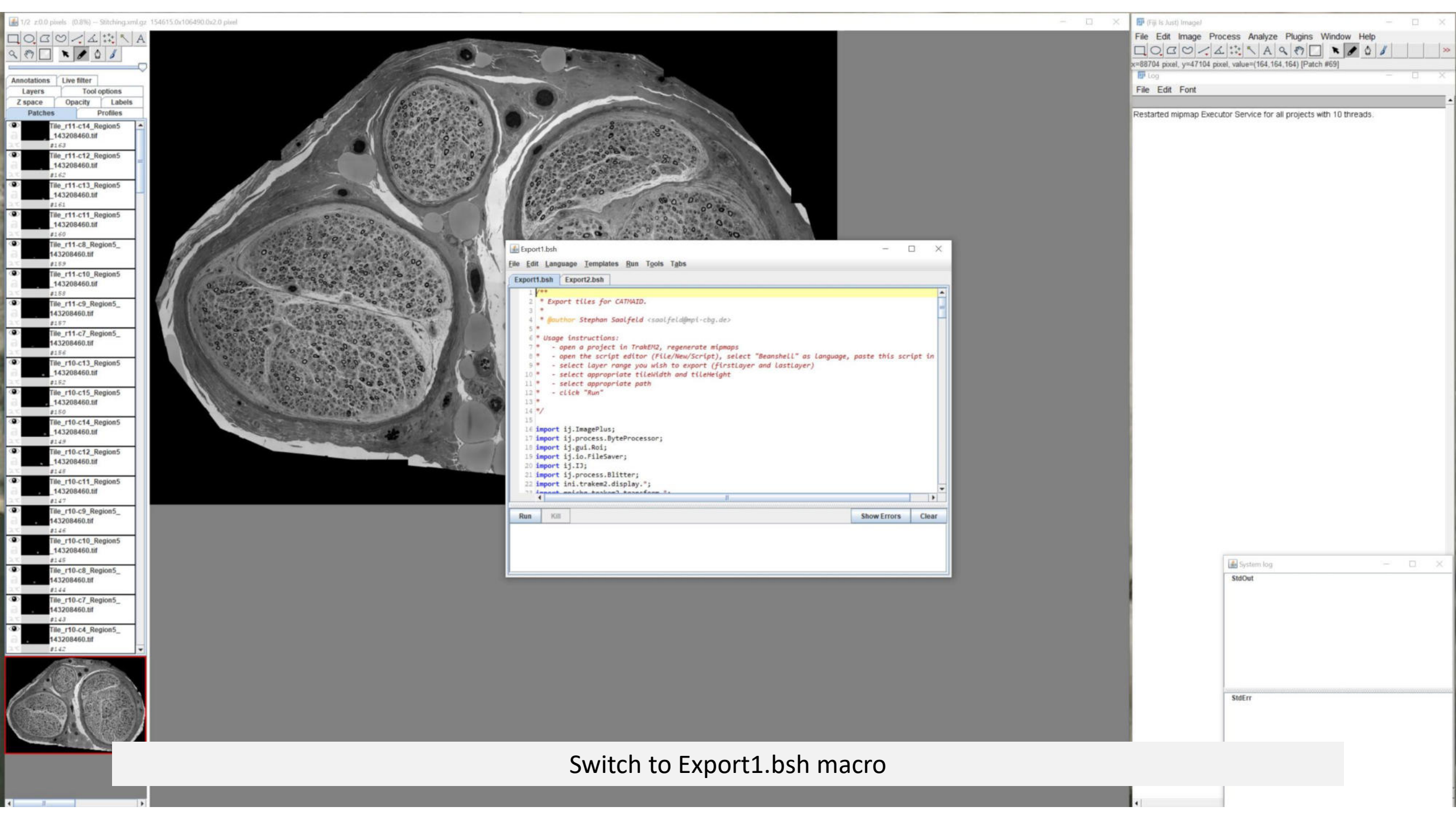
Drag&drop the Export macro files separately into the small Fiji window



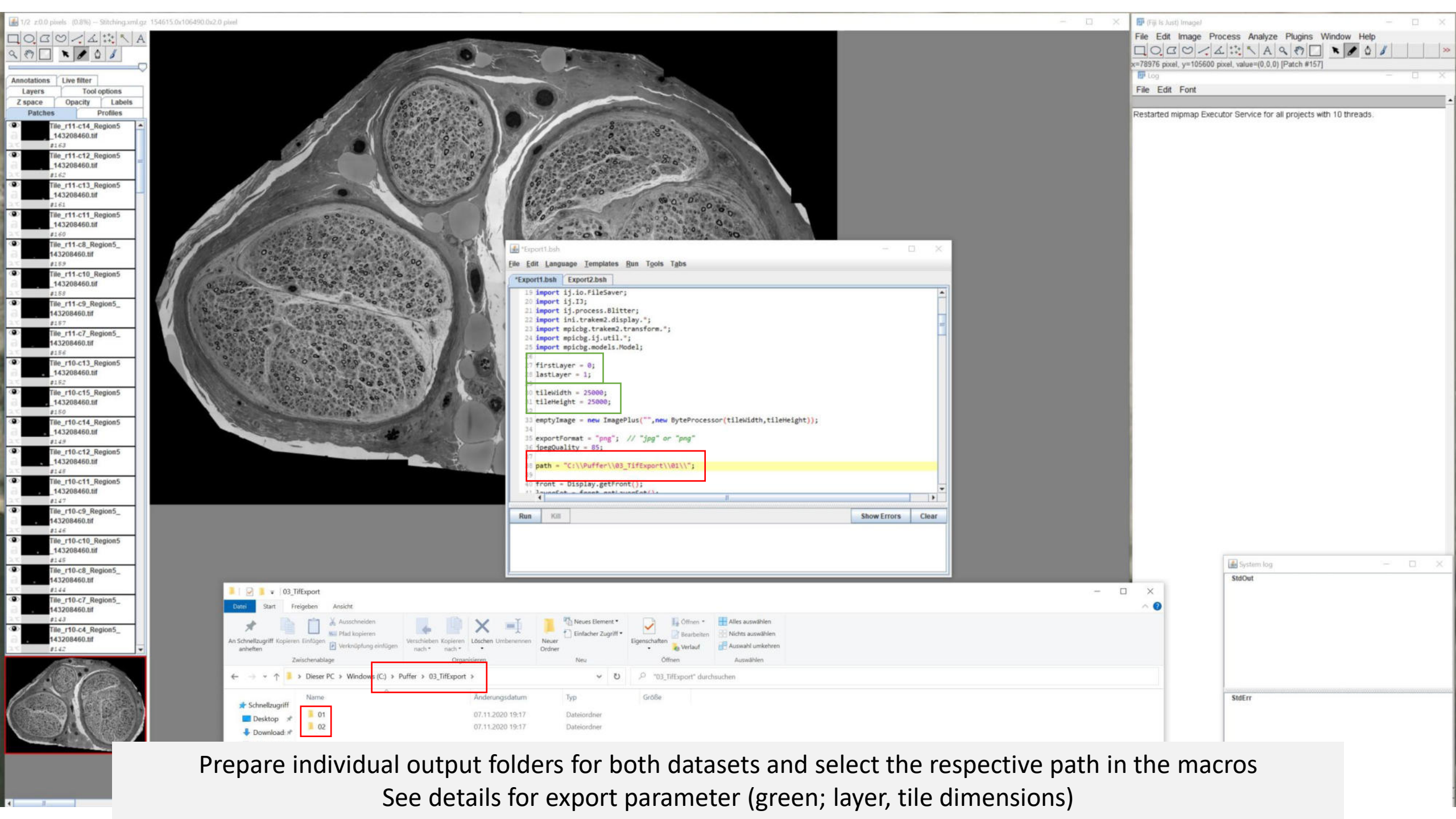
First macro window opens



Second macro window opens



Switch to Export1.bsh macro



Prepare individual output folders for both datasets and select the respective path in the macros
See details for export parameter (green; layer, tile dimensions)


```
47 }
48 left = roi.getBounds().x;
49 top = roi.getBounds().y;
50 w = roi.getBounds().width;
51 h = roi.getBounds().height;
52
53 ImagePlus openAndDelete(path)
54 {
55     file = new File(path);
56     if ( file.exists() )
57     {
58         imp = new ImagePlus( path );
59 //         file.delete();
60         return imp;
61     }
62     else
63         return emptyImage;
64 }
65
66 emptySections = new ArrayList();
67
68 for ( int l = firstLayer; l <= lastLayer; ++l )
```

Run Kill Show Errors Clear

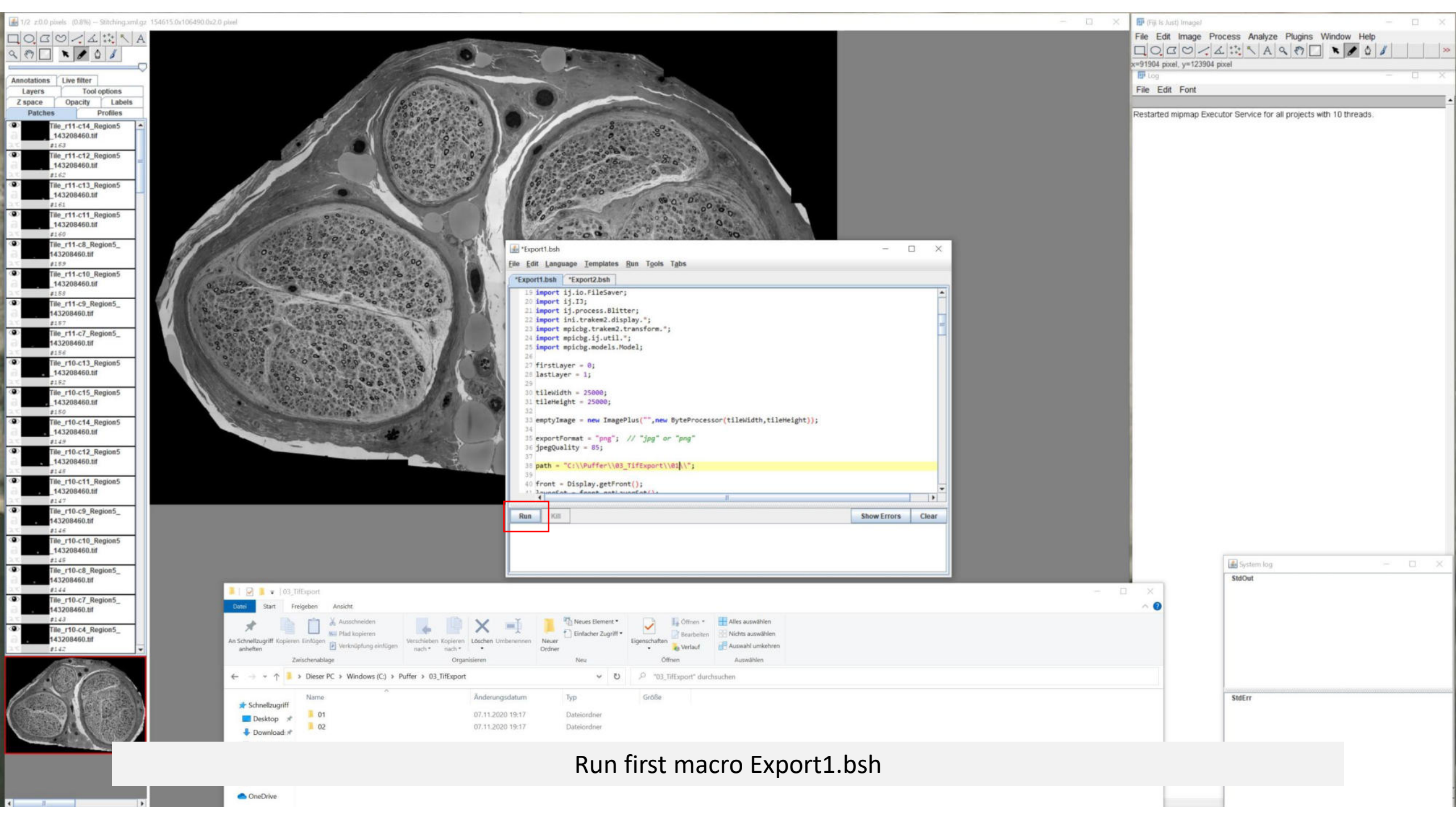
Started Export2.bsh at Sat Nov 07 19:19:41 CET 2020

```
92     layer,
93     box,
94     1.0,
95     -1,
96     ImagePlus.GRAY8,
97     Patch.class,
98     true );
99
100     fileSaver = new FileSaver(impTile);
101 //     if (exportFormat == "png") {
102 //         fileSaver.saveAsPng(dirPath + "/" + (y / tileHeight) + "_" + (x / tileWidth) + "_0.png");
103 //     } else if (exportFormat == "jpg") {
104 //         fileSaver.setJpegQuality(jpegQuality);
105 //         fileSaver.saveAsJpeg(dirPath + "/" + (y / tileHeight) + "_" + (x / tileWidth) + "_0.jpg");
106 //     } else {
107 //         IJ.log("ERROR selecting file format.");
108 //     }
109     fileSaver.saveAsTiff(dirPath + "/" + (y / tileHeight) + "_" + (x / tileWidth) + "_0.tif");
110 }
111 }
112
113 /* Level [1,n] tiles */
```

Run Kill Show Errors Clear

Started Export2.bsh at Sat Nov 07 19:19:41 CET 2020

Modifications of the CATMAID macro to only export large tif tiles
Left; line 59 commented to avoid that the large tiles are deleted
Right; lines 101-108 commented to only export tif tiles



```
*Export1.bsh
File Edit Language Templates Run Tools Tabs

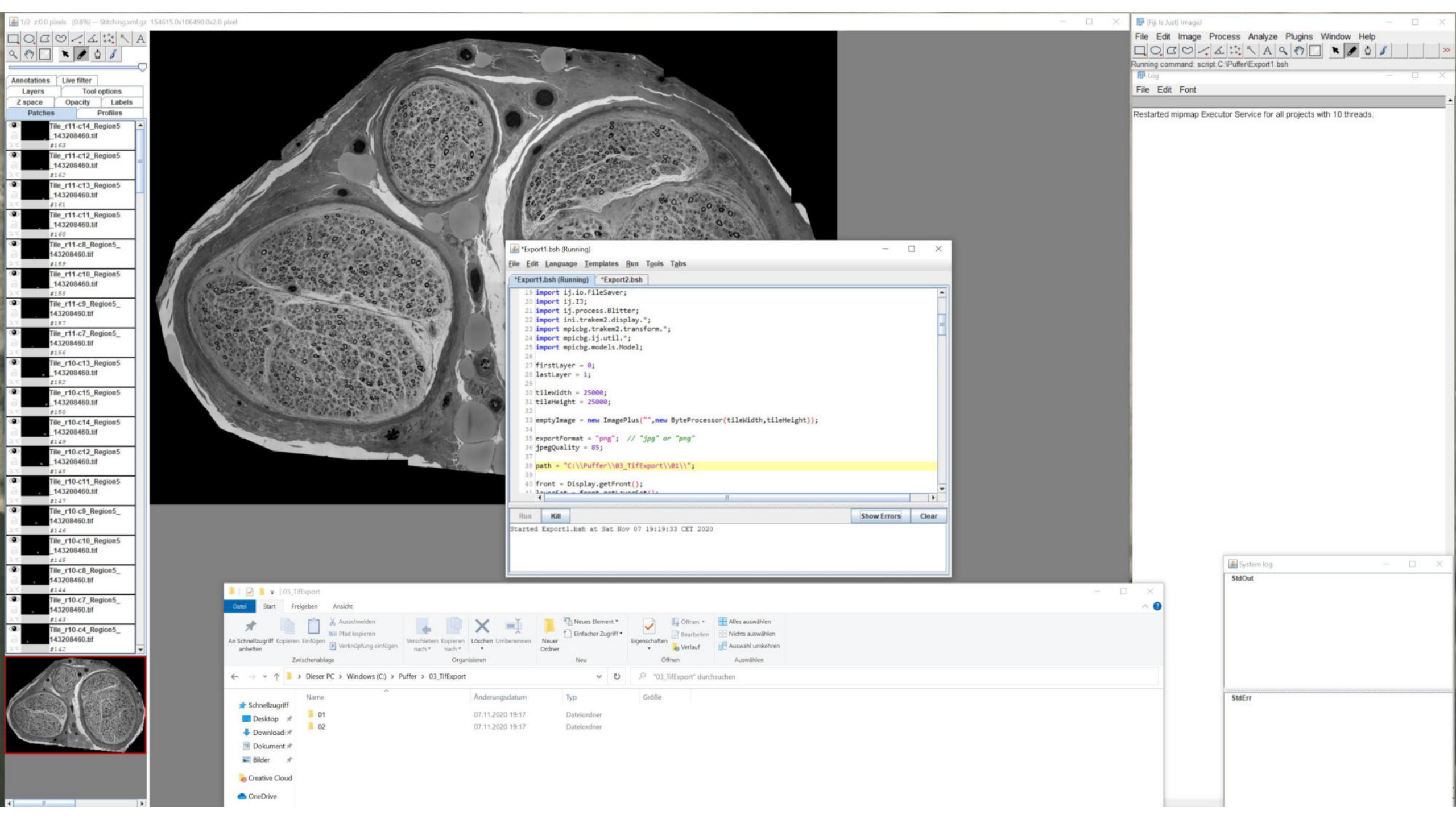
*Export1.bsh *Export2.bsh
15 import ij.io.FileSaver;
20 import ij.IJ;
21 import ij.process.Blitter;
22 import ini.trakem2.display.*;
23 import mpicbg.trakem2.transform.*;
24 import mpicbg.ij.util.*;
25 import mpicbg.models.Model;
26
27 firstLayer = 0;
28 lastLayer = 1;
29
30 tilewidth = 25000;
31 tileheight = 25000;
32
33 emptyImage = new ImagePlus("", new ByteProcessor(tilewidth, tileheight));
34
35 exportFormat = "png"; // "jpg" or "png"
36 jpegQuality = 85;
37
38 path = "C:\\Puffer\\03_TifExport\\01\\";
39
40 front = Display.getFront();
41 front.set( front.getNextWindow() );
42 front.show();

Run Show Errors Clear
```

File Explorer: D:\Puffer\03_TifExport

Name	Änderungsdatum	Typ	Größe
01	07.11.2020 19:17	Dateiordner	
02	07.11.2020 19:17	Dateiordner	

Run first macro Export1.bsh



- Annotations Live filter
- Layers Tool options
- Z space Opacity Labels
- Patches Profiles
- Tile_r11-c14_Region5_143208460.tif #163
- Tile_r11-c12_Region5_143208460.tif #162
- Tile_r11-c13_Region5_143208460.tif #161
- Tile_r11-c11_Region5_143208460.tif #160
- Tile_r11-c8_Region5_143208460.tif #159
- Tile_r11-c10_Region5_143208460.tif #158
- Tile_r11-c9_Region5_143208460.tif #157
- Tile_r11-c7_Region5_143208460.tif #156
- Tile_r10-c13_Region5_143208460.tif #155
- Tile_r10-c15_Region5_143208460.tif #154
- Tile_r10-c14_Region5_143208460.tif #149
- Tile_r10-c12_Region5_143208460.tif #148
- Tile_r10-c11_Region5_143208460.tif #147
- Tile_r10-c9_Region5_143208460.tif #146
- Tile_r10-c10_Region5_143208460.tif #145
- Tile_r10-c8_Region5_143208460.tif #144
- Tile_r10-c7_Region5_143208460.tif #143
- Tile_r10-c4_Region5_143208460.tif #142

```
*Export1.bsh (Running)
File Edit Language Templates Run Tools Tabs

*Export1.bsh (Running) *Export2.bsh

15 import ij.io.FileSaver;
20 import ij.IJ;
21 import ij.process.Blitter;
22 import ini.trakem2.display.*;
23 import mpicbg.trakem2.transform.*;
24 import mpicbg.ij.util.*;
25 import mpicbg.models.Model;
26
27 firstLayer = 0;
28 lastLayer = 1;
29
30 tilewidth = 25000;
31 tileheight = 25000;
32
33 emptyImage = new ImagePlus("", new ByteProcessor(tilewidth, tileheight));
34
35 exportFormat = "png"; // "jpg" or "png"
36 jpegQuality = 85;
37
38 path = "C:\\Puffer\\03_TifExport\\01\\";
39
40 front = Display.getFront();
41 front.setFront(emptyImage);

Run Kill Show Errors Clear

Started Export1.bsh at Sat Nov 07 19:19:33 CET 2020
```

Restarted mipmap Executor Service for all projects with 10 threads.

File Explorer window showing the directory structure for the export process.

