

# Help Menu for Neuroglancer

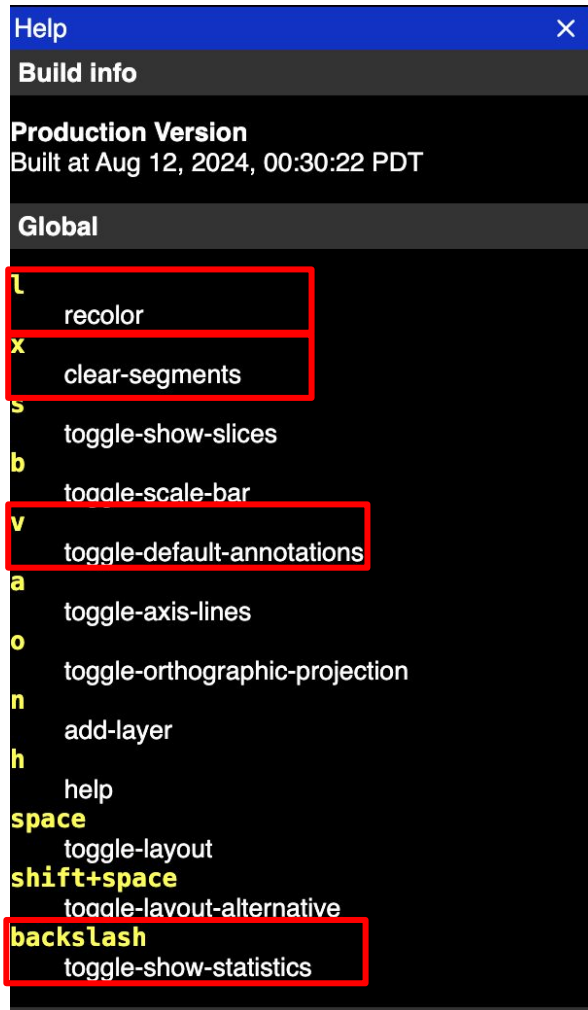
Litao Version built August 12, 2024

# Global Menu

# Unclear controls

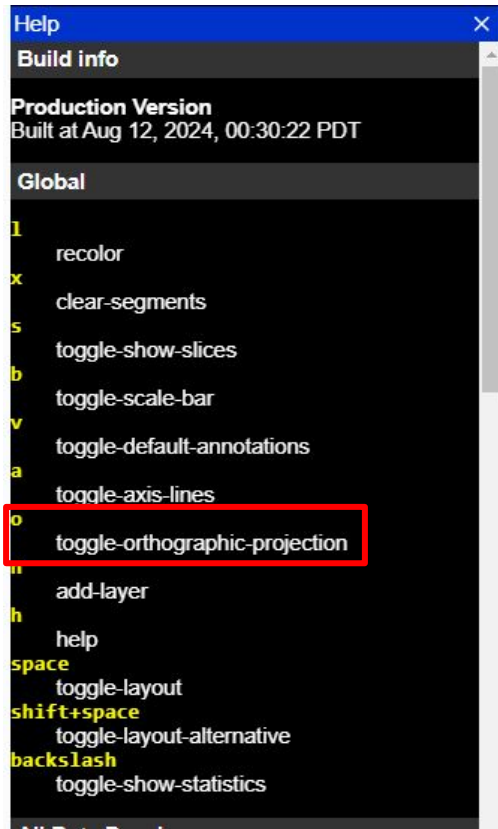
Not sure about what the following do:

- **l** → recolor
  - Drew polygons and tried this, nothing happened
  - Does this recolor an image layer or annotations?
- **x** → clear segments
  - Drew polygons and tried it, but nothing happened
  - What segments is this referring to?
- **v** → toggle default annotations
  - What is a default annotation?
- **backslash** → show statistics
  - what statistics?