Path: Dieser PC > Windows (C) > Puffer > 03_TifExport

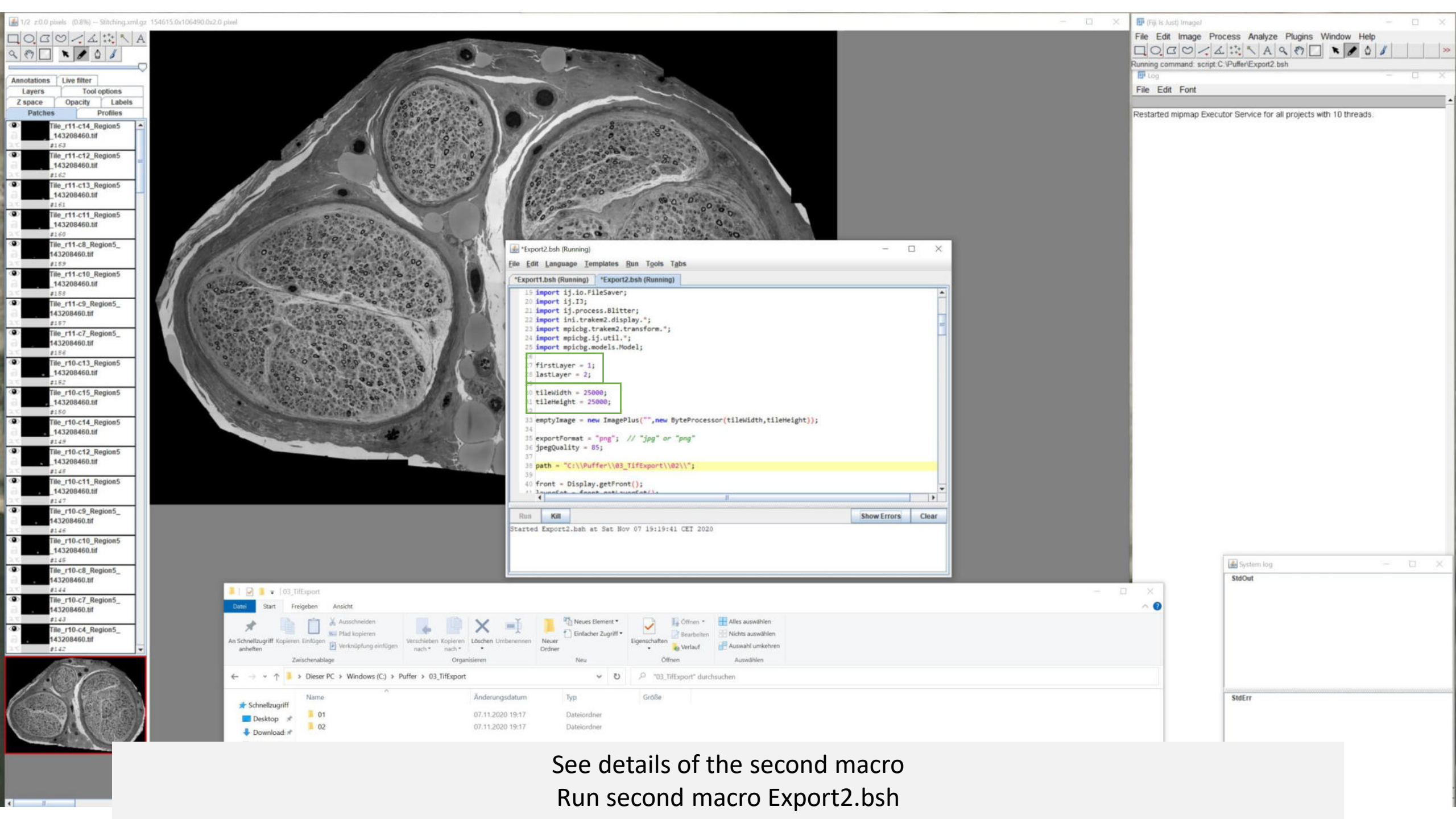
Name	Änderungsdatum	Typ	Größe
01	07.11.2020 19:17	Dateiordner	
02	07.11.2020 19:17	Dateiordner	

System log window showing the output of the export process.

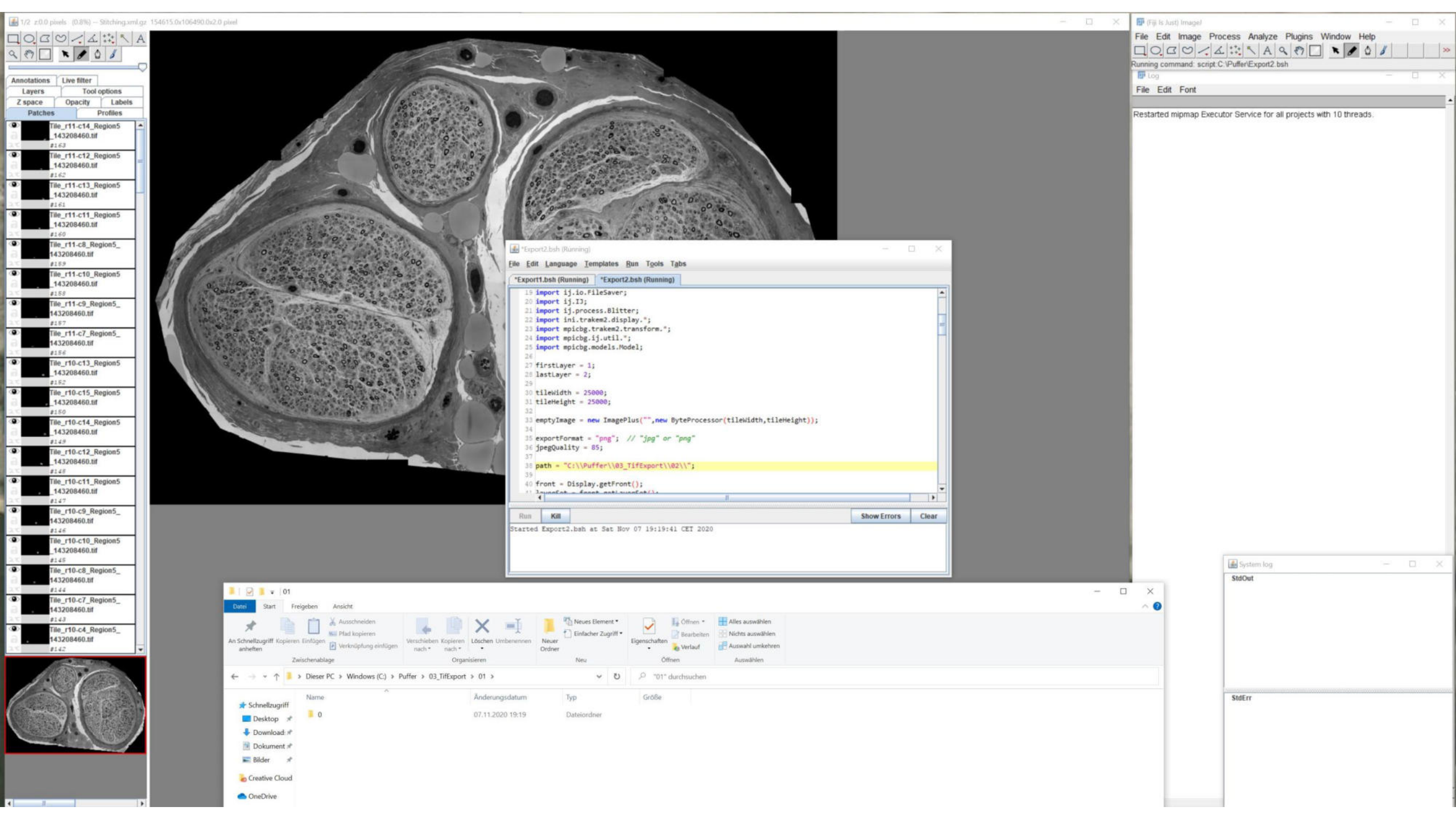
System log

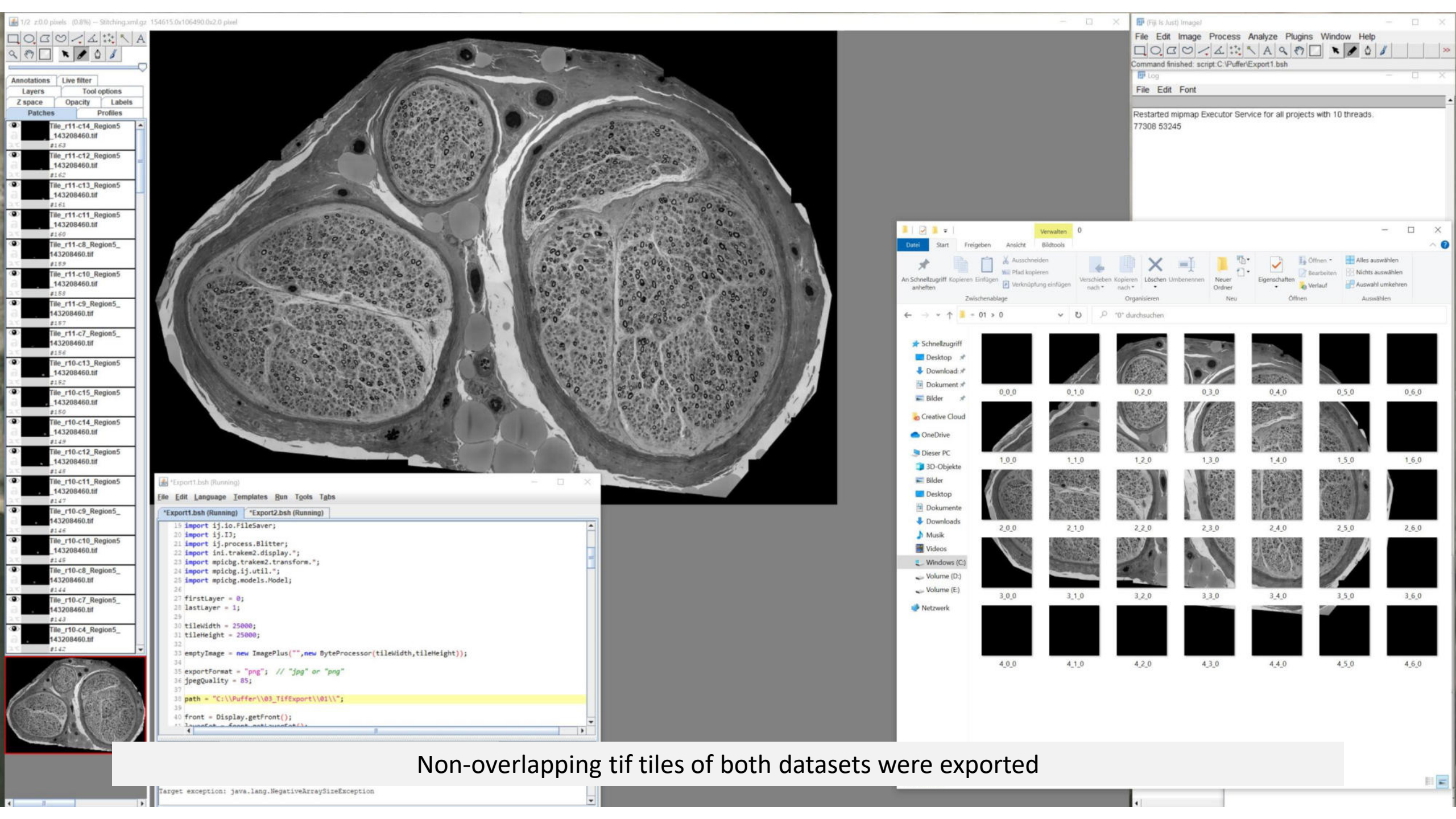
StdOut

StdErr



See details of the second macro
Run second macro Export2.bsh





Non-overlapping tif tiles of both datasets were exported


Annotations Live filter

Layers Tool options

Z space Opacity Labels

Patches Profiles

- Tile_r11-c14_Region5_143208460.tif #163
- Tile_r11-c12_Region5_143208460.tif #162
- Tile_r11-c13_Region5_143208460.tif #161
- Tile_r11-c11_Region5_143208460.tif #160
- Tile_r11-c8_Region5_143208460.tif #159
- Tile_r11-c10_Region5_143208460.tif #158
- Tile_r11-c9_Region5_143208460.tif #157
- Tile_r11-c7_Region5_143208460.tif #156
- Tile_r10-c13_Region5_143208460.tif #155
- Tile_r10-c15_Region5_143208460.tif #150
- Tile_r10-c14_Region5_143208460.tif #149
- Tile_r10-c12_Region5_143208460.tif #148
- Tile_r10-c11_Region5_143208460.tif #147
- Tile_r10-c9_Region5_143208460.tif #146
- Tile_r10-c10_Region5_143208460.tif #145
- Tile_r10-c8_Region5_143208460.tif #144
- Tile_r10-c7_Region5_143208460.tif #143
- Tile_r10-c4_Region5_143208460.tif #142




```

*Export2.bsh (Running)
File Edit Language Templates Run Tools Tabs

*Export1.bsh *Export2.bsh
19 import ij.io.FileSaver;
20 import ij.IJ;
21 import ij.process.Blitter;
22 import ini.trakem2.display.*;
23 import mpicbg.trakem2.transform.*;
24 import mpicbg.ij.util.*;
25 import mpicbg.models.Model;
26
27 firstLayer = 1;
28 lastLayer = 2;
29
30 tilewidth = 25000;
31 tileheight = 25000;
32
33 emptyImage = new ImagePlus("", new ByteProcessor(tilewidth, tileheight));
34
35 exportFormat = "png"; // "jpg" or "png"
36 jpegQuality = 85;
37
38 path = "C:\\Puffer\\103_TifExport\\102\\";
39
40 front = Display.getFront();
41

```

Run Kill Show Output Clear

Sourced file: null : Object constructor : at Line: 147 : in file: <unknown file> : new ByteProcessor (tileWidth * 2 , tileHeight * 2)

Target exception: java.lang.NegativeArraySizeException

(Puffer is Just) ImageJ

File Edit Image Process Analyze Plugins Window Help

Command finished: script.C:\Puffer\Export2.bsh

Log

File Edit Font

Restarted mipmap Executor Service for all projects with 10 threads.
77308 53245
77308 53245

Verwalten 0

Daten Start Freigeben Ansicht Bildtools

An Schnellzugriff anheften Kopieren Einfügen Zwischenablage

Ausschneiden Pfad kopieren Verknüpfung einfügen Verschieben Kopieren nach Löschen Umbenennen Organisieren

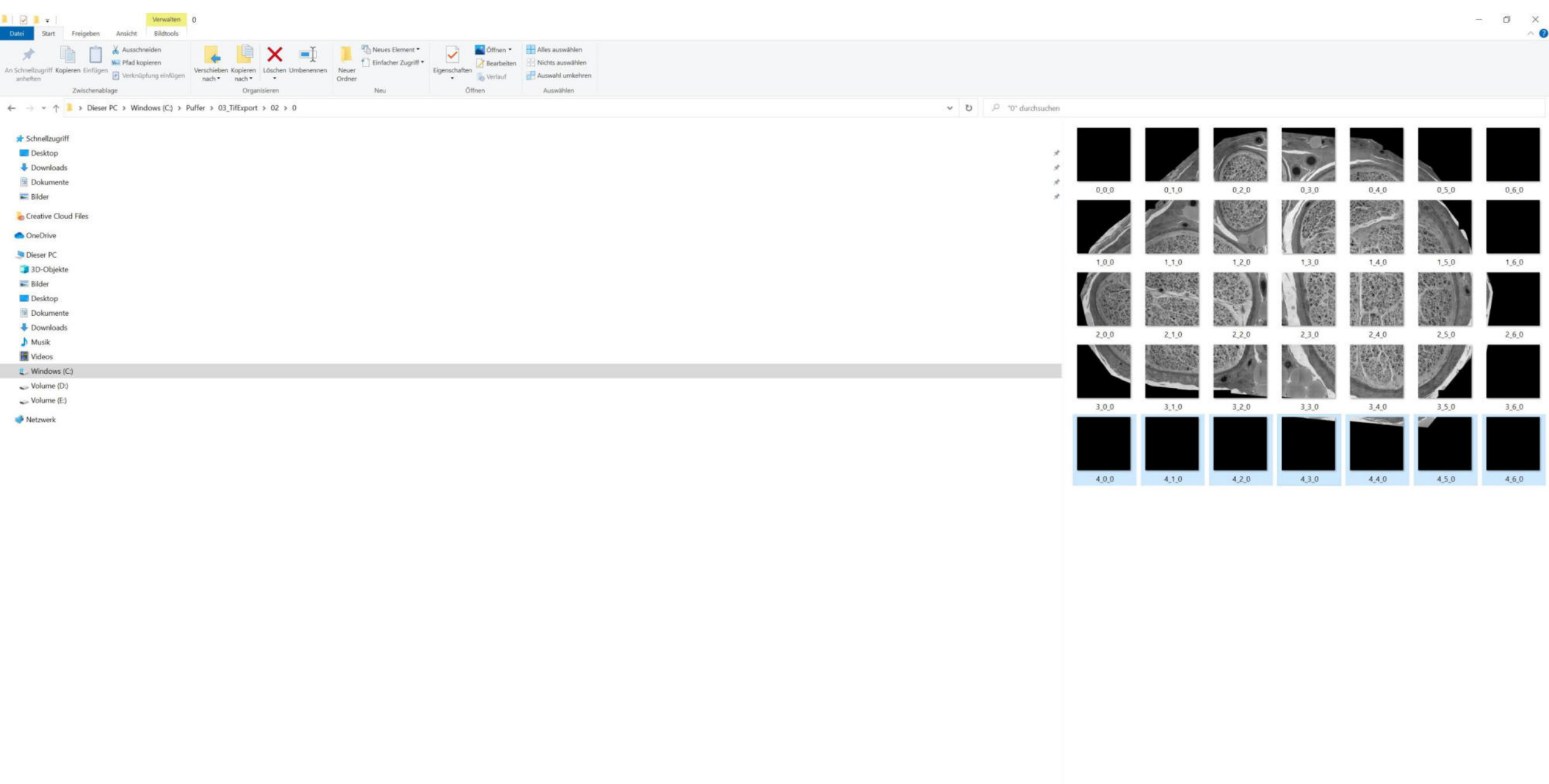
Neuer Ordner Eigenschaft Bearbeiten Öffnen Verlauf

Alle auswählen Nichts auswählen Auswahl umkehren Auswählen

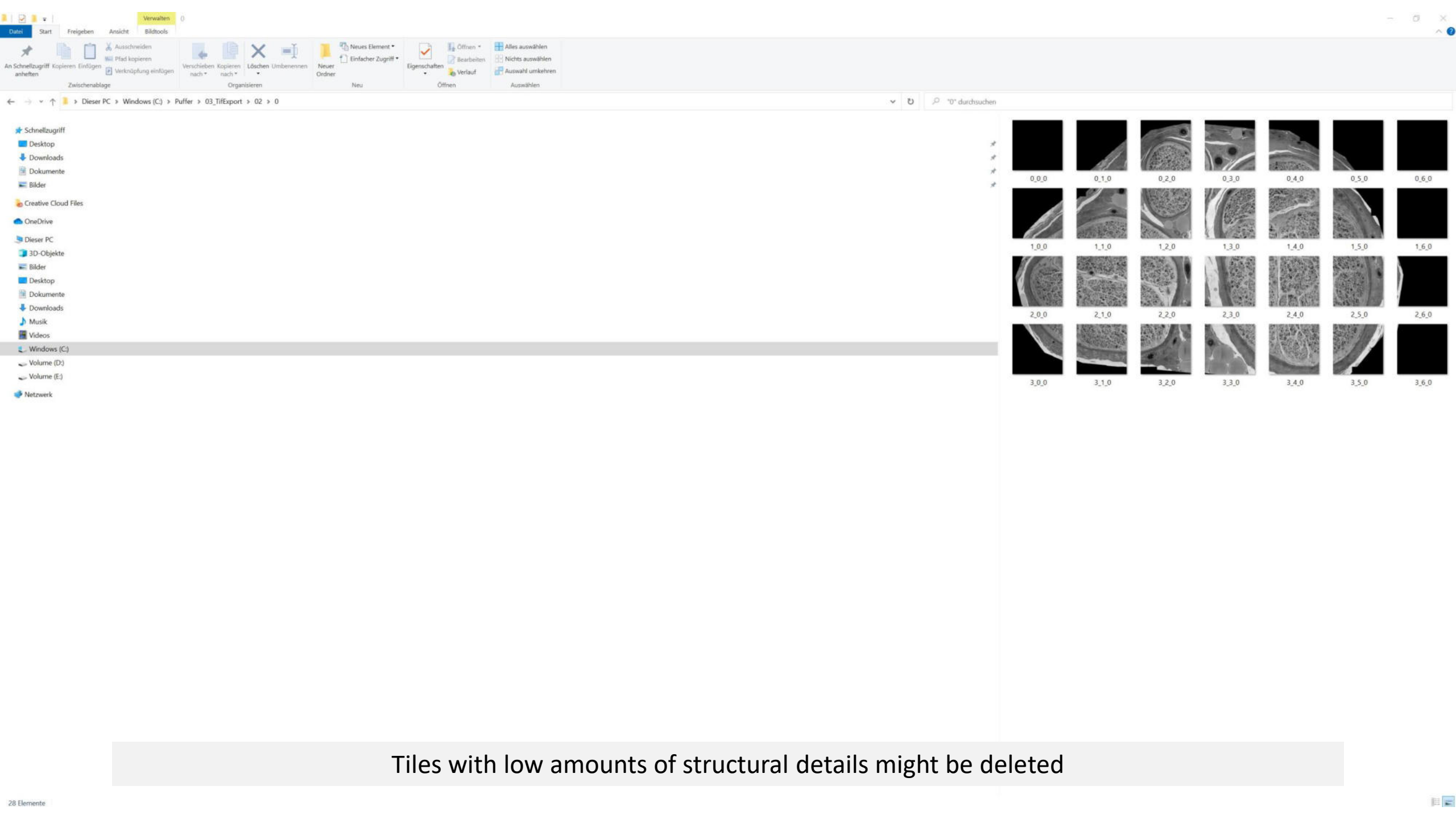
← → ↕ "02" > 0 "0" durchsuchen

0,0,0	0,1,0	0,2,0	0,3,0	0,4,0	0,5,0	0,6,0
1,0,0	1,1,0	1,2,0	1,3,0	1,4,0	1,5,0	1,6,0
2,0,0	2,1,0	2,2,0	2,3,0	2,4,0	2,5,0	2,6,0
3,0,0	3,1,0	3,2,0	3,3,0	3,4,0	3,5,0	3,6,0
4,0,0	4,1,0	4,2,0	4,3,0	4,4,0	4,5,0	4,6,0

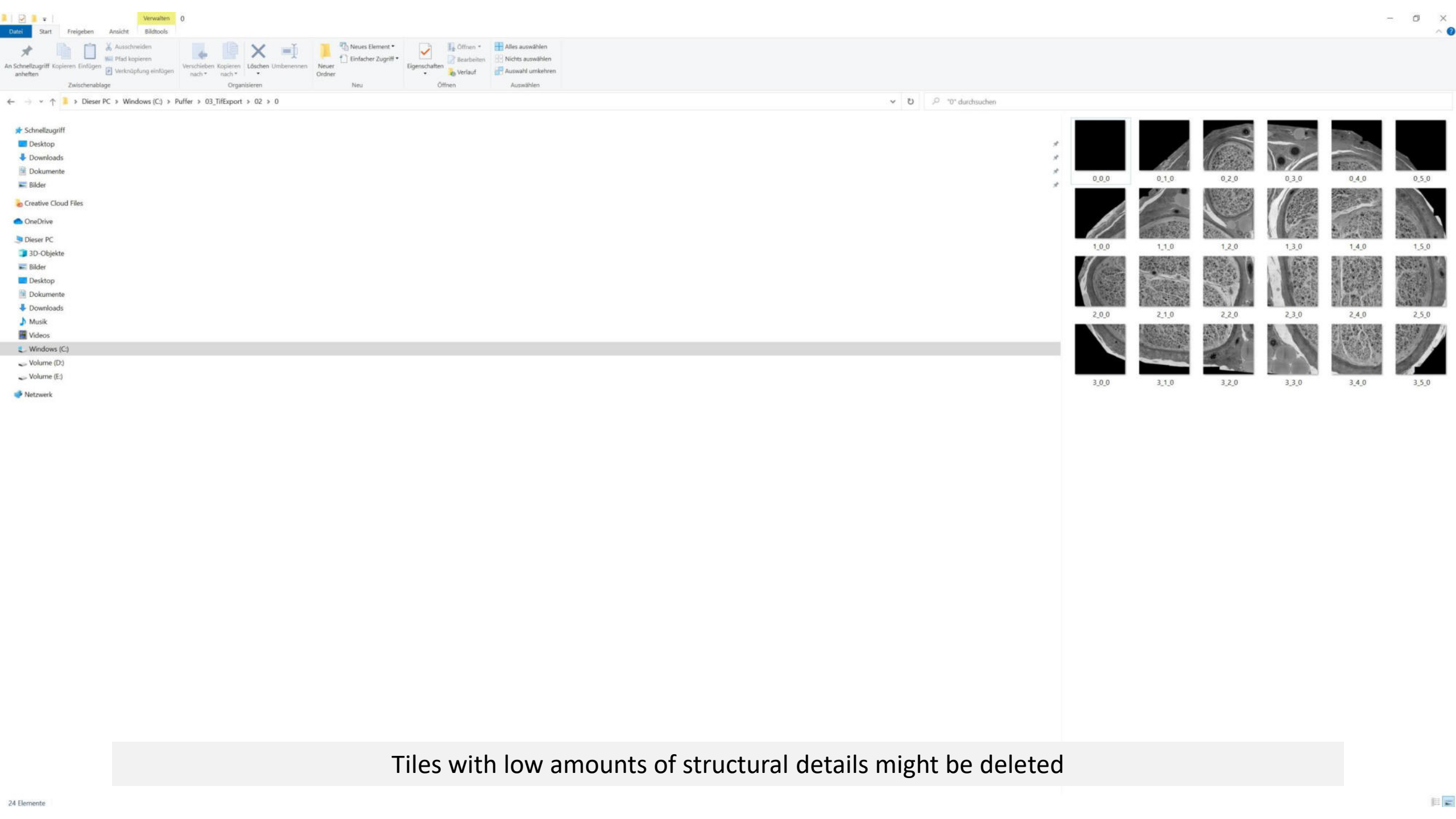
35 Elemente



Tiles with low amounts of structural details might be deleted



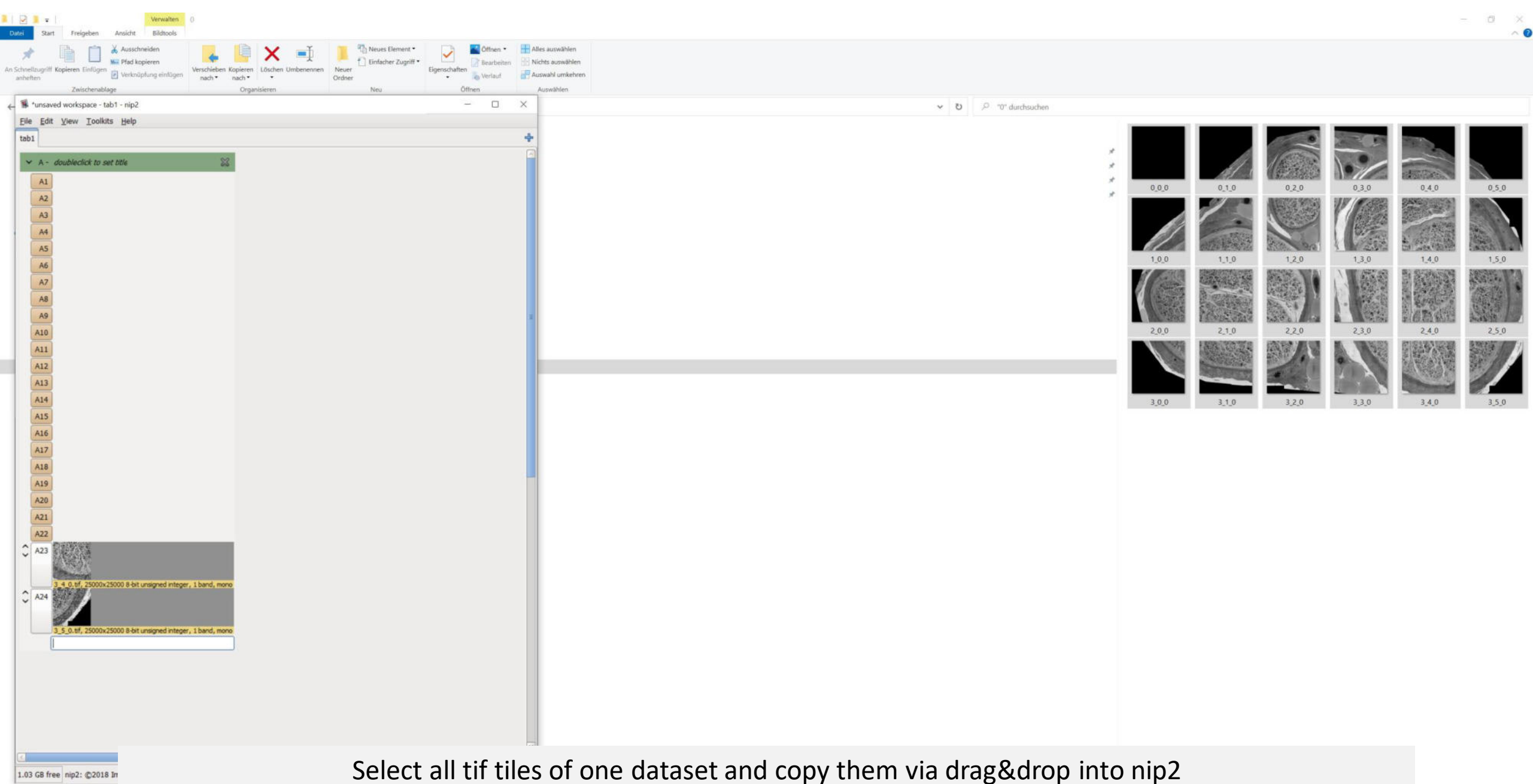
Tiles with low amounts of structural details might be deleted



Tiles with low amounts of structural details might be deleted

The screenshot displays the nip2 software interface. At the top, there is a menu bar with options: Datei, Start, Freigeben, Ansicht, and Verwalten. Below the menu bar is a toolbar with various icons for file operations (Anheften, Kopieren, Einfügen, Ausschneiden, etc.) and image processing (Verschieben, Kopieren, Löschen, etc.). The main workspace is divided into two panes. The left pane, titled 'unsaved workspace - tab1 - nip2', contains a single tab 'tab1' with a green header 'A - doubleclick to set title' and an empty text input field. The right pane shows a 4x6 grid of 24 axial MRI slices of a brain, labeled from 0,0,0 to 3,5,0. The slices are arranged in four rows and six columns. The first row contains slices 0,0,0 to 0,5,0. The second row contains slices 1,0,0 to 1,5,0. The third row contains slices 2,0,0 to 2,5,0. The fourth row contains slices 3,0,0 to 3,5,0. The slices show a cross-section of a brain with varying contrast and intensity. The status bar at the bottom left indicates '2.66 GB free' and 'nip2: ©2018 Imperial College, London'.

Open nip2



Select all tif tiles of one dataset and copy them via drag&drop into nipy2
Ensure that the order (A1-A24) is correct; A1=0_0_0, ..., A24= 3_5_0)
Image tiles might be renamed using Bulk rename utility

*unsaved workspace - tab1 - nip2

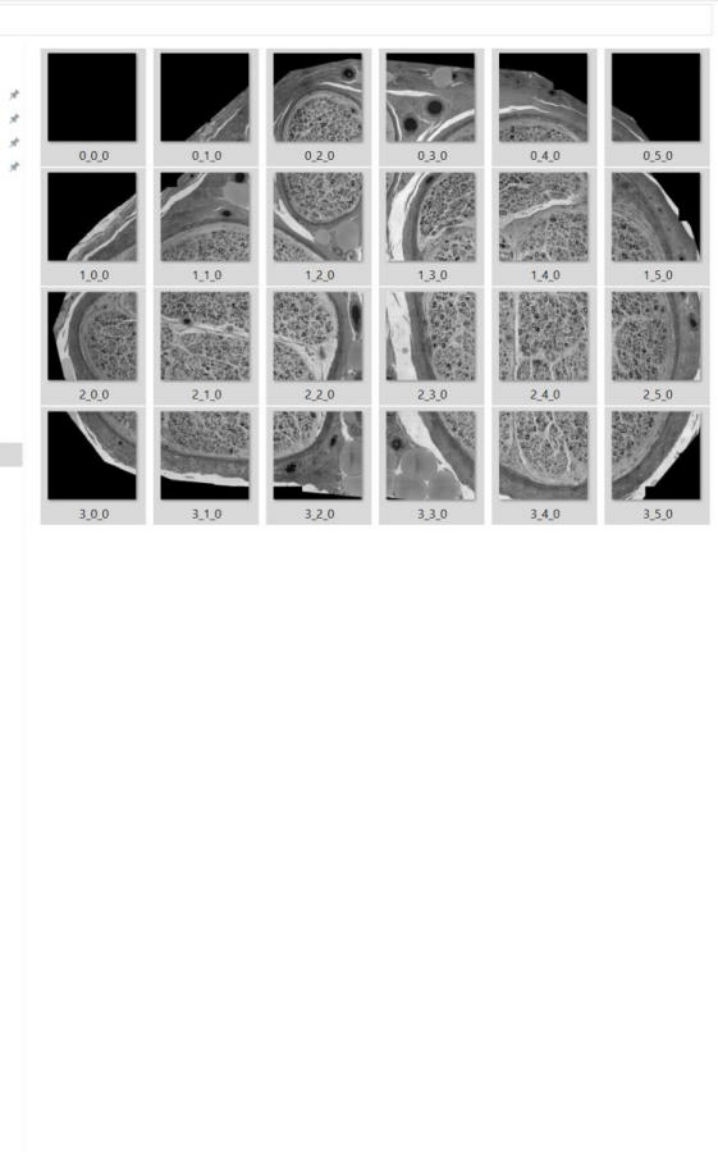
File Edit View Toolkits Help

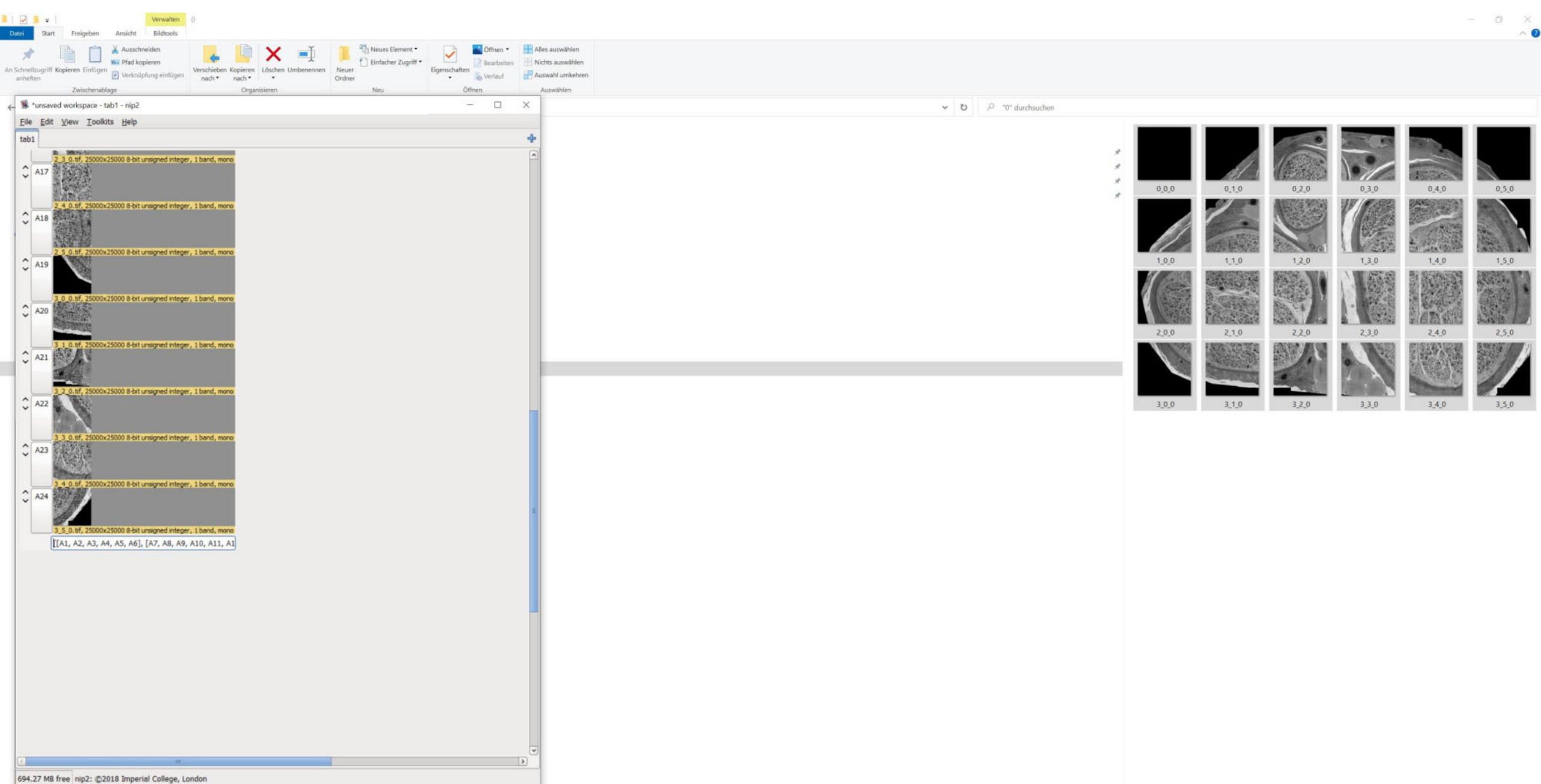
tab1

A - doubleclick to set title

- A1 0 0 0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A2 0 1 0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A3 0 2 0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A4 0 3 0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A5 0 4 0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A6 0 5 0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A7 1 0 0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A8 1 1 0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A9 1 2 0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A10 1 3 0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A11 1 4 0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A12 1 5 0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A13 1 5 0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono

694.27 MB free nip2: ©2018 Imperial College, London





Prepare to link the tiles together in nip2; `[[A1, A2, A3, A4, A5, A6], [A7, A8, A9, ...]]`, press [enter]

*unsaved workspace - tab1 - nlp2

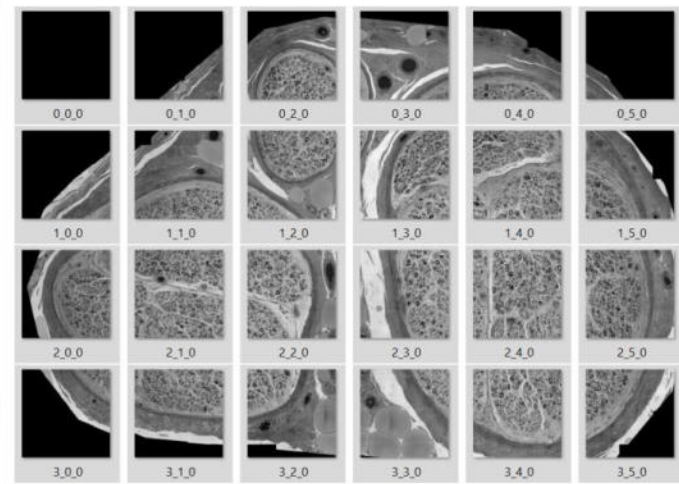
tab1

- A17 2_3_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A18 2_4_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A19 2_5_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A20 3_0_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A21 3_1_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A22 3_2_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A23 3_3_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A24 3_4_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A25 3_5_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono

A16, A17, A18 | A19, A20, A21, A22, A23, A24

685.75 MB free A25 = [[A1, A2, A3, A4, A5, A6], [A7, A8, A9, A10, A11, A12], [A13, A14, A15, A16, A17, A18], [A19, A20, A21, A22, A...

10" durchsuchen



*unsaved workspace - tab1 - nip2

File Edit View **Tools** Help

tab1

- Edit
 - Colour
 - Filter
 - Histogram
 - Image
 - New
 - Convert to Image
 - Format
 - Header
 - Cache
 - Levels
 - Transform
 - Band
 - Alpha
 - Crop
 - Insert
 - Select
 - Draw
 - Join
 - Bandwise Join
 - Left to Right
 - Top to Bottom
 - Tile
 - Patterns
 - Test Images
 - Magick
 - Math
 - Matrix
 - Object
 - Tasks
 - Widgets

A17 2_3_0.tif integer, 1 band, mono

A18 2_4_0.tif

A19 2_5_0.tif

A20 3_0_0.tif, 25000x25000 8-bit unsigned

A21 3_1_0.tif, 25000x25000 8-bit unsigned

A22 3_2_0.tif, 25000x25000 8-bit unsigned

A23 3_3_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono

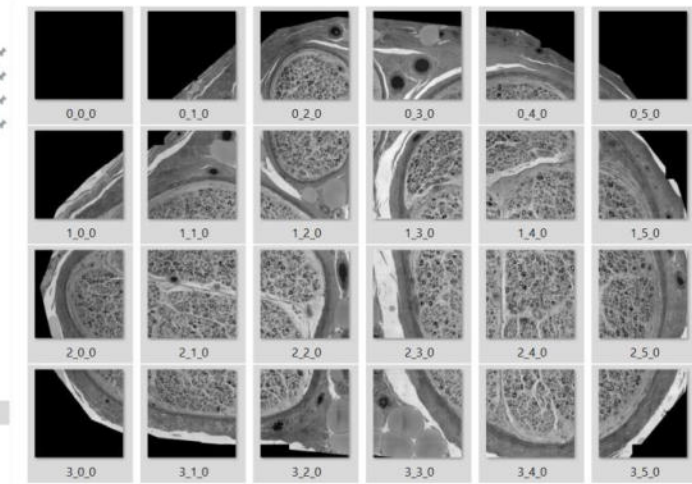
A24 3_4_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono

A25 3_5_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono

[A16, A17, A18], [A19, A20, A21, A22, A23, A24]]

681.56 MB free Array x: join a list of lists of images into a single image

10" durchsuchen



File Edit View Toolkits Help

tab1

- A17 2_3_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A18 2_4_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A19 2_5_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A20 3_0_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A21 3_1_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A22 3_2_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A23 3_3_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A24 3_4_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A25 3_5_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A26 Array, 150000x100000 8-bit unsigned integer, 1 band, mono

hshim Horizontal spacing: 0

vshim Vertical spacing: 0

bg_colour Background colour: 0

halign Horizontal alignment: Centre

valign Vertical alignment: Centre

Image_join_item.Array_item.action A25

Selected: A26 A25 = [[A1, A2, A3, A4, A5, A6], [A7, A8, A9, A10, A11, A12], [A13, A14, A15, A16, A17, A18], [A19, A20, A21, A22, A...