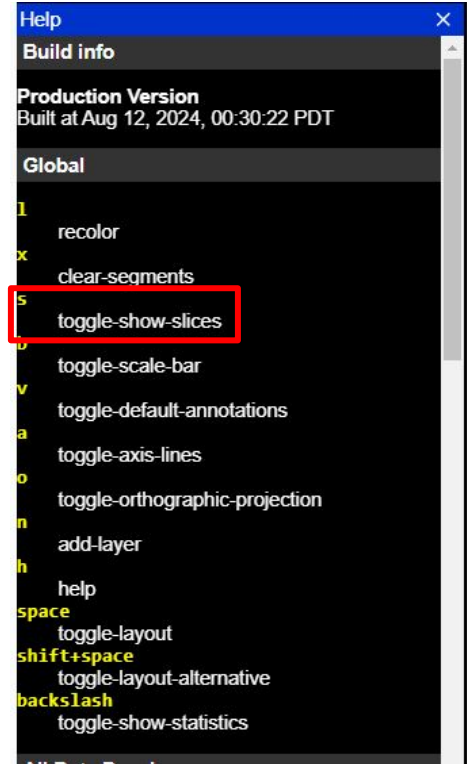
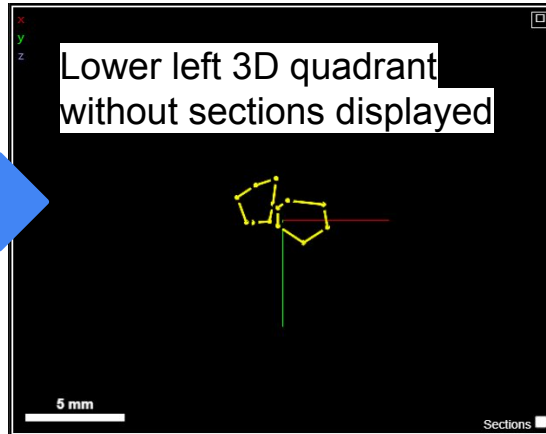
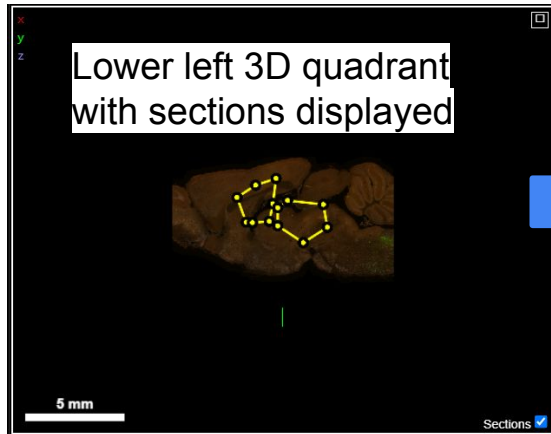
# Unclear command

- o → toggle-orthographic-projection
  - Pressing “o” on keyboard seems to change the the orthographic projection by very little
  - What is this useful for?



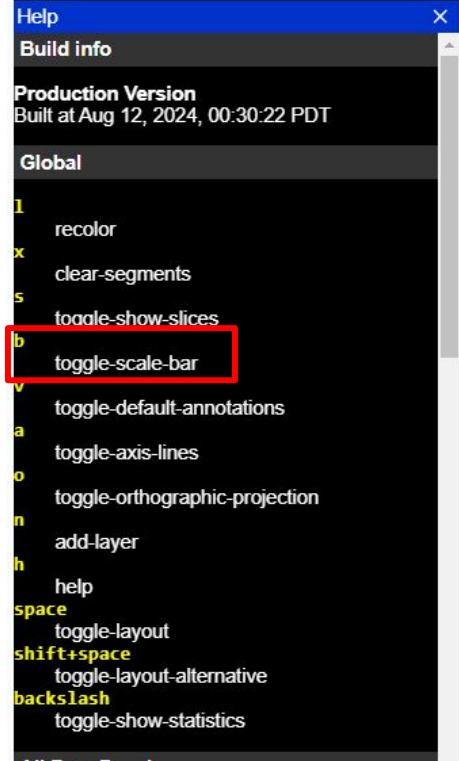
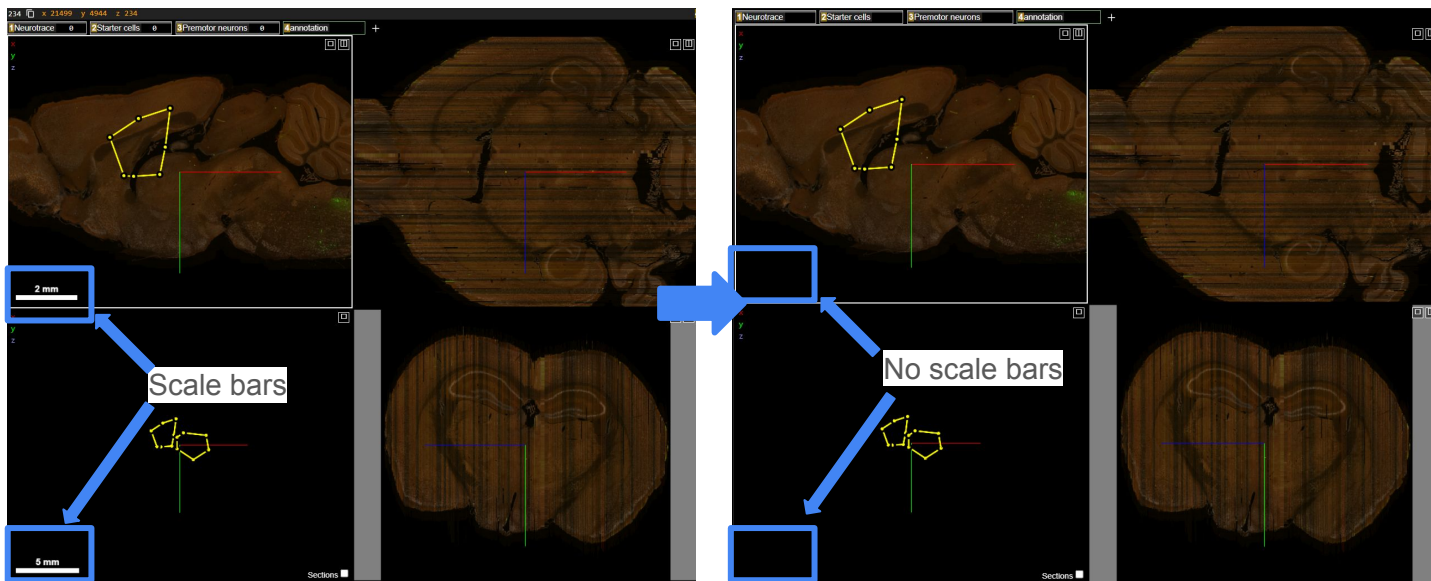
# Toggle slices in 3D-view quadrant (same for Mac/PC)