0° durchsuchen

0,0,0	0,1,0	0,2,0	0,3,0	0,4,0	0,5,0
1,0,0	1,1,0	1,2,0	1,3,0	1,4,0	1,5,0
2,0,0	2,1,0	2,2,0	2,3,0	2,4,0	2,5,0
3,0,0	3,1,0	3,2,0	3,3,0	3,4,0	3,5,0

A26; linked image tiles

File Edit View Toolkits Help

tab1

- 2_3_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A17
- 2_4_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A18
- 2_5_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A19
- 3_0_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A20
- 3_1_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A21
- 3_2_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A22
- 3_3_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A23
- 3_4_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A24
- 3_5_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A25 [[13, A14, A15, A16, A17, A18], [A19, A20, A21, A22, A23, A24]]
- A26

Array, 15000 1 band, mono

- hsh
- vsh
- bg_color
- hal
- val
- Image Join Item: Array Item: Action: A25

0 0 0 0 0

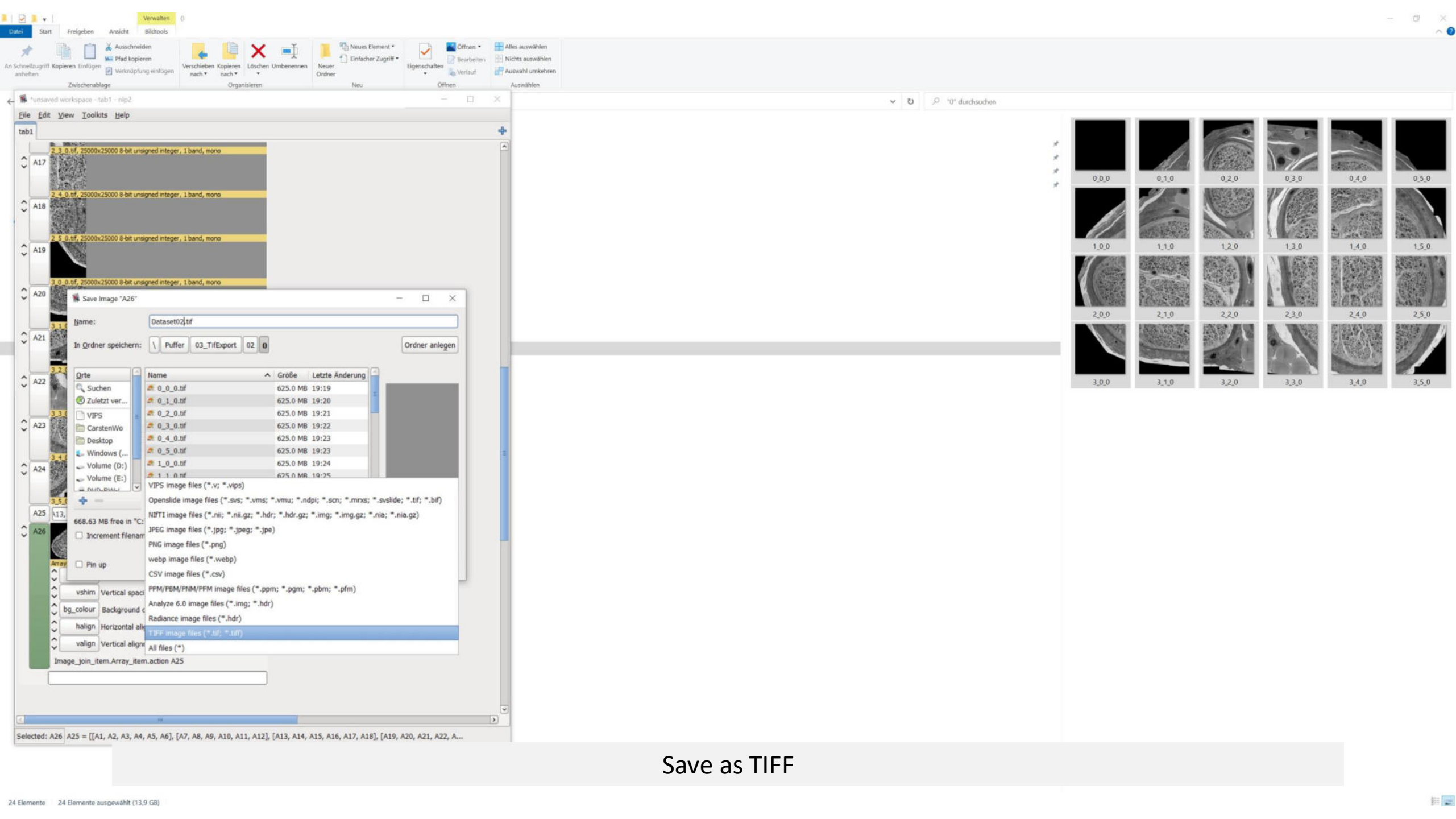
Centre Centre

Selected: A26 A25 = [[A1, A2, A3, A4, A5, A6], [A7, A8, A9, A10, A11, A12], [A13, A14, A15, A16, A17, A18], [A19, A20, A21, A22, A...

0° durchsuchen

0,0	0,1	0,2	0,3	0,4	0,5
1,0	1,1	1,2	1,3	1,4	1,5
2,0	2,1	2,2	2,3	2,4	2,5
3,0	3,1	3,2	3,3	3,4	3,5

Right click on the preview-> save as



Save as TIFF

*unsaved workspace - tab1 - nlp2

tab1

- 2_3_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A17
- 2_4_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A18
- 2_5_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A19
- 3_0_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A20
- 3_1_0.tif
- A21
- 3_2_0.tif
- A22
- 3_3_0.tif
- A23
- 3_4_0.tif
- A24
- 3_5_0.tif
- A25
- A26

Save Image "A26"

Name: Dataset02.tif

In Ordner speichern: Puffer 03_TifExport 02

Orte: Suchen, Zuletzt ver..., VIPS, CarstenWo, Desktop, Windows (...), Volume (D:), Volume (E:), ...

Name	Größe	Letzte Änderung
0_0_0.tif	625.0 MB	19:19
0_1_0.tif	625.0 MB	19:20
0_2_0.tif	625.0 MB	19:21
0_3_0.tif	625.0 MB	19:22
0_4_0.tif	625.0 MB	19:23
0_5_0.tif	625.0 MB	19:23
1_0_0.tif	625.0 MB	19:24
1_1_0.tif	625.0 MB	19:25
1_2_0.tif	625.0 MB	19:27

TIFF image files (*.tif; *.tiff)

668.63 MB free in "C:\Puffer\03_TifExport\02\0"

Increment filename

Pin up

Speichern Abbrechen

vshim Vertical spacing: 0

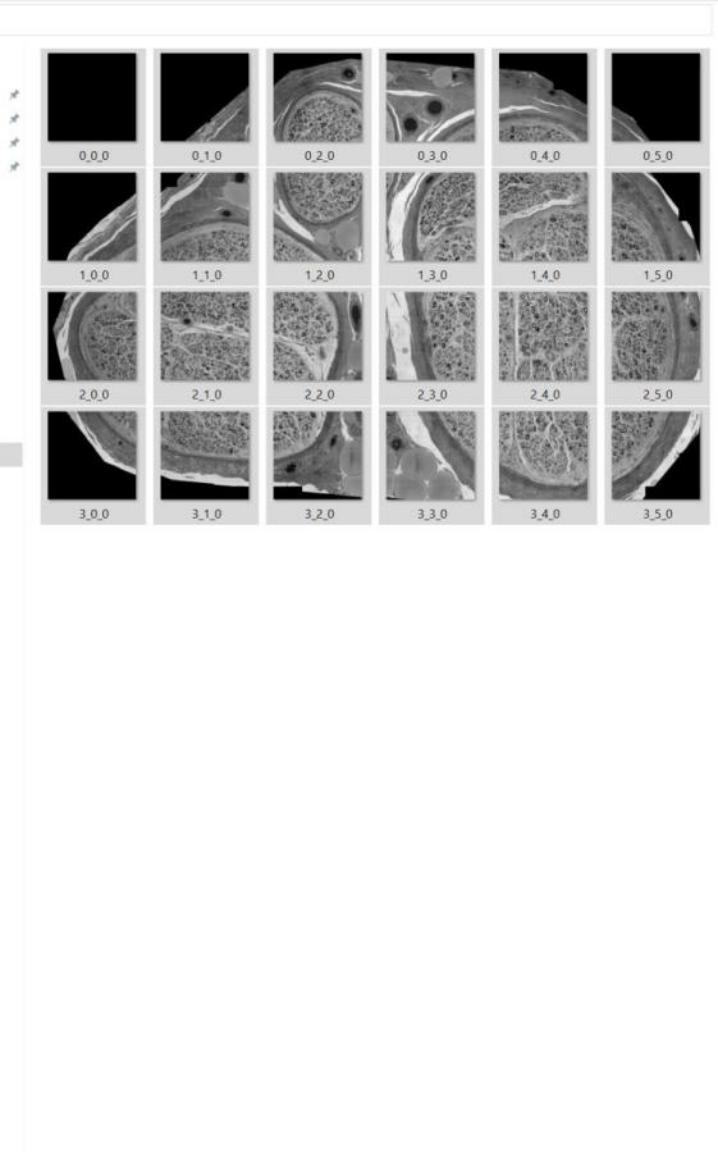
bg_colour Background colour: 0

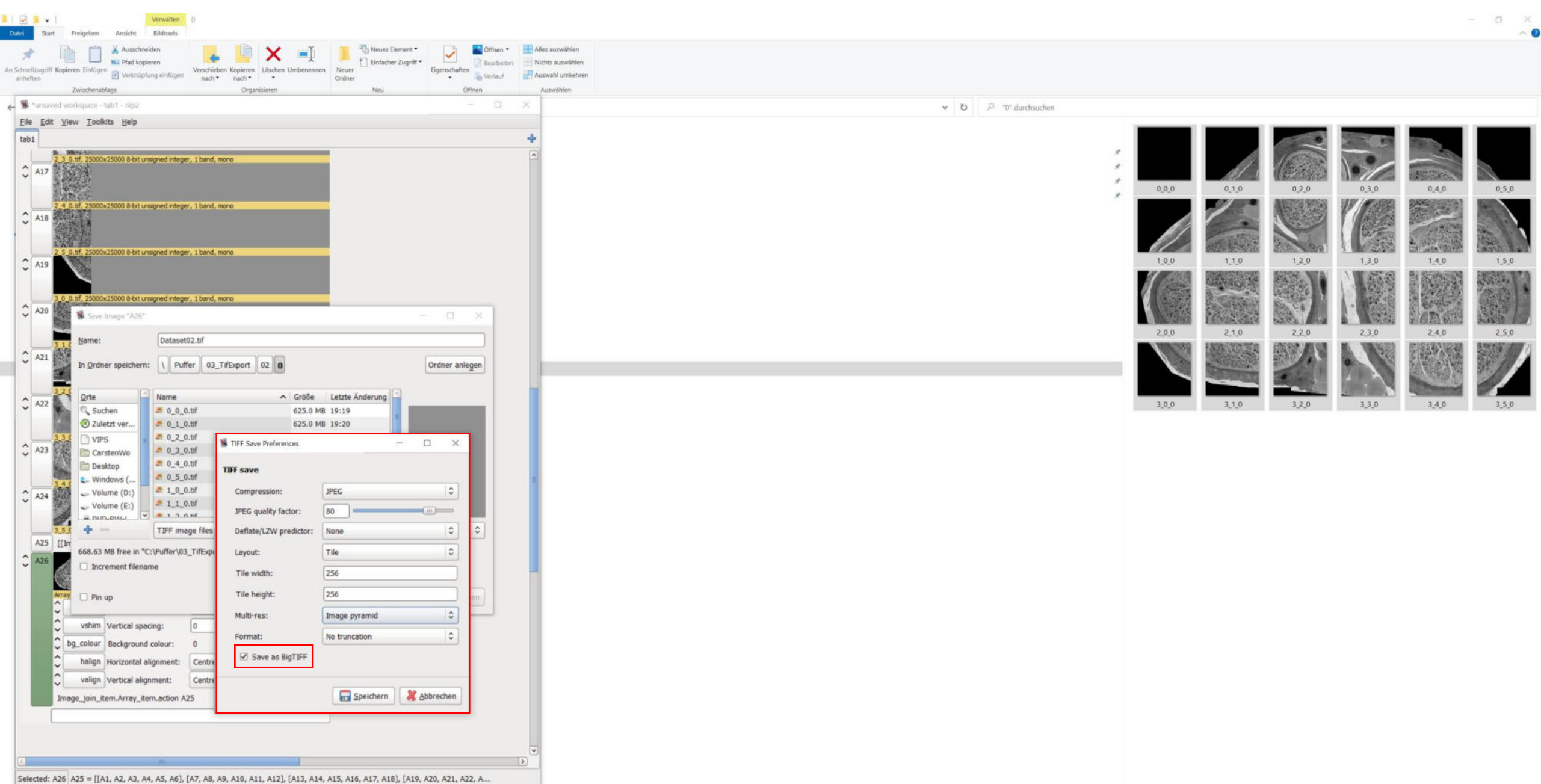
halign Horizontal alignment: Centre

valign Vertical alignment: Centre

Image_join_item.Array_item.action A25

Selected: A26 A25 = [[A1, A2, A3, A4, A5, A6], [A7, A8, A9, A10, A11, A12], [A13, A14, A15, A16, A17, A18], [A19, A20, A21, A22, A...





See „TIFF Save Preferences“ for detailed export parameters
Check „Save as BigTIFF“

The screenshot shows a software interface with a grid of 30 medical images (3x5) on the right, labeled from 0,0,0 to 3,5,0. A red box highlights a file icon labeled 'Dataset02' below the grid. On the left, a 'Save Image "A26"' dialog box is open, showing the file name 'Dataset02.tif' and the save location 'Puffer\03_TifExport\02'. A 'TIFF Save Preferences' dialog box is also open, showing settings for compression (JPEG), quality factor (80), layout (Tile), and other options. A 'Cancel' button is highlighted with a red box at the bottom of the 'Save Image' dialog.

Press save; a new file is prepared (export might take some minutes)

*unsaved workspace - tab1 - nlp2

tab1

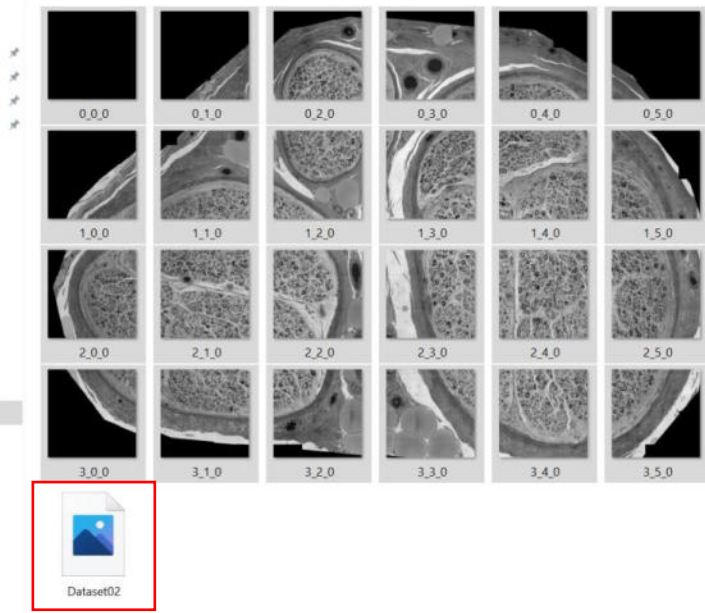
- 2_3_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A17
- 2_4_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A18
- 2_5_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A19
- 3_0_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A20
- 3_1_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A21
- 3_2_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A22
- 3_3_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A23
- 3_4_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A24
- 3_5_0.tif, 25000x25000 8-bit unsigned integer, 1 band, mono
- A25 [[Image_file "C:\Puffer\03_TifExport\02\0\0_0.tif", Image_file "C:\Puffer\...
- A26

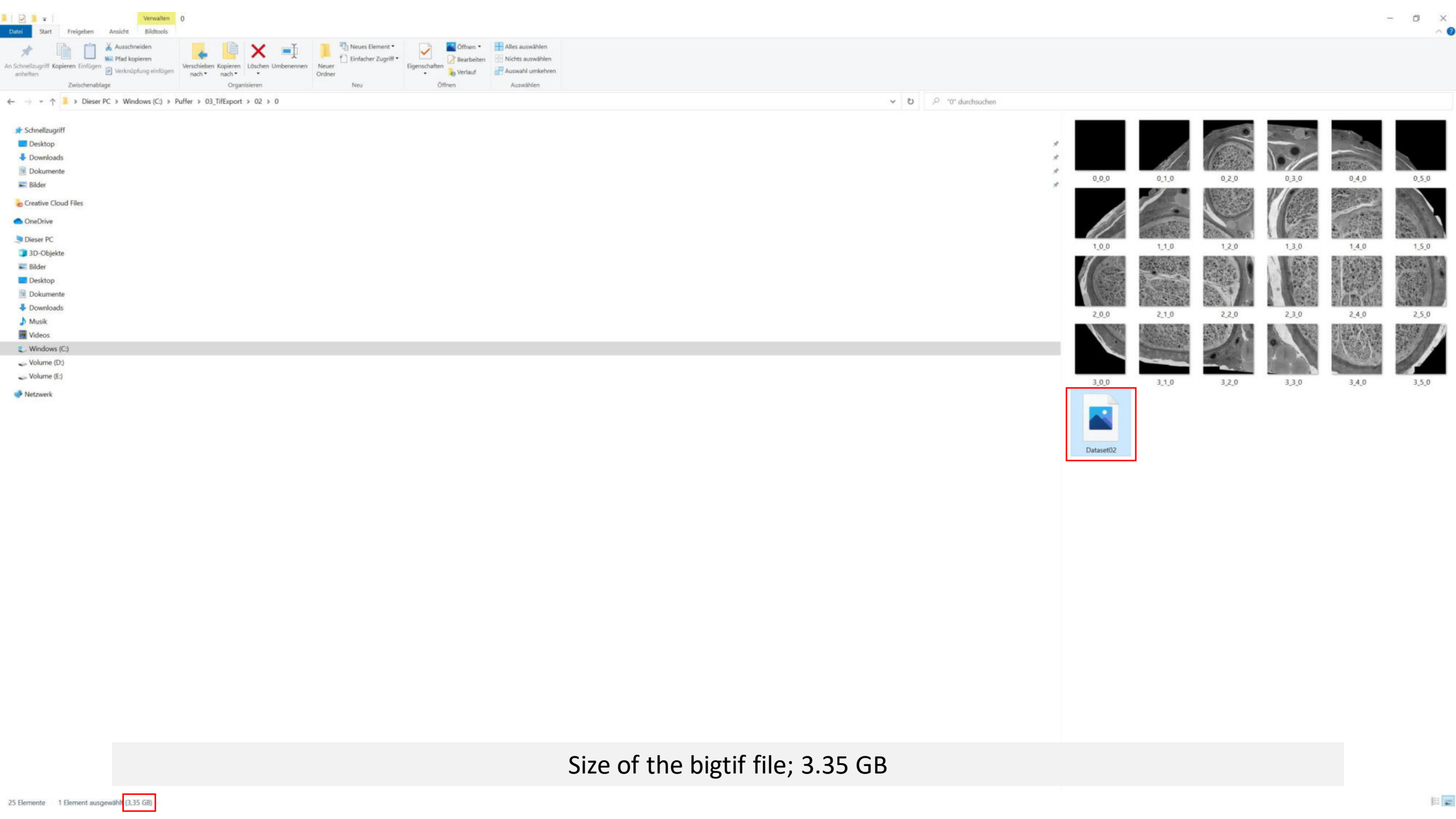
Array, 150000x100000 8-bit unsigned integer, 1 band, mono

- hshim Horizontal spacing: 0
- vshim Vertical spacing: 0
- bg_colour Background colour: 0
- halign Horizontal alignment: Centre
- valign Vertical alignment: Centre

Image_join_item.Array_item.action A25

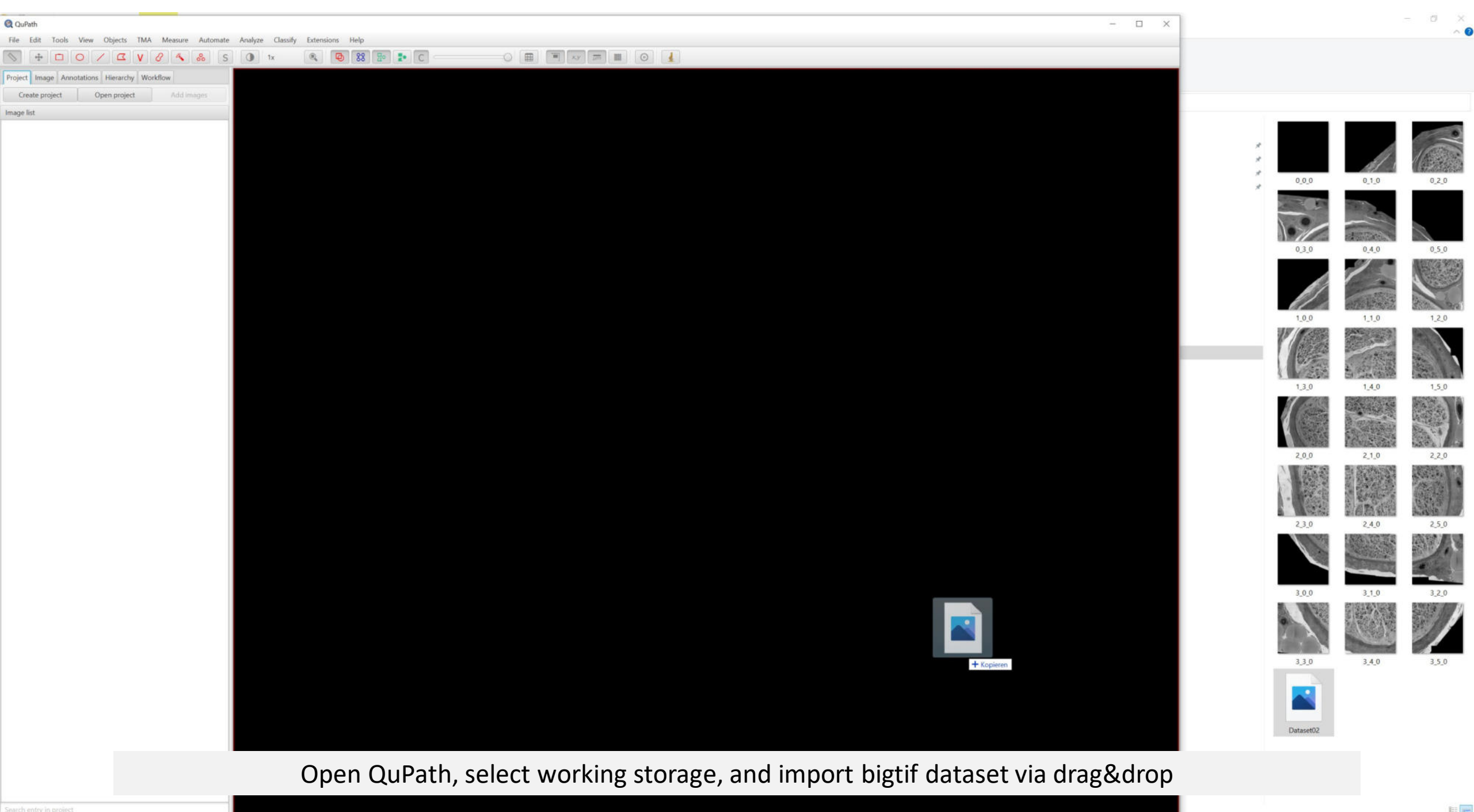
Selected: A26 A25 = [[A1, A2, A3, A4, A5, A6], [A7, A8, A9, A10, A11, A12], [A13, A14, A15, A16, A17, A18], [A19, A20, A21, A22, A...



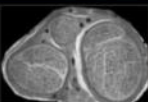


Size of the bigtif file; 3.35 GB

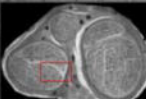
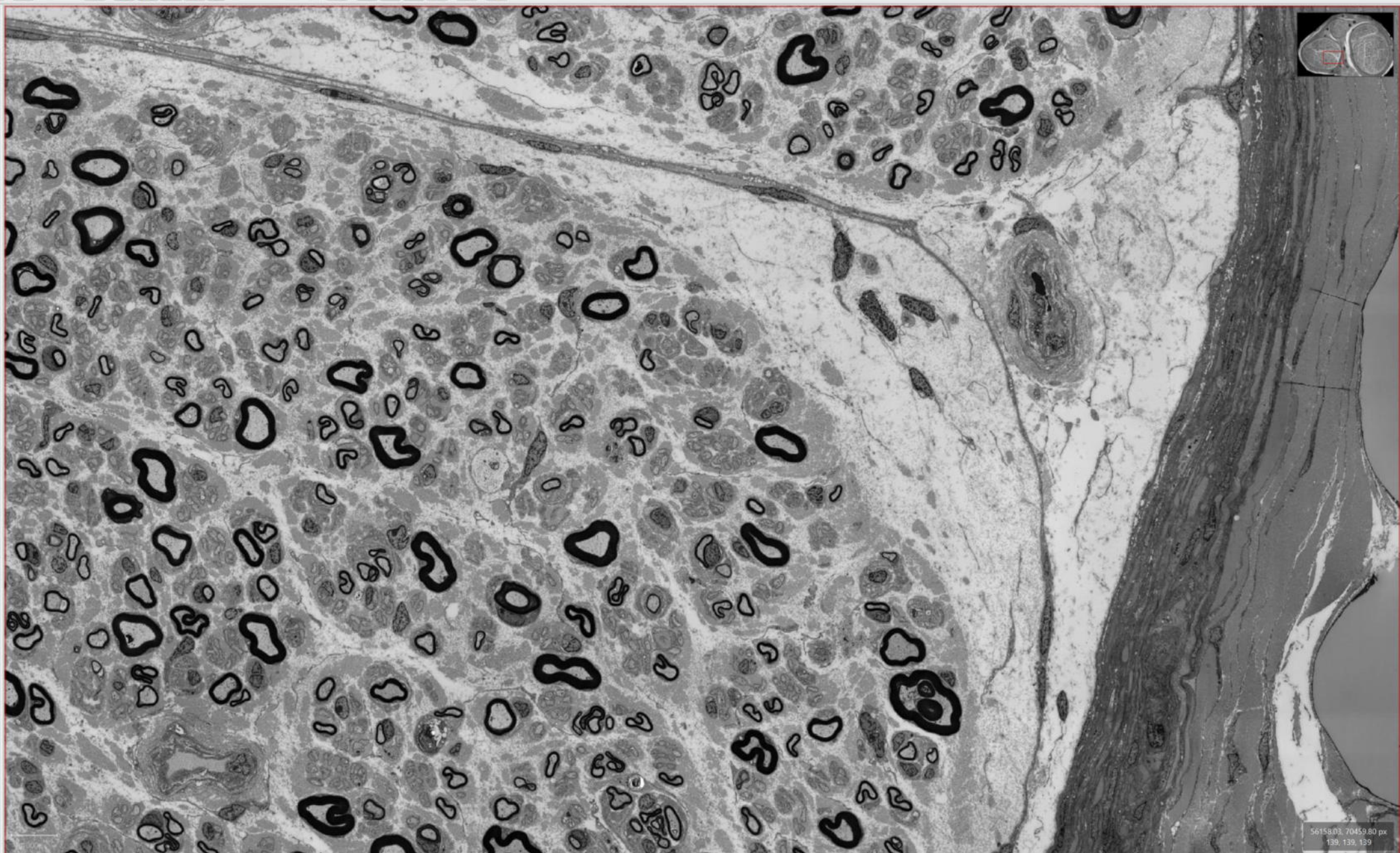
3,35 GB



Open QuPath, select working storage, and import bigtif dataset via drag&drop

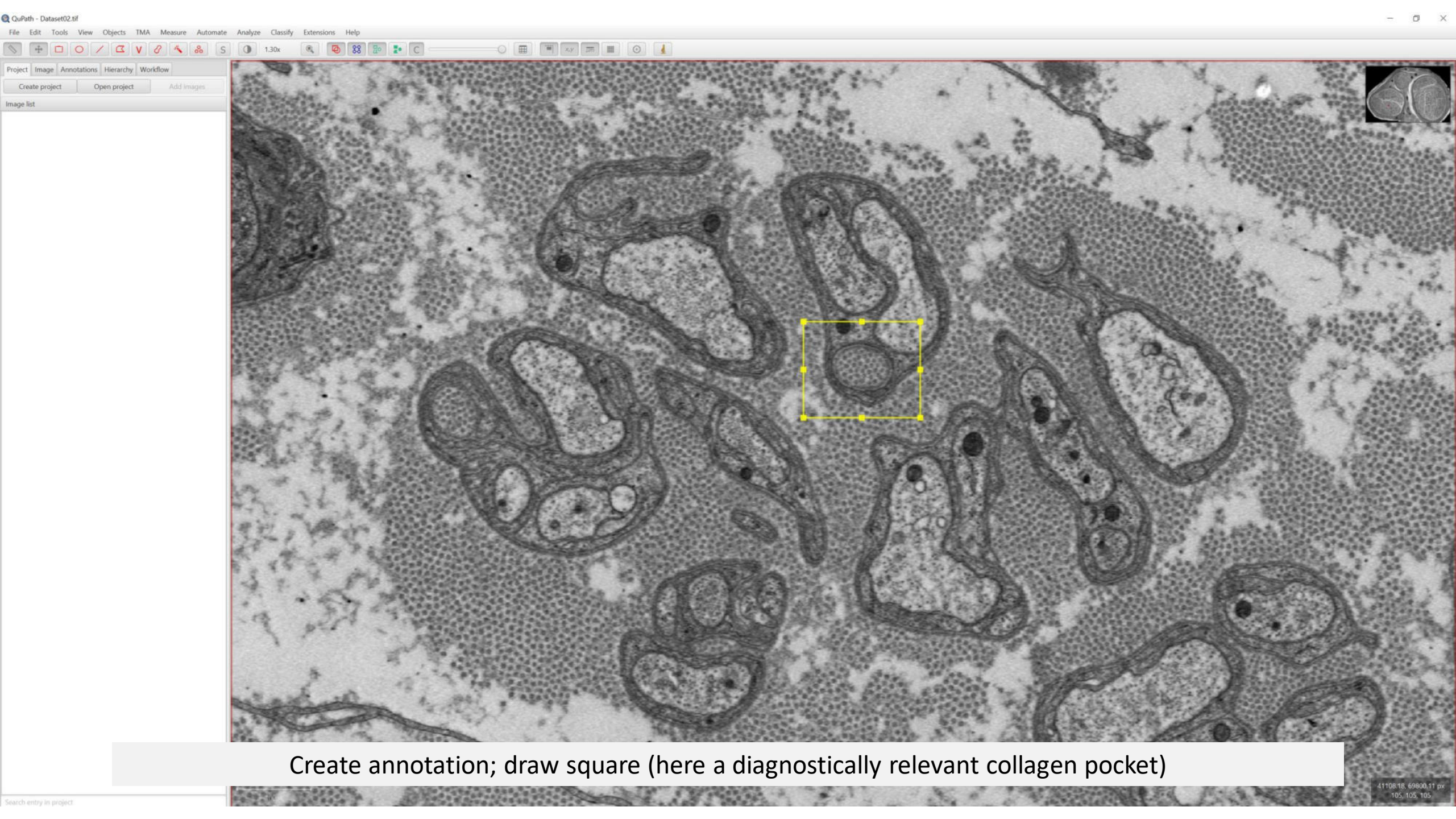


Pan-and-zoom analysis via mouse wheel

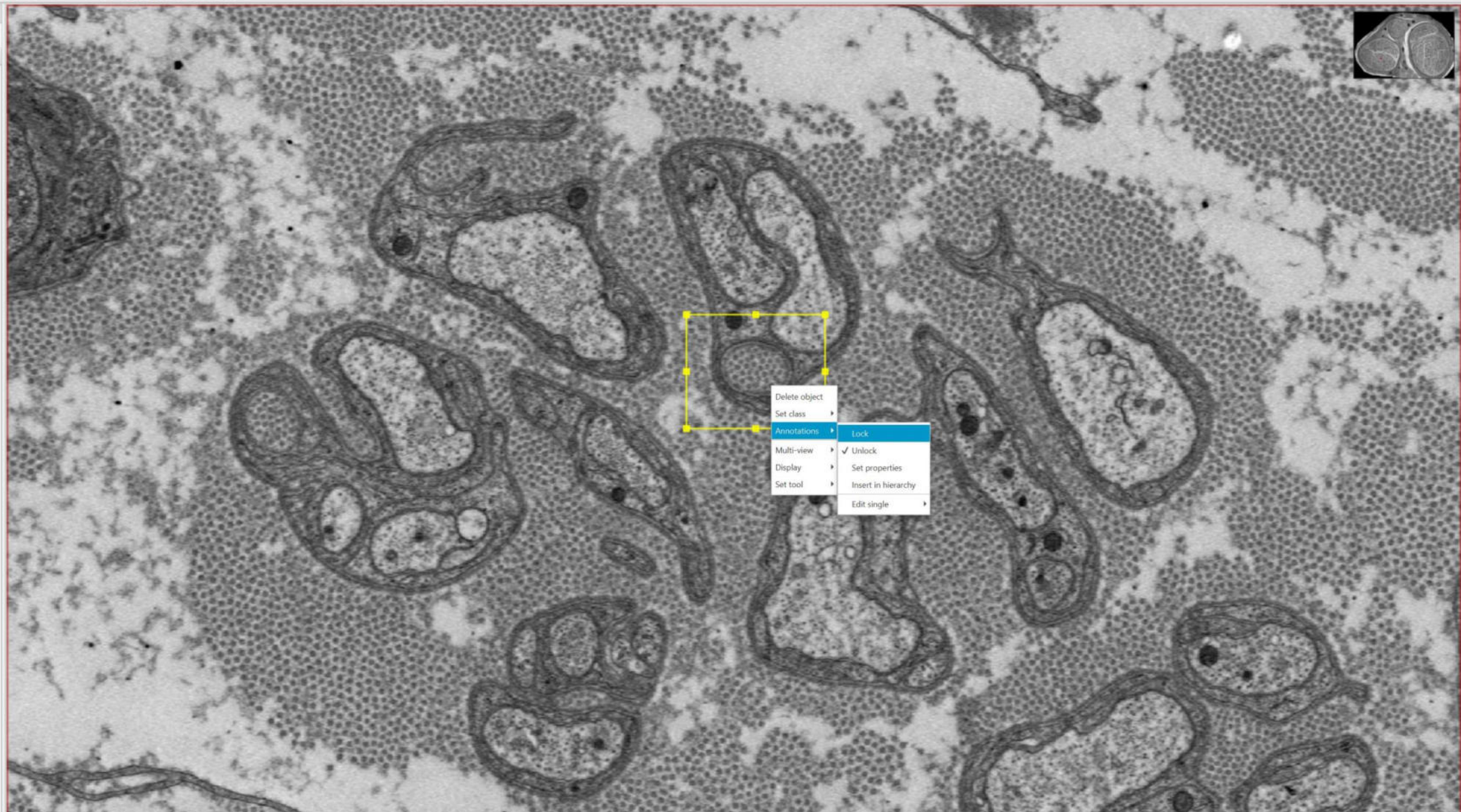




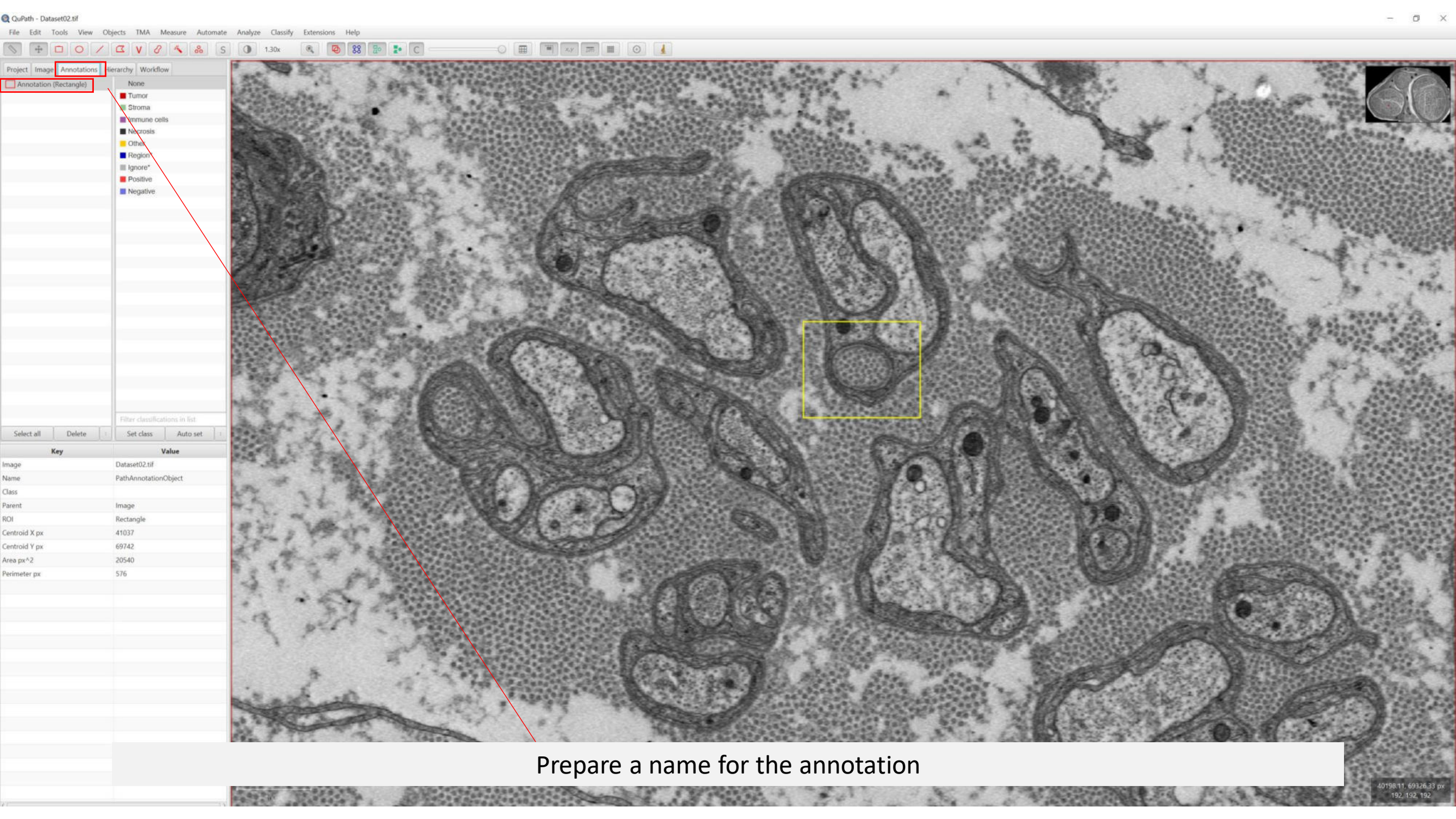
Create annotation; select a tool (such as square)



Create annotation; draw square (here a diagnostically relevant collagen pocket)