- s → toggle-show-slices
  - Pressing “s” on keyboard toggles slices in 3D quadrant on the lower left



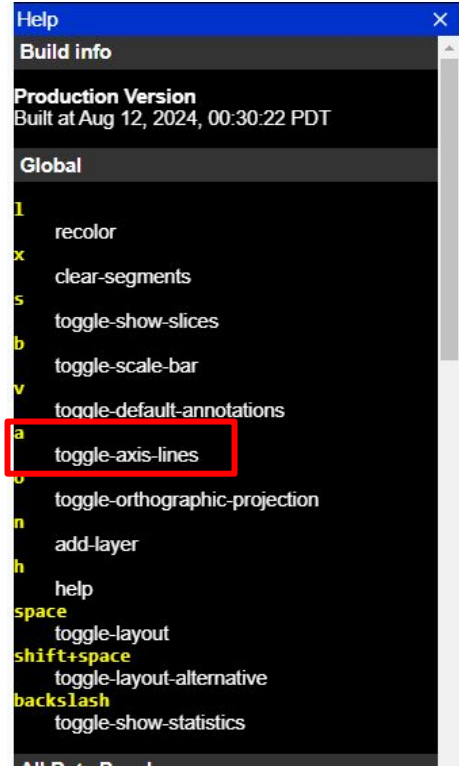
# Toggle scale bars on/off (same for PC/Mac)

- **b** → toggle-scale-bar
  - Pressing “b” on keyboard toggles scale bar on both sagittal plane and 3D-viewer



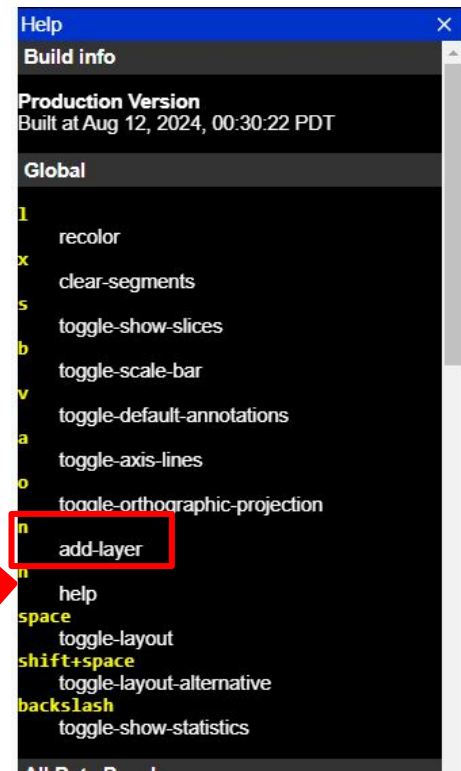
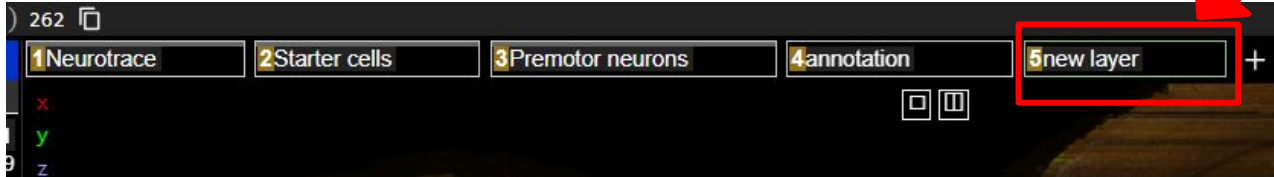
# Toggle axis on/off (same for Mac/PC)

- a → toggle-axis-lines
  - Pressing “a” key on keyboard toggles x-y-z axis on and off for all views



# Create new image layer (same on Mac/PC)

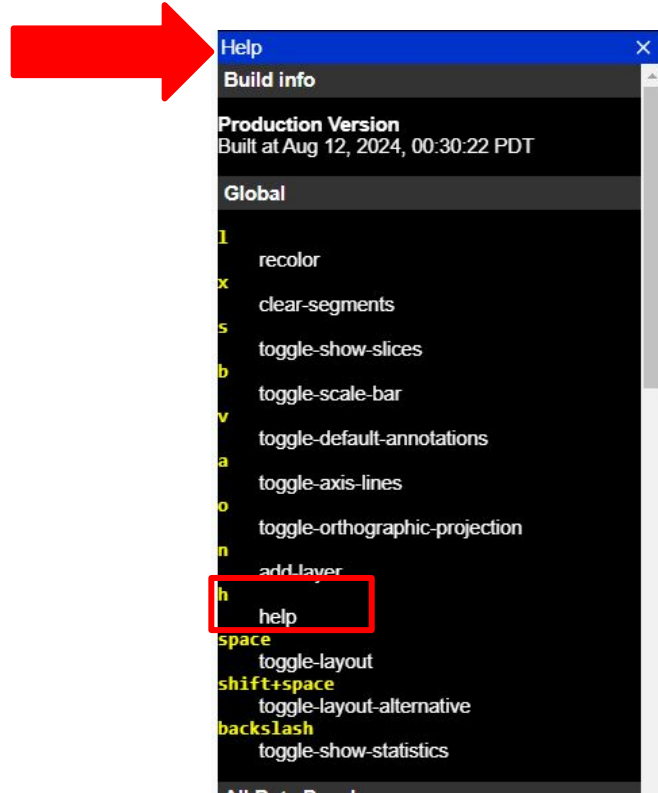
- $n \rightarrow$  add-layer
  - Pressing “n” on keyboard creates a new **image layer**
  - Different from an annotation layer!
  - Should change description to specify that this is only creating a new image layer



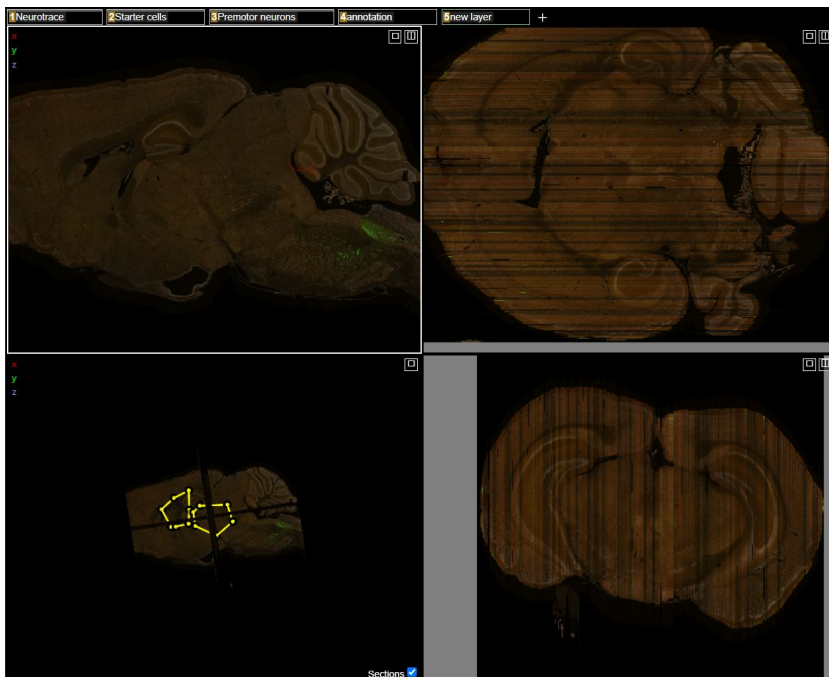
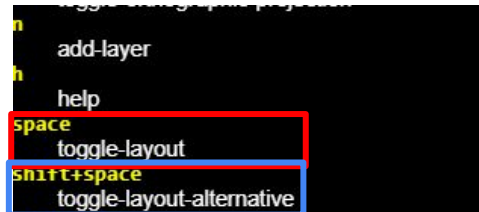