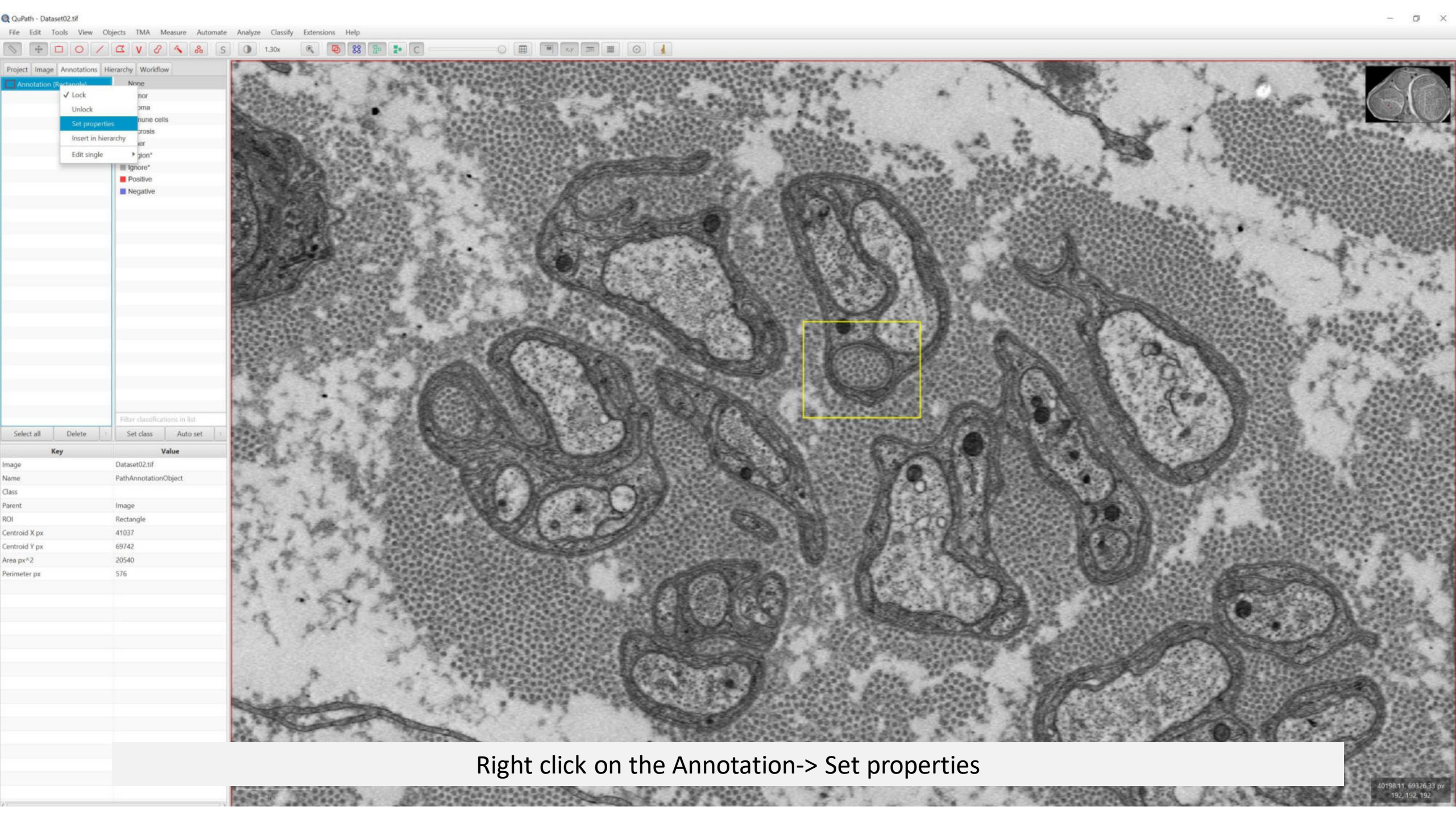
Lock the square



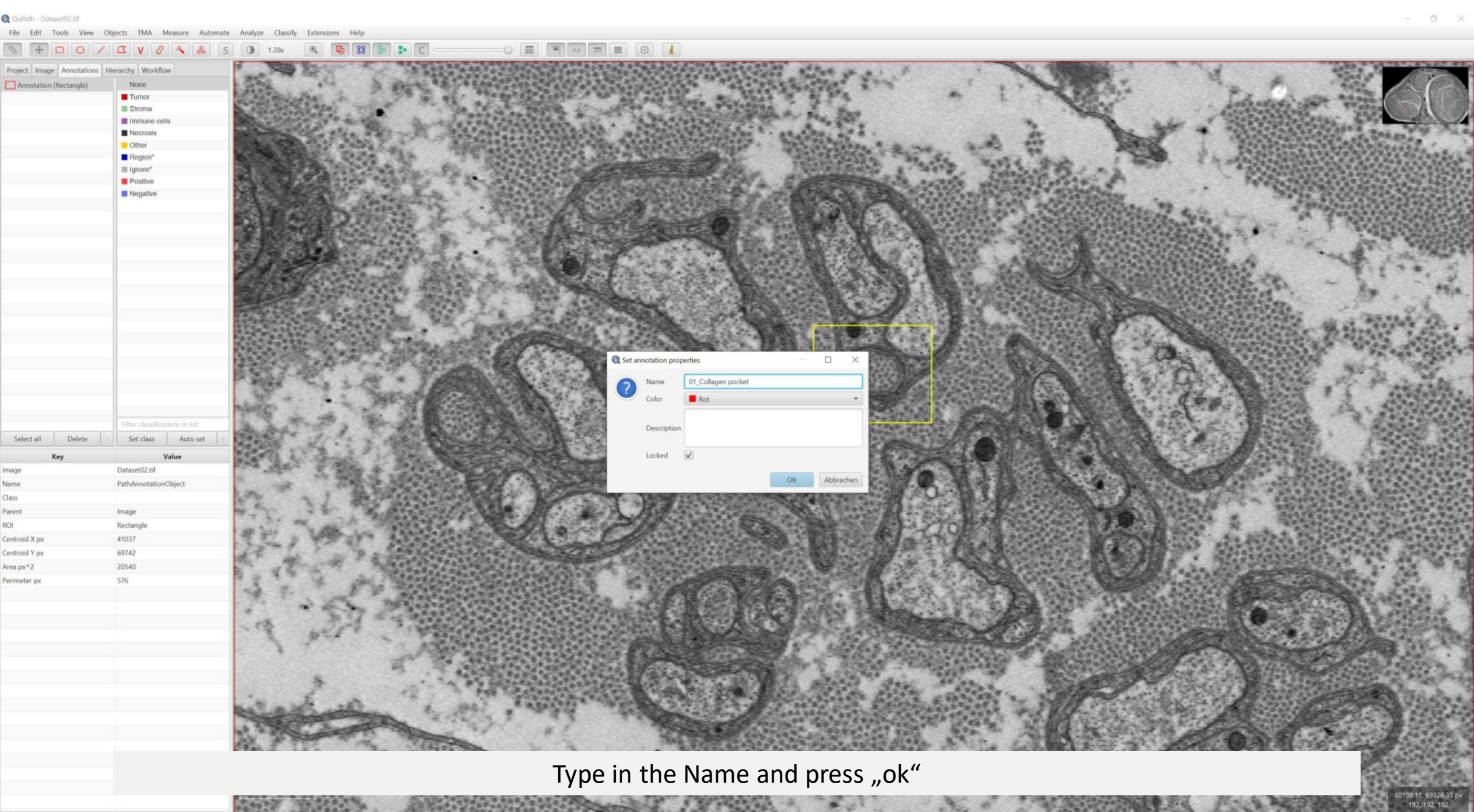
- None
- Tumor
- Stroma
- Immune cells
- Necrosis
- Other
- Region
- Ignore*
- Positive
- Negative

Key	Value
Image	Dataset02.tif
Name	PathAnnotationObject
Class	
Parent	Image
ROI	Rectangle
Centroid X px	41037
Centroid Y px	69742
Area px^2	20540
Perimeter px	576

Prepare a name for the annotation



Right click on the Annotation-> Set properties



Type in the Name and press „ok“



Project Image Annotations Hierarchy Workflow

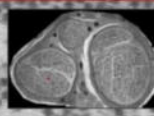
01_Collagen pocket (Rectangle) None

- Tumor
- Stroma
- Immune cells
- Necrosis
- Other
- Region*
- Ignore*
- Positive
- Negative

Filter classifications in list

Select all Delete Set class Auto set

Key	Value
Image	Dataset02.tif
Name	01_Collagen pocket
Class	
Parent	Image
ROI	Rectangle
Centroid X px	41037
Centroid Y px	69742
Area px^2	20540
Perimeter px	576





Project Image Annotations Hierarchy Workflow

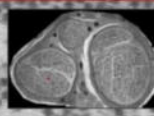
01_Collagen pocket (Rectangle) None

- Tumor
- Stroma
- Immune cells
- Necrosis
- Other
- Region*
- Ignore*
- Positive
- Negative

Filter classifications in list

Select all Delete Set class Auto set

Key	Value
Image	Dataset02.tif
Name	01_Collagen pocket
Class	
Parent	Image
ROI	Rectangle
Centroid X px	41037
Centroid Y px	69742
Area px^2	20540
Perimeter px	576



Annotations list:

- Annotation (Rectangle)
- 01_Collagen pocket (Rectangle)

Classifications:

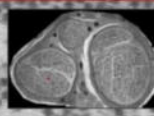
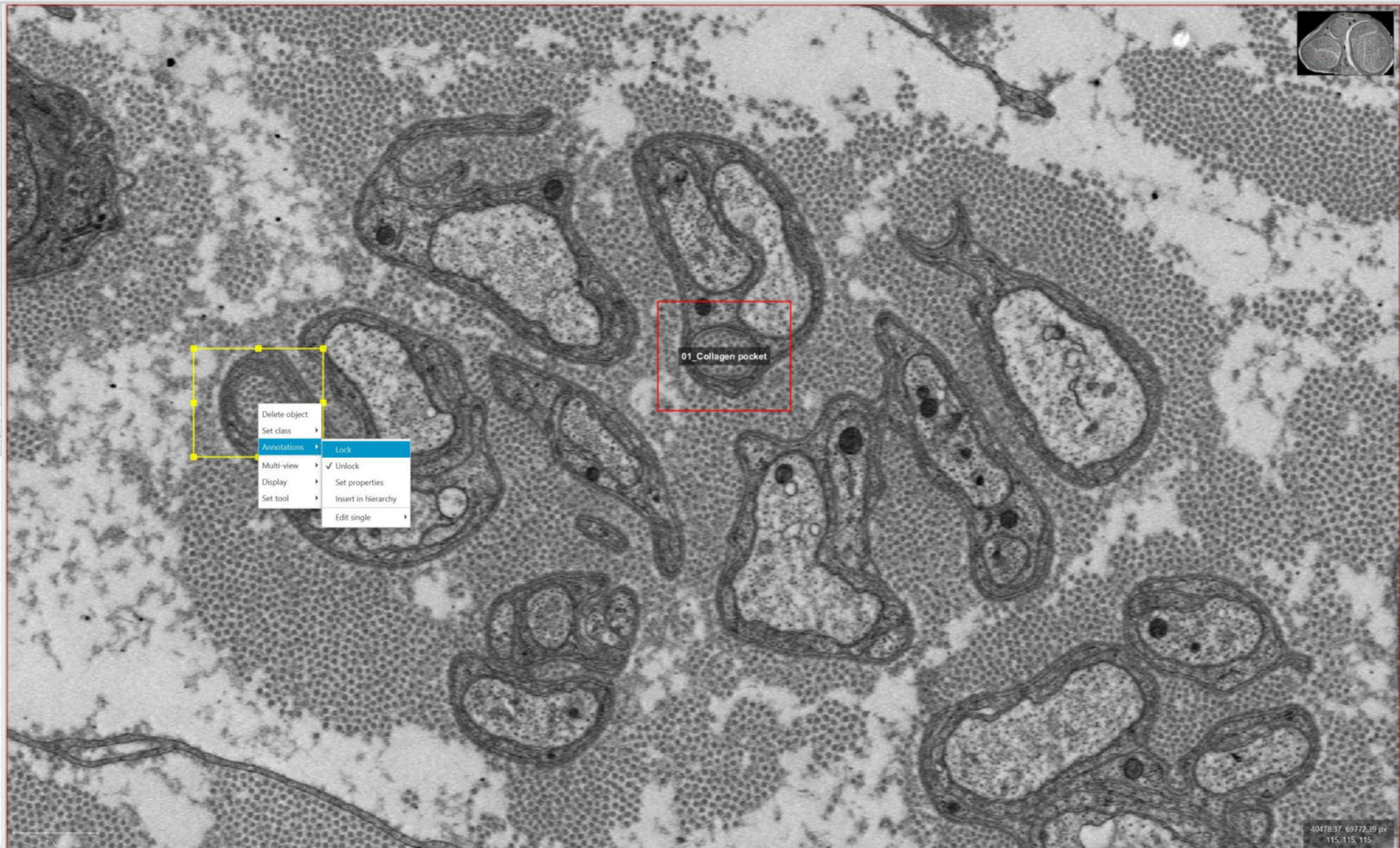
- None
- Tumor
- Stroma
- Immune cells
- Necrosis
- Other
- Region*
- Ignore*
- Positive
- Negative

Filter classifications in list

Select all Delete

Set class Auto set

Key	Value
Image	Dataset02.tif
Name	PathAnnotationObject
Class	
Parent	Image
ROI	Rectangle
Centroid X px	40483
Centroid Y px	69797.5
Area px^2	19866
Perimeter px	566



Annotations

- Annotations
- 01_Collag

Annotations menu:

- Lock
- Unlock
- Set properties
- Insert in hierarchy
- Edit single

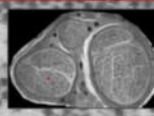
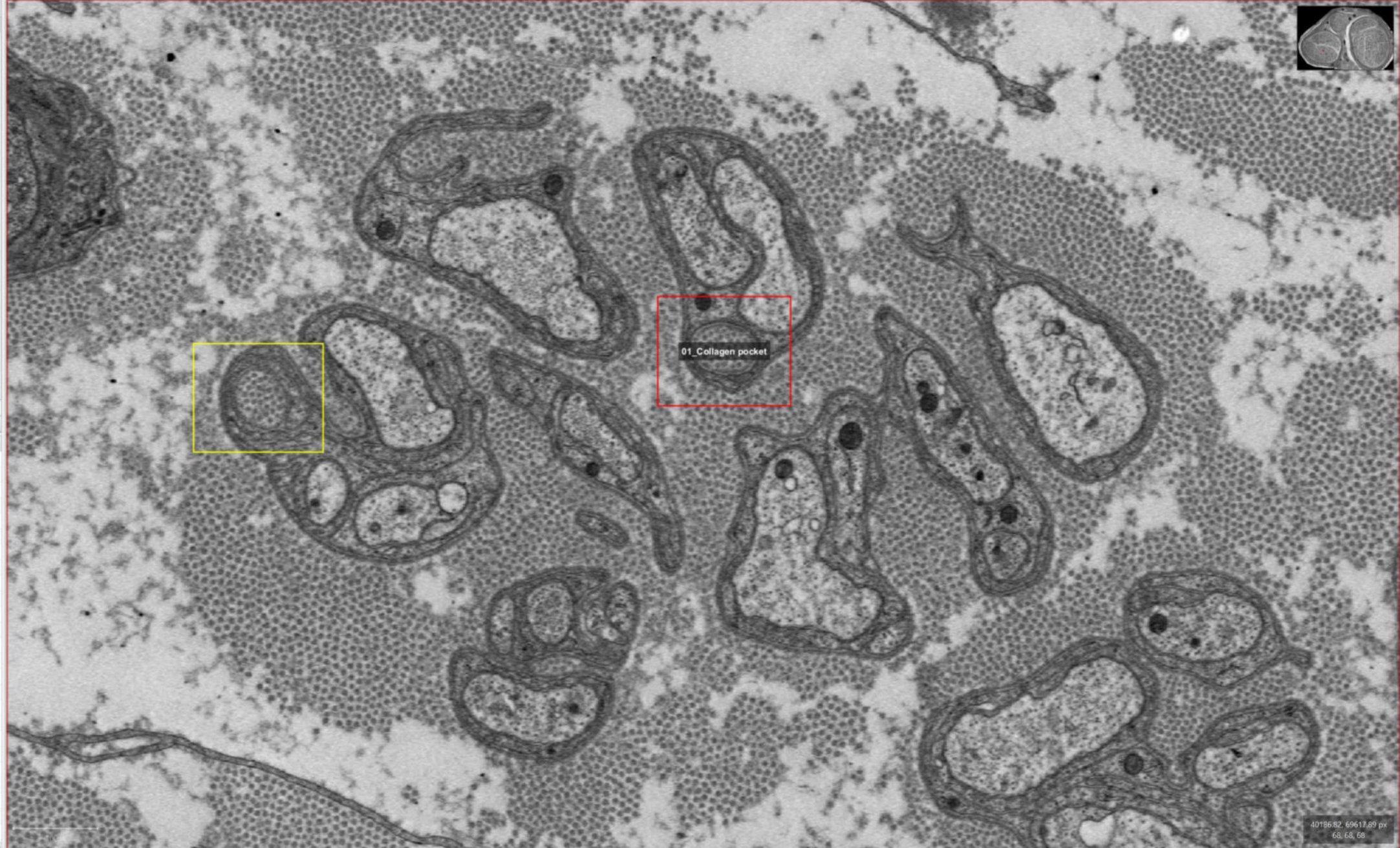
Classifications:

- None
- Tumor
- Stroma
- Immune cells
- Necrosis
- Other
- Region*
- Ignore*
- Positive
- Negative

Filter classifications in list

Select all Delete

Key	Value
Image	Dataset02.tif
Name	PathAnnotationObject
Class	
Parent	Image
ROI	Rectangle
Centroid X px	40483
Centroid Y px	69797.5
Area px^2	19866
Perimeter px	566



Project Image Annotations Hierarchy Workflow

- Annotation (Rectangle)
- 01_Collagen pocket (Rectangle)

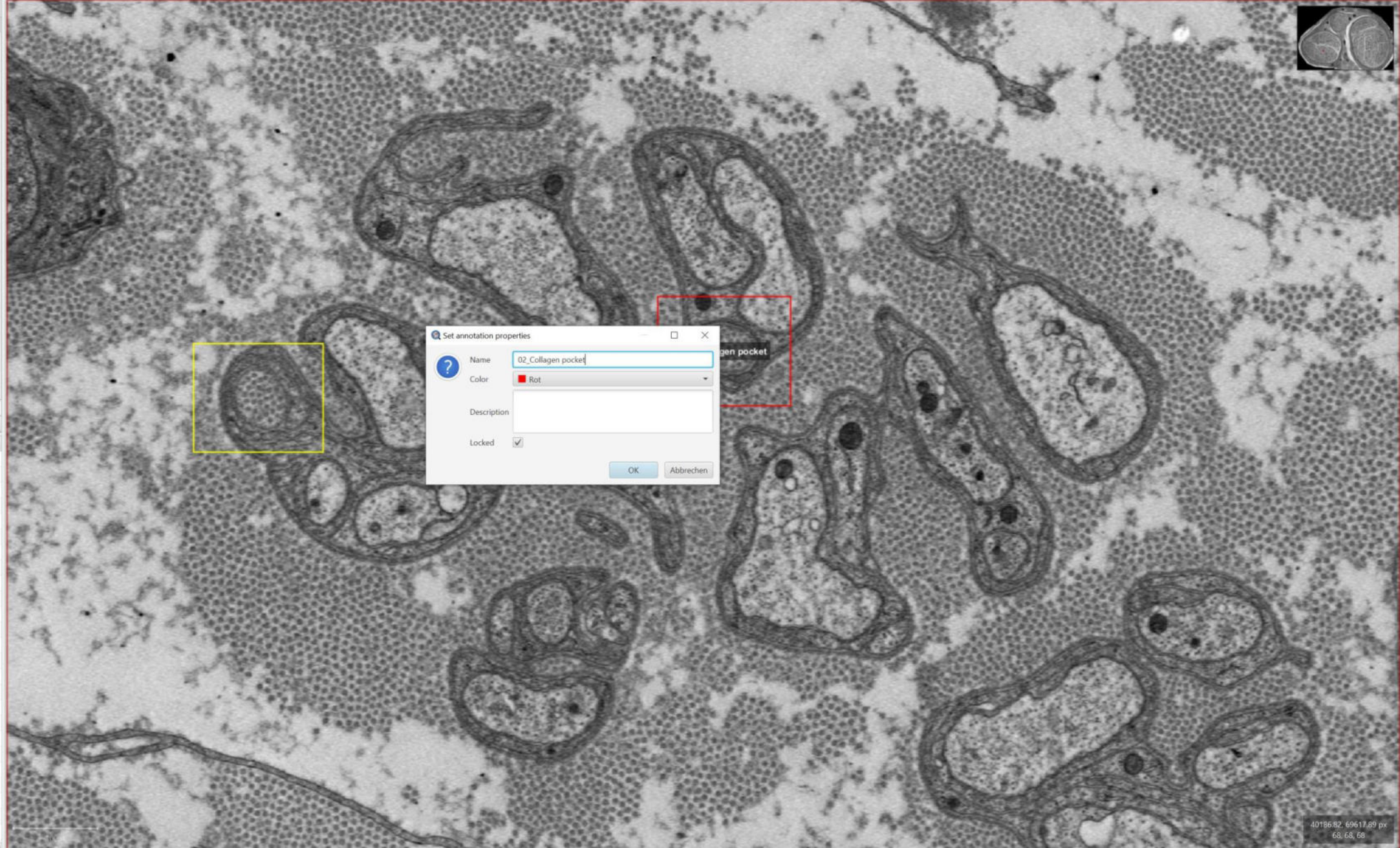
None

- Tumor
- Stroma
- Immune cells
- Necrosis
- Other
- Region*
- Ignore*
- Positive
- Negative

Filter classifications in list

Select all Delete Set class Auto set

Key	Value
Image	Dataset02.tif
Name	PathAnnotationObject
Class	
Parent	Image
ROI	Rectangle
Centroid X px	40483
Centroid Y px	69797.5
Area px^2	19866
Perimeter px	566



Set annotation properties

Name: 02_Collagen pocket

Color: Rot

Description:

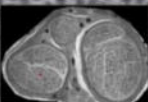
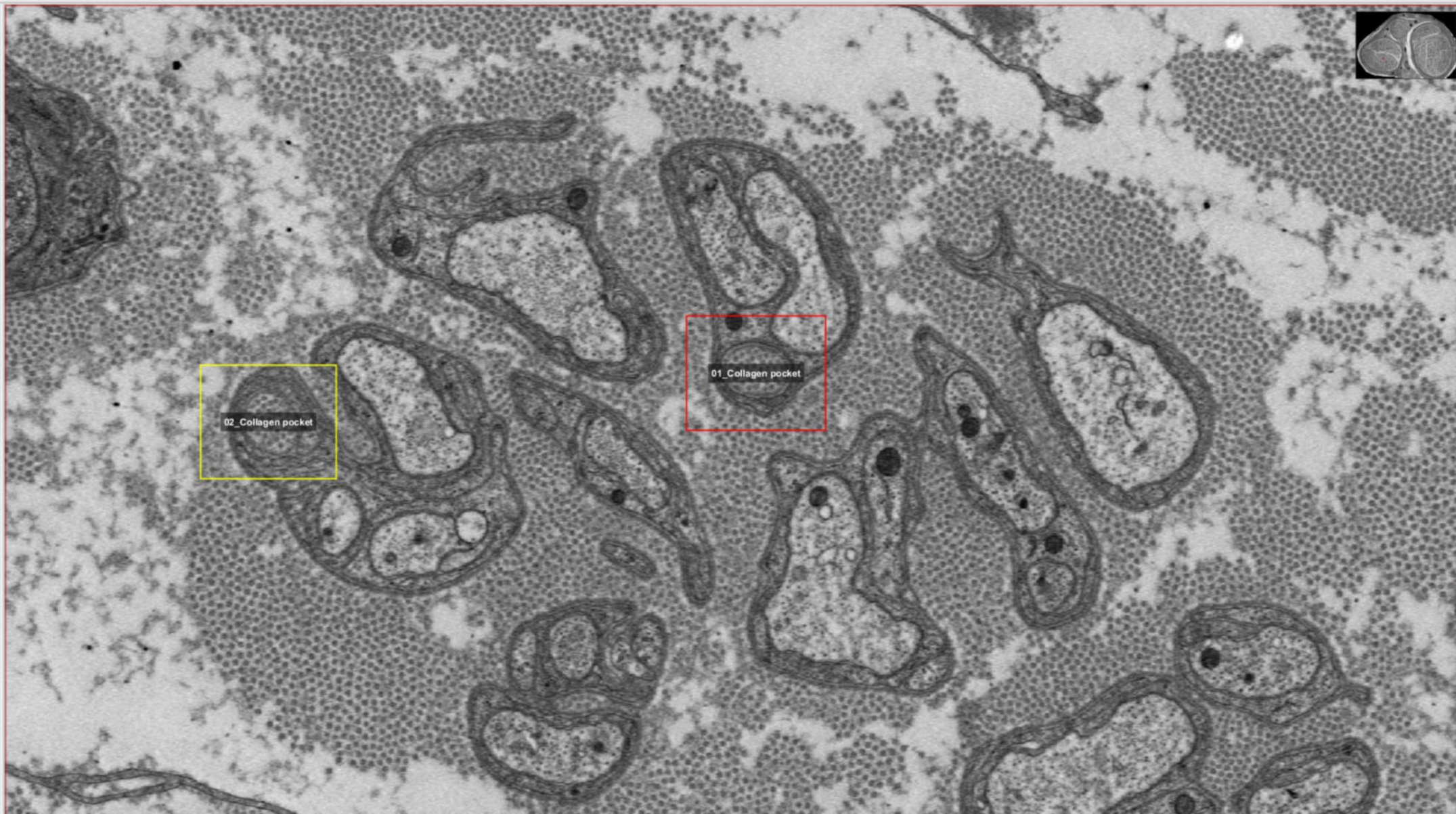
Locked:

OK Abbrechen

- 01_Collagen pocket (Rectangle)
- 02_Collagen pocket (Rectangle)

Image: 02_Collagen pocket (Rectangle)

Key	Value
Image	Dataset02.tif
Name	02_Collagen pocket
Class	
Parent	Image
ROI	Rectangle
Centroid X px	40483
Centroid Y px	69797.5
Area px^2	19866
Perimeter px	566



Second collagen pocket was annotated

File Edit Tools View Objects TMA Measure Automate Analyze Classify Extensions Help

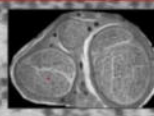
Project...
Recent projects...
Open... Ctrl+O
Open URL... Ctrl+Shift+O
Reload data Ctrl+R
Save As Ctrl+Shift+S
Save Ctrl+S
Export images...
Export snapshot...
TMA data...
Quit

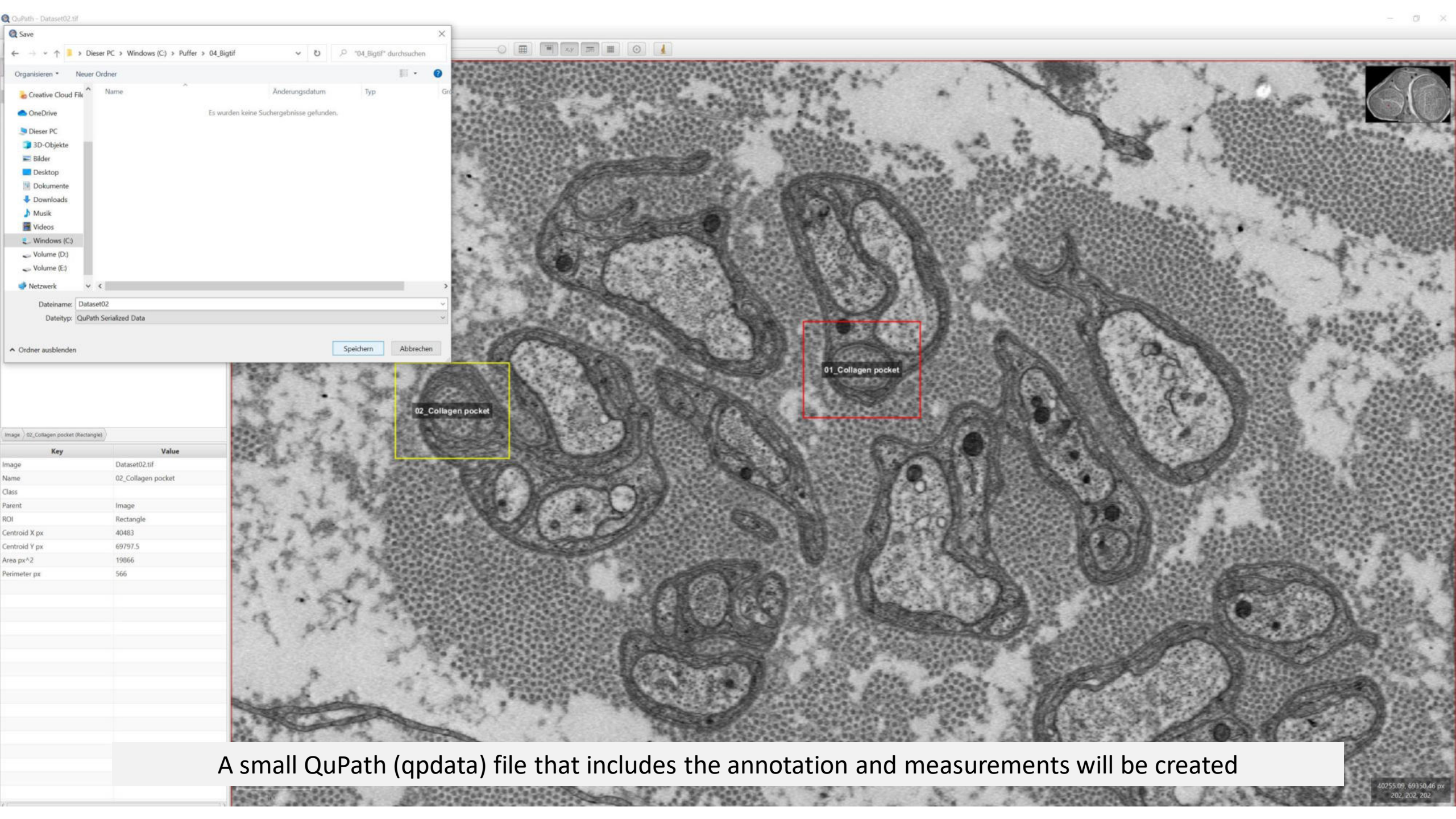


Image: 02_Collagen pocket (Rectangle)

Key	Value
Image	Dataset02.tif
Name	02_Collagen pocket
Class	
Parent	Image
ROI	Rectangle
Centroid X px	40483
Centroid Y px	69797.5
Area px^2	19866
Perimeter px	566

Save

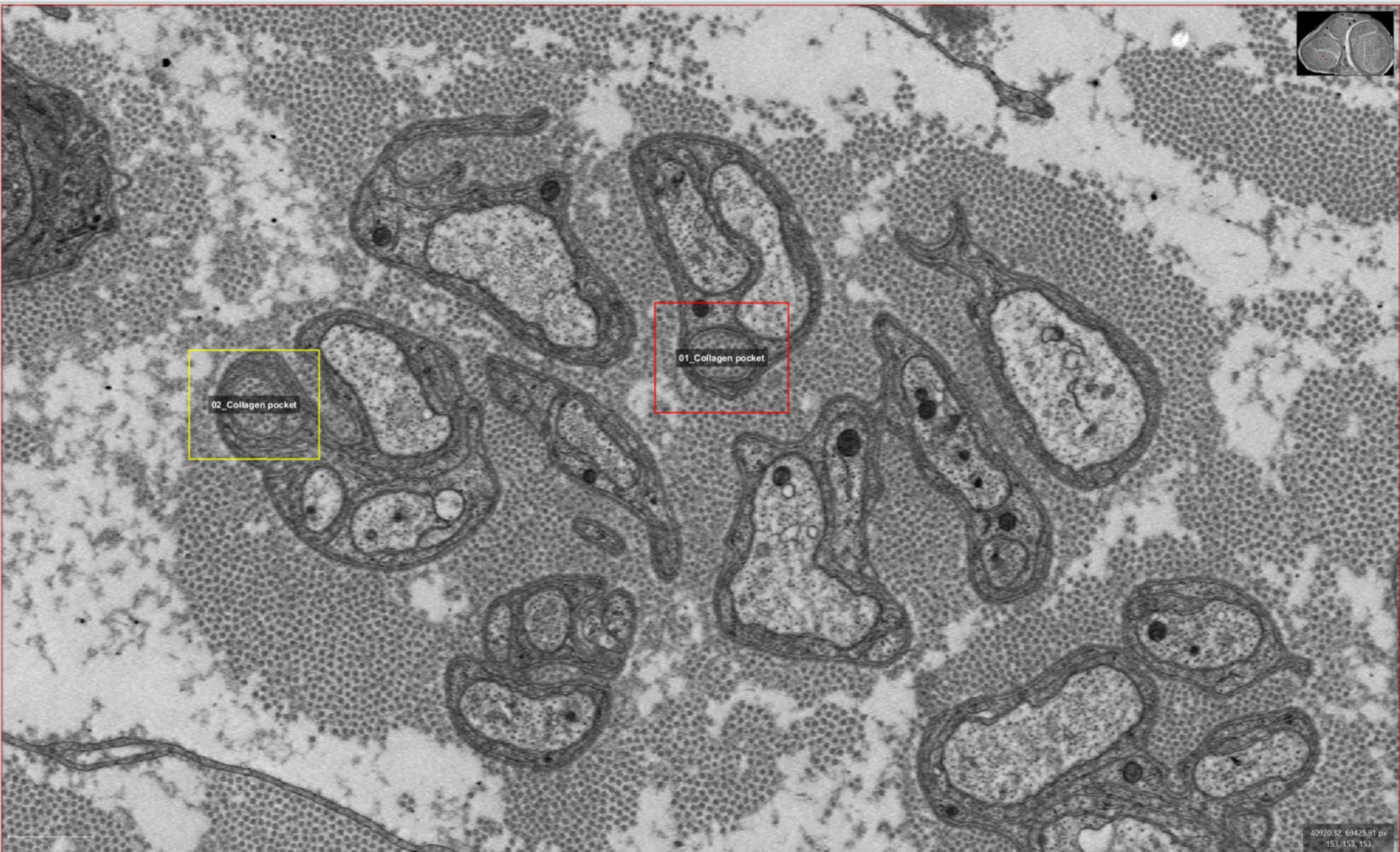


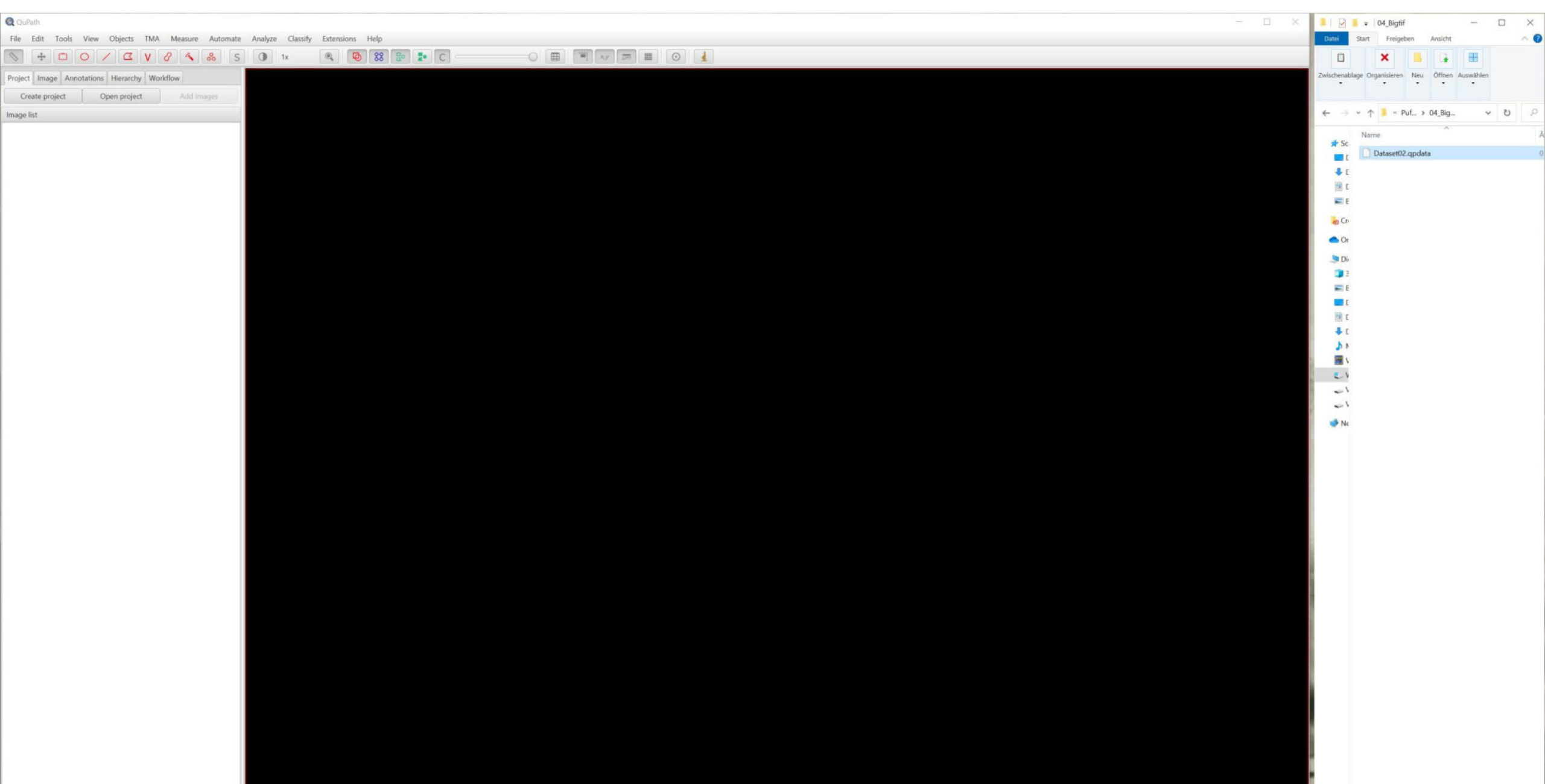


A small QuPath (qpdata) file that includes the annotation and measurements will be created

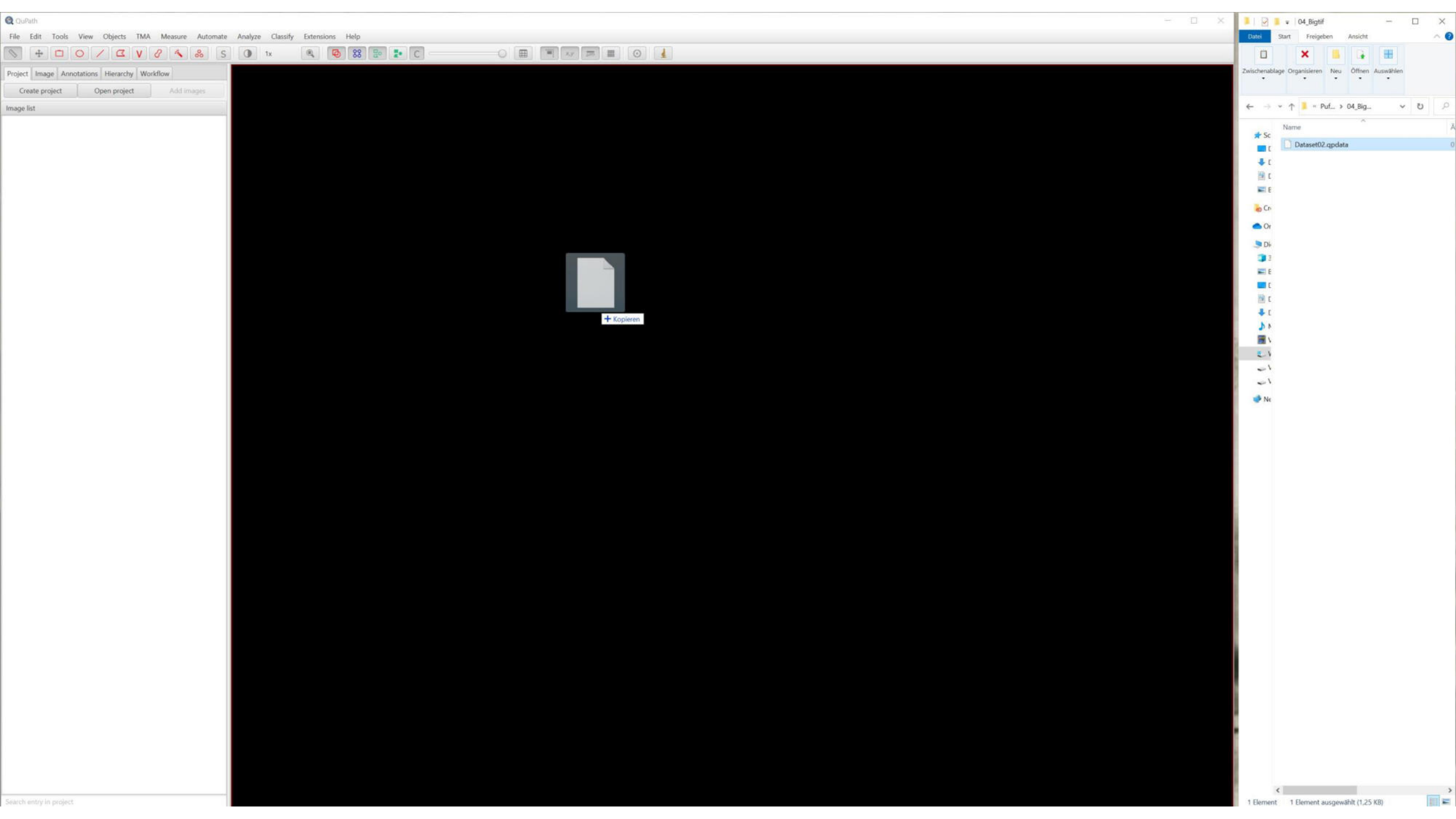
- 01_Collagen pocket (Rectangle)
- 02_Collagen pocket (Rectangle)

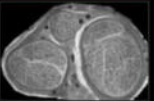
Key	Value
Image	Dataset02.tif
Name	02_Collagen pocket
Class	
Parent	Image
ROI	Rectangle
Centroid X px	40483
Centroid Y px	69797.5
Area px^2	19866
Perimeter px	566





In a new session, the qpdata file can be opened via drag&drop, thus, the bigtif will be opened as well
It might be required to update the path of the bigtif file





04_Bigtif

Datei Start Freigeben Ansicht

Zwischenablage Organisieren Neu Öffnen Auswählen

← → ↕ " Puf... → 04_Big...

Name

- Sc
- Dataset02.qpdata

1 Element 1 Element ausgewählt (1,25 KB)

Project Image Annotations Hierarchy Workflow

- 01_Collagen pocket (Rectangle)
- 02_Collagen pocket (Rectangle)

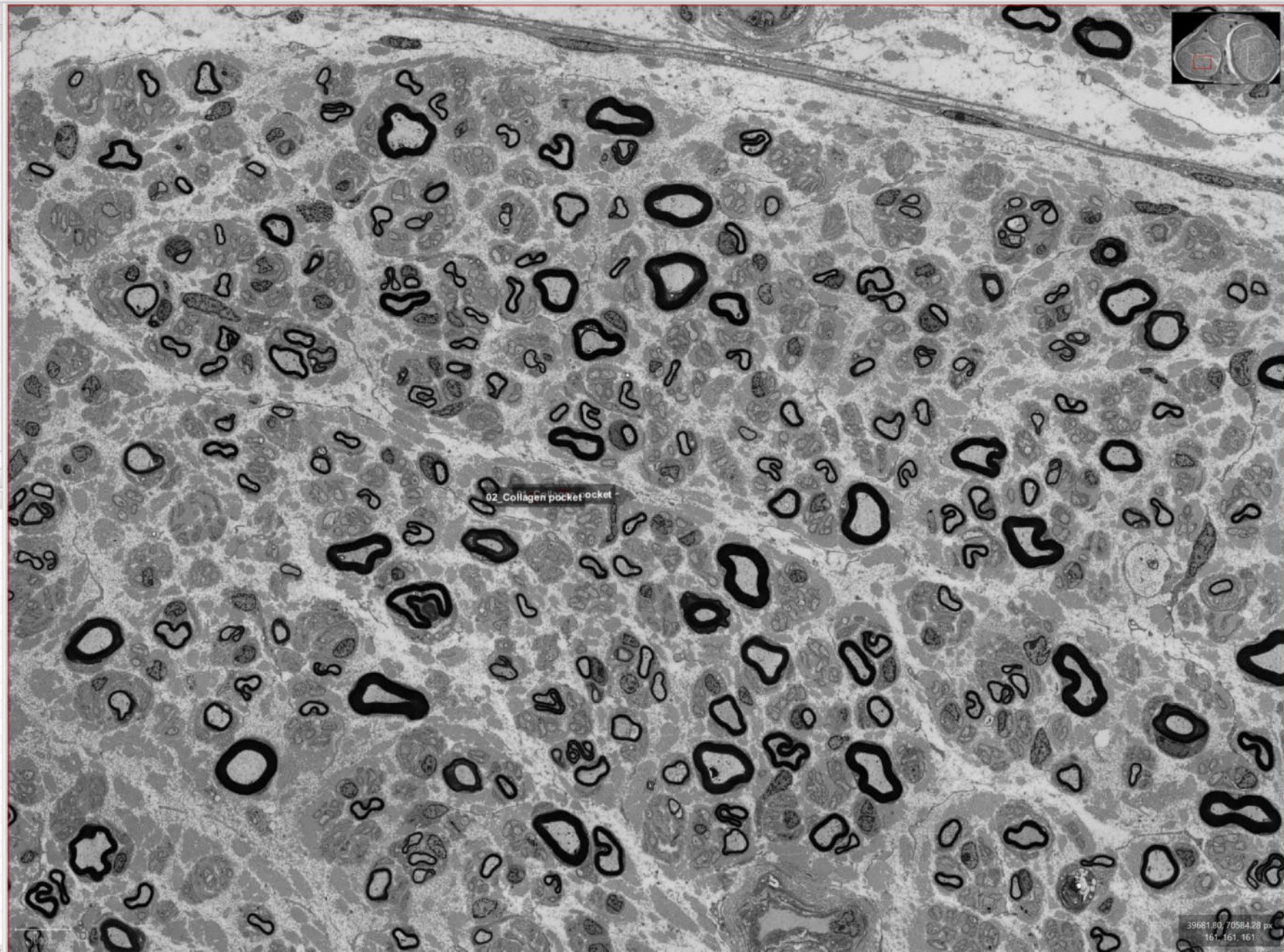
None

- Tumor
- Stroma
- Immune cells
- Necrosis
- Other
- Region*
- Ignore*
- Positive
- Negative