# Launch the “Help” Menu (same on Mac/PC)

- h → help
  - Pressing “h” on keyboard opens up “Help” Menu on the right hand side of screen



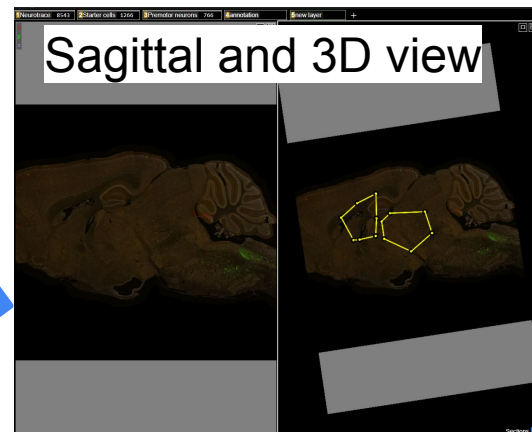
# Change NG layout view (same on Mac/PC)



Space bar only



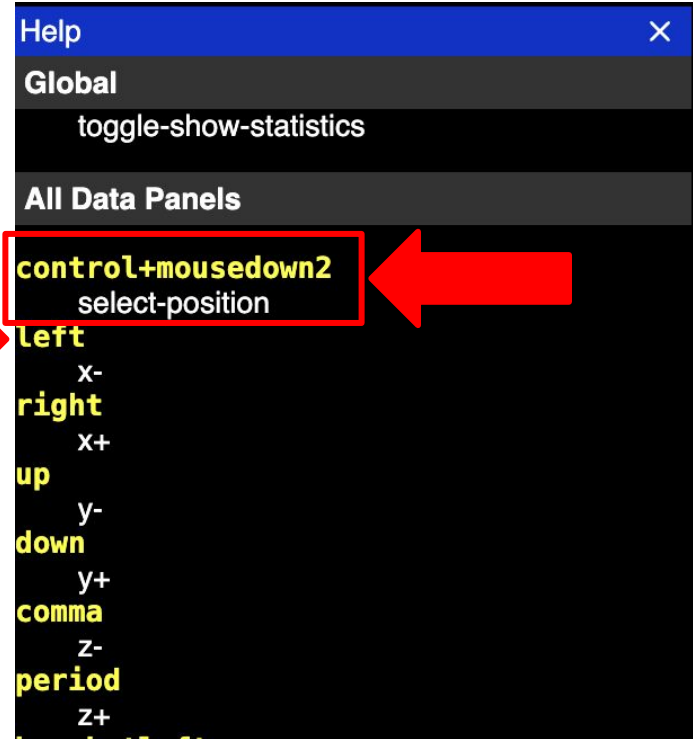
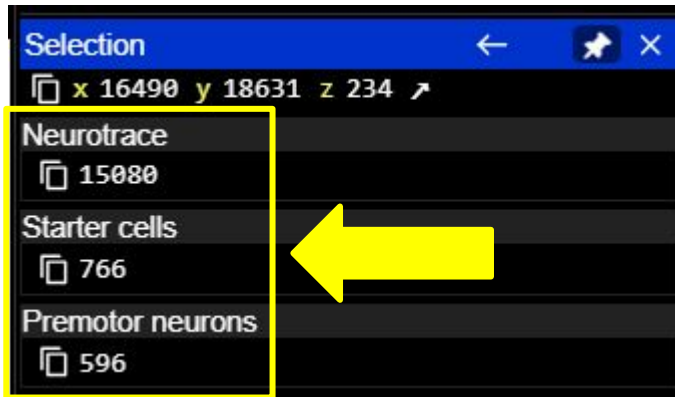
Shift + Space bar



# All Data Panels Menu

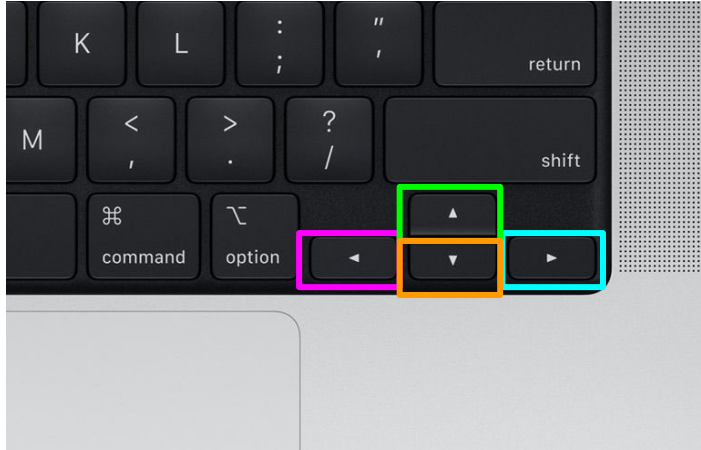
# Unclear controls

- Tried ctrl + right-click on PC
- ctrl + two-finger click on Mac
- Unsure what it represents?
- Is this pixel value?

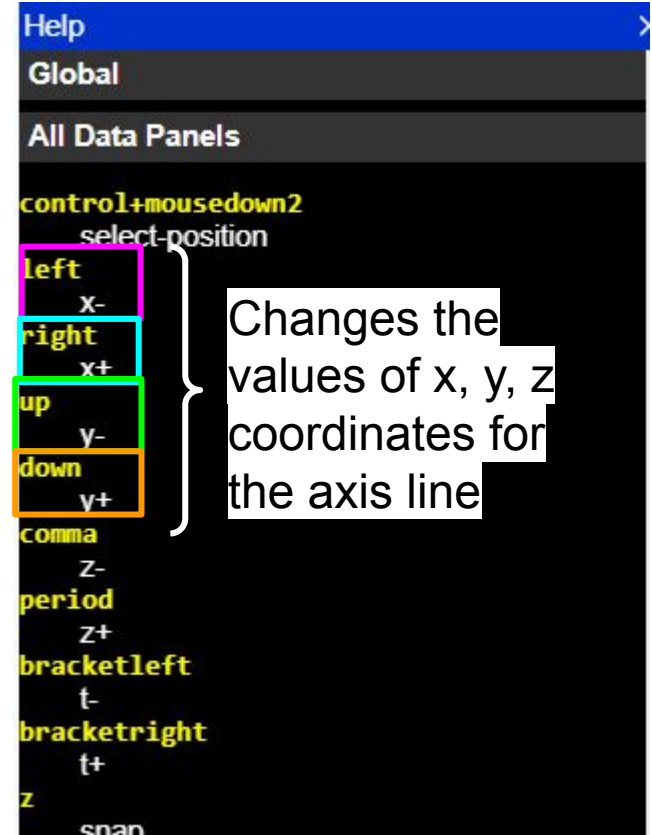
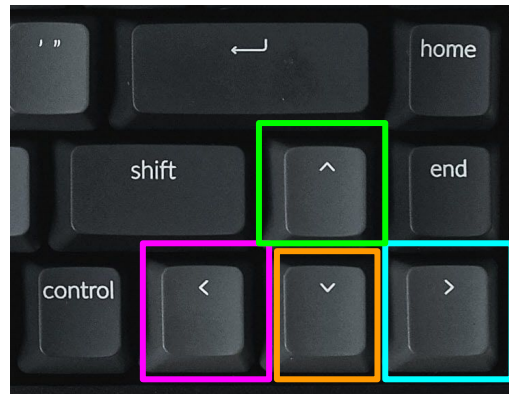


# Move axis-line coordinates (same on Mac/PC)

Mac keyboard  
arrows

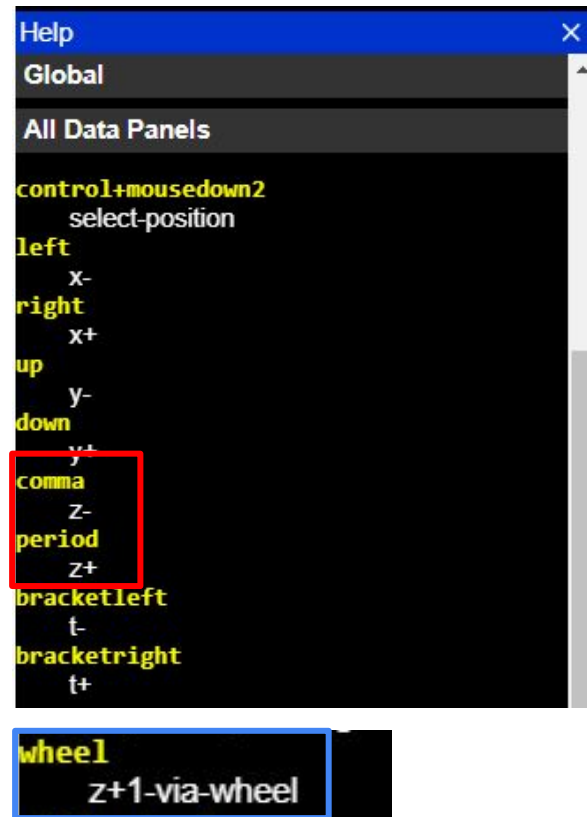


PC keyboard  
arrows



# Moving from section to section along z-axis (same for Mac/PC)

- comma → z- (previous section)
  - Pressing “comma” key on keyboard decreases z-value (previous slice)
- period → z+
  - Pressing “period” key on keyboard increases z-value (next slice)
- Can do the same with **scroll wheel** on mouse
  - Scroll up = z+1
  - Scroll down = z-1