Filter classifications in list

Select all Delete Set class Auto set

Key	Value
Image	Dataset02.tif
Name	Image



O4_Bigtif

Datei Start Freigeben Ansicht

Zwischenablage Organisieren Neu Öffnen Auswählen

Name

- Dataset02.qpdata

1 Element 1 Element ausgewählt (1,25 KB)

Project Image Annotations Hierarchy Workflow

- 01_Collagen pocket (Rectangle)
- 02_Collagen pocket (Rectangle)

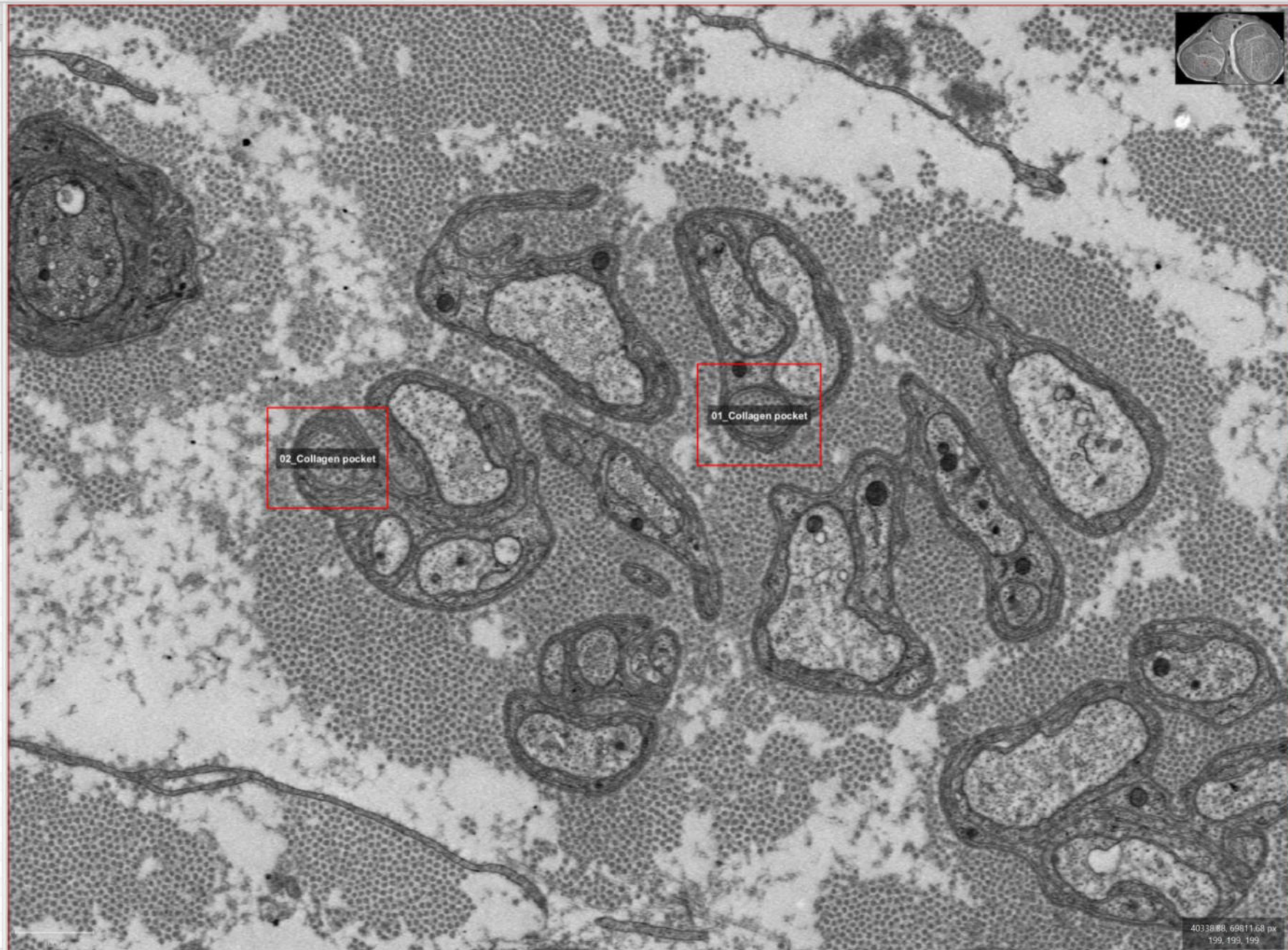
None

- Tumor
- Stroma
- Immune cells
- Necrosis
- Other
- Region*
- Ignore*
- Positive
- Negative

Filter classifications in list

Select all Delete Set class Auto set

Key	Value
Image	Dataset02.tif
Name	Image



O4_Bigtif

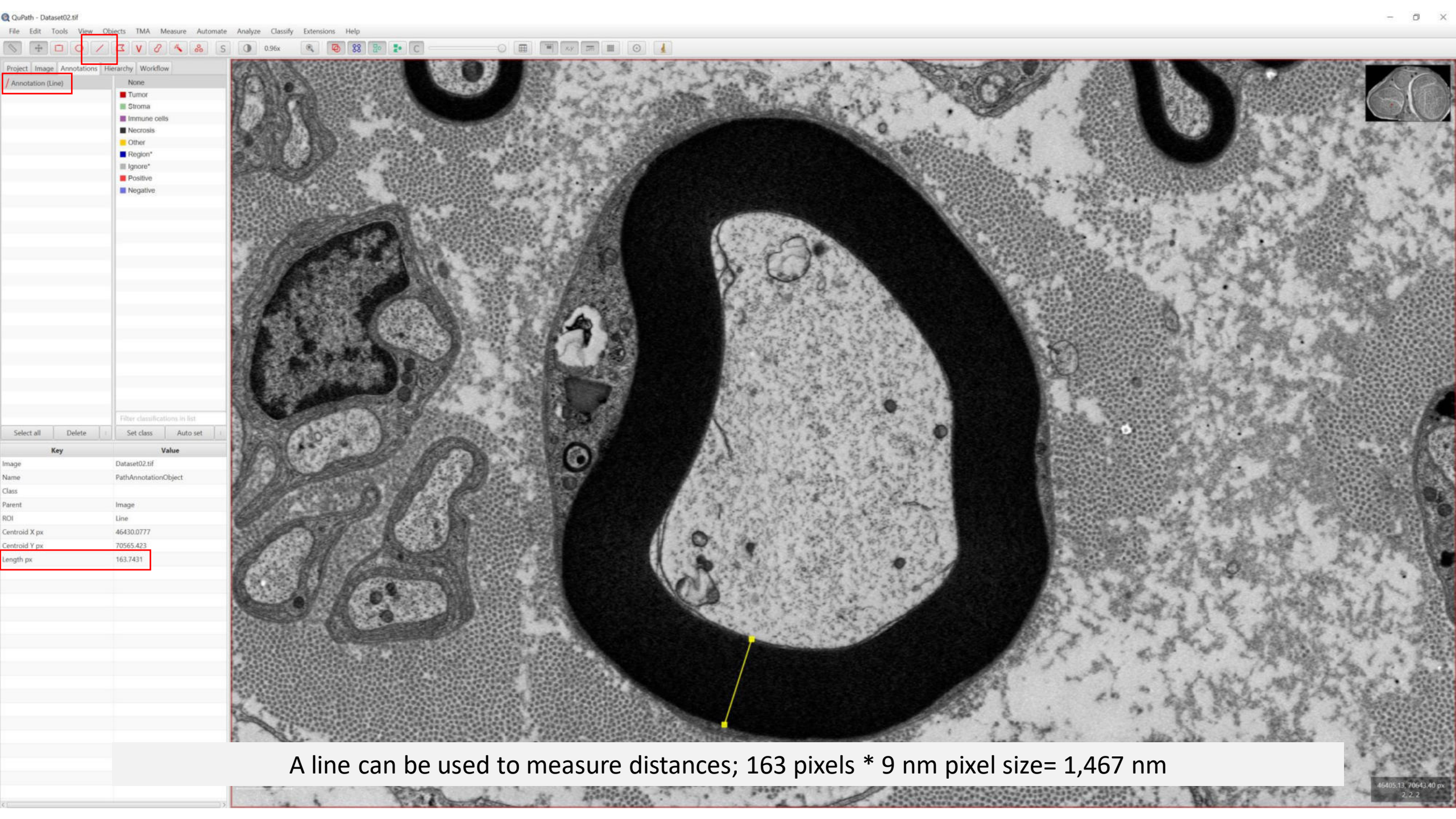
Datei Start Freigeben Ansicht

Zwischenablage Organisieren Neu Öffnen Auswählen

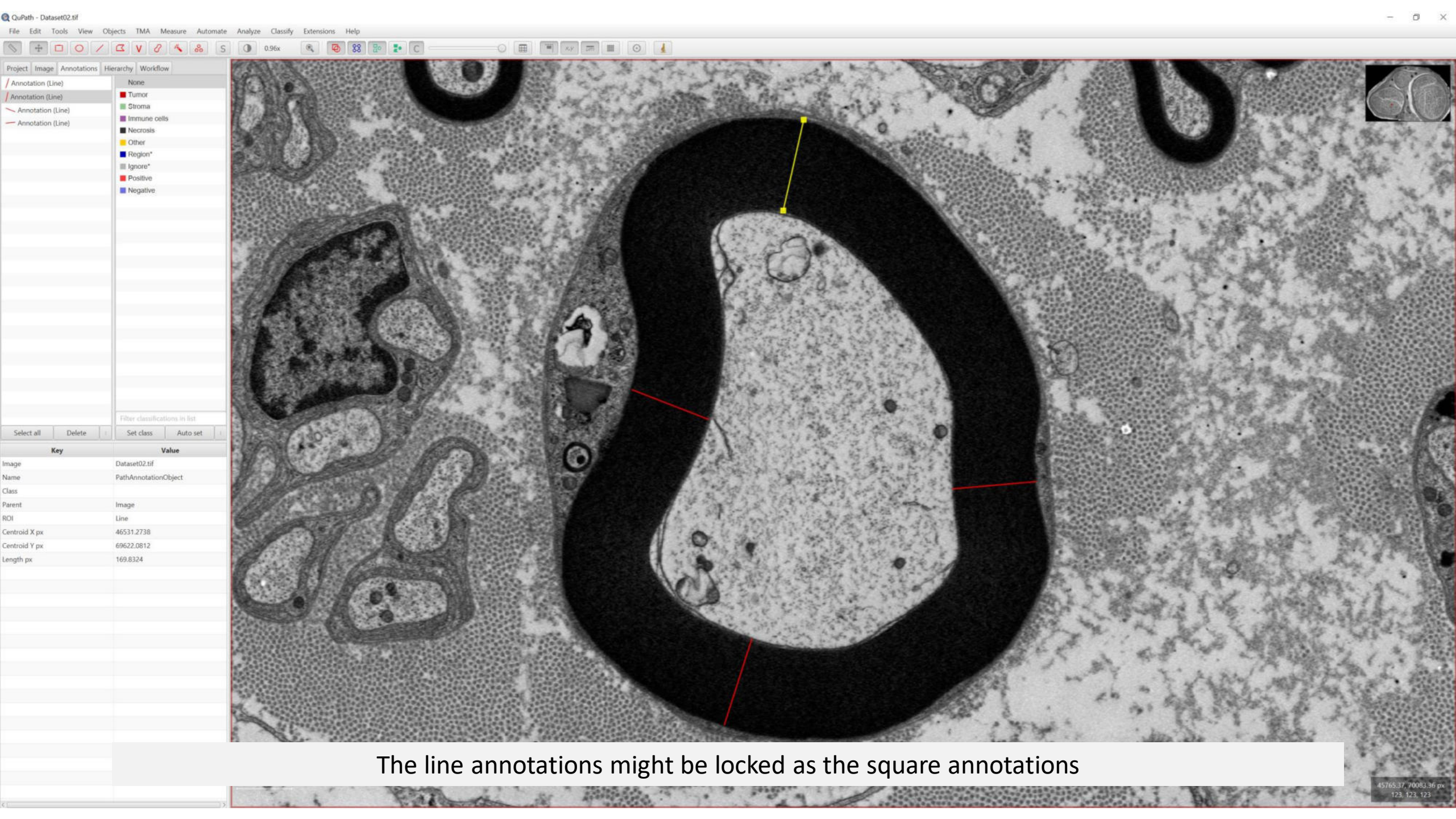
Name

- Dataset02.qpdata

40338x68, 69811x68 px
199, 199, 199



A line can be used to measure distances; 163 pixels * 9 nm pixel size= 1,467 nm



Project Image Annotations Hierarchy Workflow

- / Annotation (Line)
- / Annotation (Line)
- / Annotation (Line)
- / Annotation (Line)

None

- Tumor
- Stroma
- Immune cells
- Necrosis
- Other
- Region*
- Ignore*
- Positive
- Negative

Filter classifications in list

Select all Delete Set class Auto set

Key	Value
Image	Dataset02.tif
Name	PathAnnotationObject
Class	
Parent	Image
ROI	Line
Centroid X px	46531.2738
Centroid Y px	69622.0812
Length px	169.8324

The line annotations might be locked as the square annotations

Project Image Annotations Hierarchy Workflow

- Annotation (Line)
- Annotation (Line)
- Annotation (Line)
- Annotation (Line)

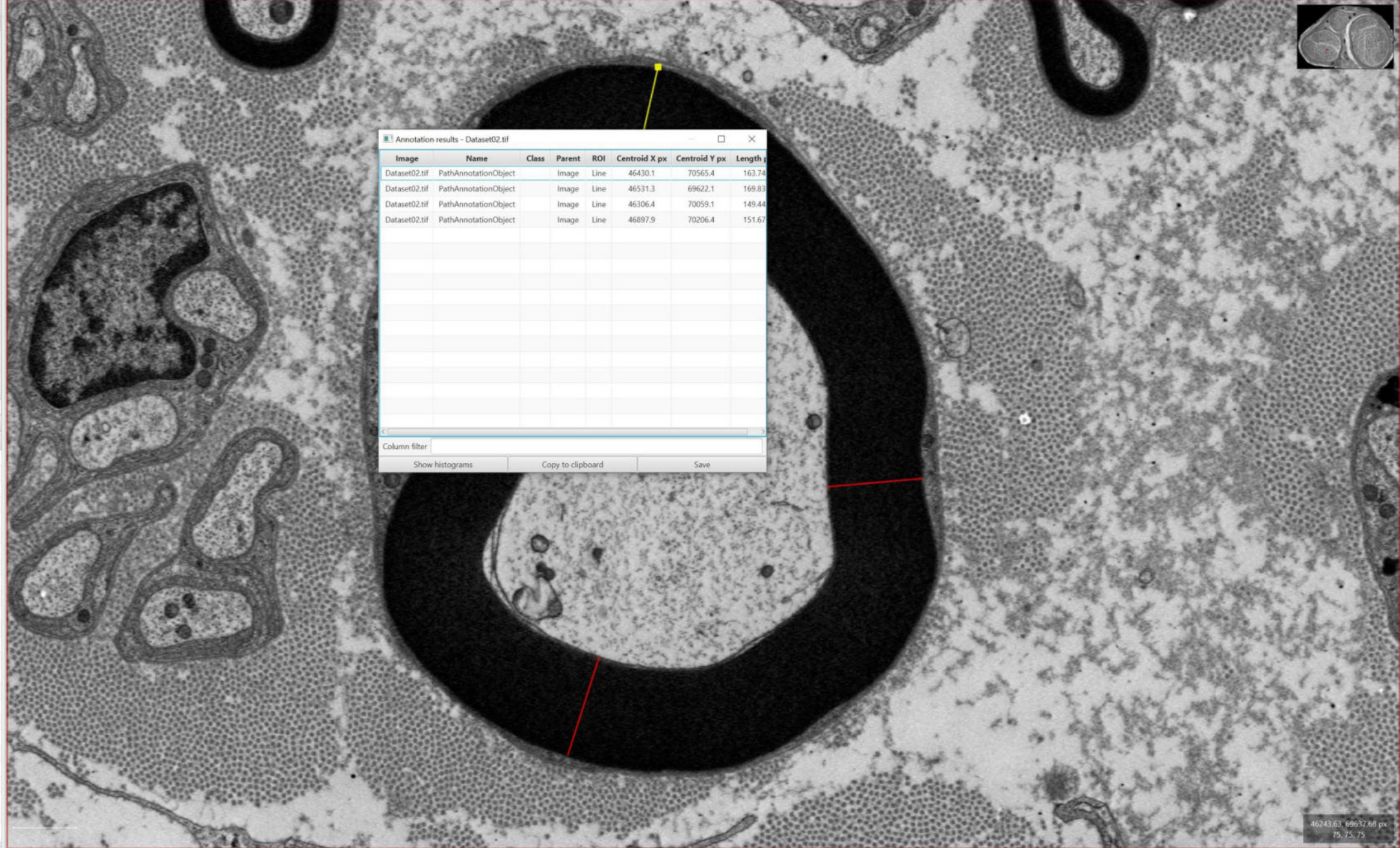
None

- Tumor
- Stroma
- Immune cells
- Necrosis
- Other
- Region*
- Ignore*
- Positive
- Negative

Filter classifications in list

Select all Delete Set class Auto set

Key	Value
Image	Dataset02.tif
Name	PathAnnotationObject
Class	
Parent	Image
ROI	Line
Centroid X px	46531.2738
Centroid Y px	69622.0812
Length px	169.8324



Annotation results - Dataset02.tif

Image	Name	Class	Parent	ROI	Centroid X px	Centroid Y px	Length px
Dataset02.tif	PathAnnotationObject	Image	Line		46430.1	70565.4	163.74
Dataset02.tif	PathAnnotationObject	Image	Line		46531.3	69622.1	169.83
Dataset02.tif	PathAnnotationObject	Image	Line		46306.4	70059.1	149.44
Dataset02.tif	PathAnnotationObject	Image	Line		46897.9	70206.4	151.67

Column filter

Show histograms Copy to clipboard Save

**Macro Name : carsten_SK_III_30s_02****Version**

Stage goto X= 61.471 mm Stage goto Y= 45.453 mm
Stage goto X= 61.471 mm Stage goto Y= 45.453 mm
Stage goto Z= 29.880 mm
Stage goto R= 169.3 °
Scan Rotation= 356.1 °
Delay For 30 seconds
Stage goto X= 61.803 mm Stage goto Y= 45.538 mm
Stage goto X= 61.803 mm Stage goto Y= 45.538 mm
Stage goto R= 138.2 °
Scan Rotation= 358.6 °
Delay For 30 seconds
Stage goto X= 61.368 mm Stage goto Y= 45.605 mm
Stage goto X= 61.368 mm Stage goto Y= 45.605 mm
Stage goto R= 109.4 °
Scan Rotation= 18.4 °
Delay For 30 seconds
Stage goto X= 61.666 mm Stage goto Y= 45.530 mm
Stage goto X= 61.666 mm Stage goto Y= 45.530 mm
Stage goto R= 78.1 °
Scan Rotation= 4.2 °
Delay For 30 seconds
Stage goto X= 61.161 mm Stage goto Y= 45.593 mm
Stage goto X= 61.161 mm Stage goto Y= 45.593 mm
Stage goto R= 49.4 °
Scan Rotation= 358.5 °
Delay For 30 seconds
Stage goto X= 61.433 mm Stage goto Y= 45.462 mm
Stage goto X= 61.433 mm Stage goto Y= 45.462 mm
Stage goto R= 17.8 °
Scan Rotation= 10.3 °
Delay For 30 seconds
Stage goto X= 61.319 mm Stage goto Y= 45.468 mm
Stage goto X= 61.319 mm Stage goto Y= 45.468 mm
Stage goto R= 348.2 °
Scan Rotation= 348.7 °
Delay For 30 seconds
Stage goto X= 61.314 mm Stage goto Y= 45.463 mm
Stage goto X= 61.314 mm Stage goto Y= 45.463 mm
Stage goto R= 318.5 °
Scan Rotation= 356.5 °
Delay For 30 seconds
Stage goto X= 61.339 mm Stage goto Y= 45.292 mm
Stage goto X= 61.339 mm Stage goto Y= 45.292 mm
Stage goto R= 288.6 °
Scan Rotation= 0.1 °
Delay For 30 seconds
Stage goto X= 61.852 mm Stage goto Y= 45.276 mm
Stage goto X= 61.852 mm Stage goto Y= 45.276 mm
Stage goto R= 257.8 °
Scan Rotation= 348.4 °
Delay For 30 seconds
Stage goto X= 61.698 mm Stage goto Y= 45.308 mm
Stage goto X= 61.698 mm Stage goto Y= 45.308 mm
Stage goto R= 228.2 °
Scan Rotation= 357.3 °
Delay For 30 seconds
Stage goto X= 62.060 mm Stage goto Y= 45.274 mm
Stage goto X= 62.060 mm Stage goto Y= 45.274 mm
Stage goto R= 197.1 °
Scan Rotation= 355.9 °
Delay For 30 seconds
Delay For 3600 seconds
EHT Off