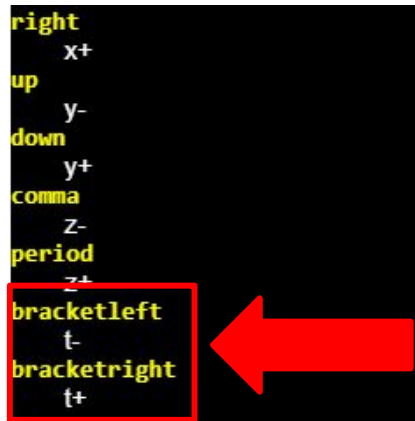


# “bracket” commands unknown

The following controls did not change anything in both Mac/PC:

- bracketleft → t-
- bracketright → t+

What does the “t” represent?

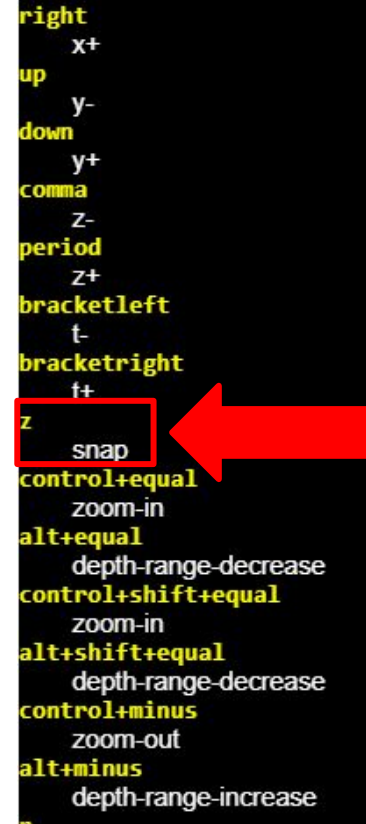


```
right
  x+
up
  y-
down
  y+
comma
  z-
period
  z+
bracketleft
  t-
bracketright
  t+
z
  snap
control+equal
  zoom-in
alt+equal
  depth-range-decrease
control+shift+equal
  zoom-in
alt+shift+equal
  depth-range-decrease
control+minus
  zoom-out
alt+minus
  depth-range-increase
```

# “snap” action unknown

Pressed the “z” key and did not notice any changes with or without annotations displayed on both Mac/PC

What is this “snapping” to?

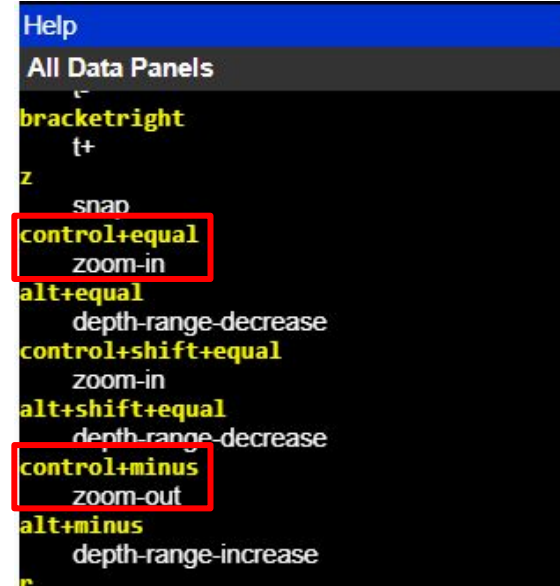
A screenshot of a keyboard layout on a dark background. The keys are labeled with text in a light yellow/green color. The labels include: right, x+, up, y-, down, y+, comma, z-, period, z+, bracketleft, t-, bracketright, t+, z, snap, control+equal, zoom-in, alt+equal, depth-range-decrease, control+shift+equal, zoom-in, alt+shift+equal, depth-range-decrease, control+minus, zoom-out, alt+minus, and depth-range-increase. A red rectangular box is drawn around the 'z' key label, and a large red arrow points from the right towards this box.

```
right
  x+
up
  y-
down
  y+
comma
  z-
period
  z+
bracketleft
  t-
bracketright
  t+
z
  snap
control+equal
  zoom-in
alt+equal
  depth-range-decrease
control+shift+equal
  zoom-in
alt+shift+equal
  depth-range-decrease
control+minus
  zoom-out
alt+minus
  depth-range-increase
```



# Zoom in/out of section (same for Mac/PC)

- control + equal → zoom-in
  - **On PC:** press “ctrl” key and then the “=” key on keyboard to zoom into section
  - **On Mac:** press “control” key and then the “=” key on keyboard to zoom into section
- control + minus → zoom-out
  - **On PC:** press “ctrl” key and then the “-” key on keyboard to zoom out of section
  - **On Mac:** press “control” key and then the “-” key on keyboard to zoom out of section



# Change depth range on z-axis needs edit

Depth of range changes the visibility of annotations across sections:

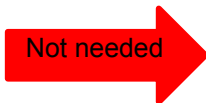
- more depth of range means the annotations of one section will appear more visibly on sections prior/after
- less depth of range will display annotations on the section they were made only

Mac command is different:

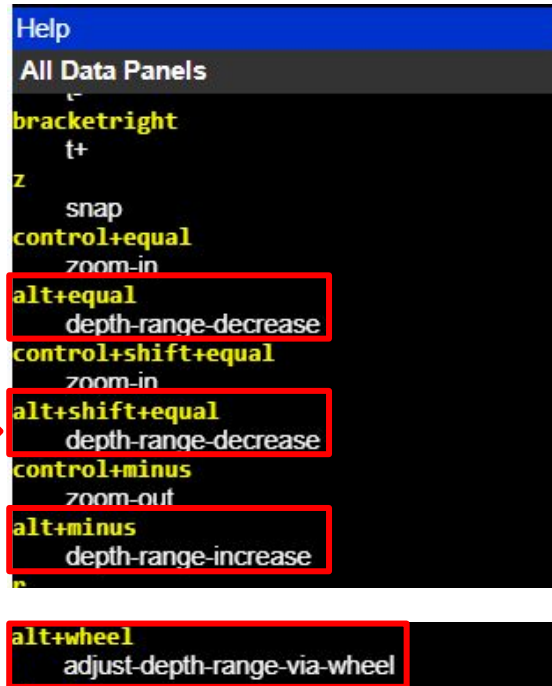
- *option + equal* → depth-range-decrease
- *option + minus* → depth-range-increase
- *option + scroll up* → depth-range-increase
- *option + scroll down* → depth-range-decrease

PC commands are the same:

- *alt + equal* → depth-range-decrease
- *alt + minus* → depth-range-increase
- *alt + scroll up* → depth-range-decrease
- *alt + scroll down* → depth-range-increase

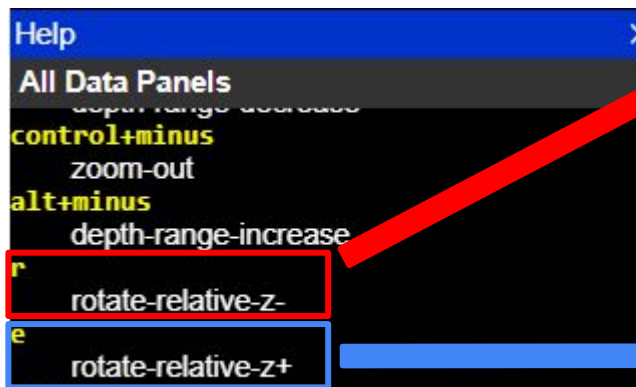


Not needed

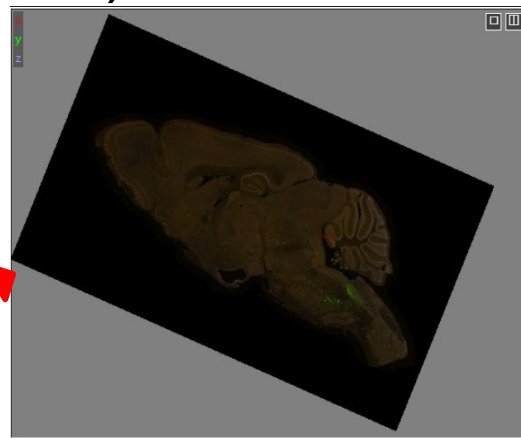


# Rotate slice image (same on Mac/PC)

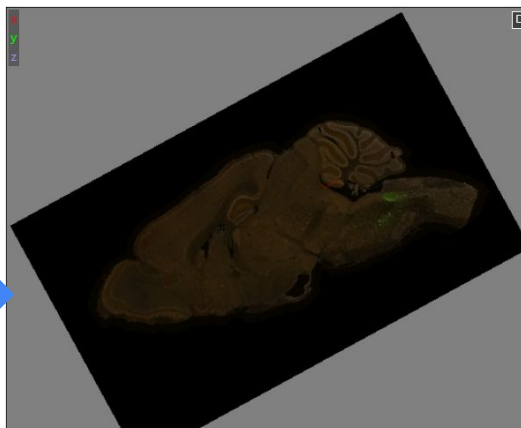
- **r** → rotate-relative-z-
  - Rotates image clockwise
- **e** → rotate-relative-z+
  - Rotates image counter-clockwise



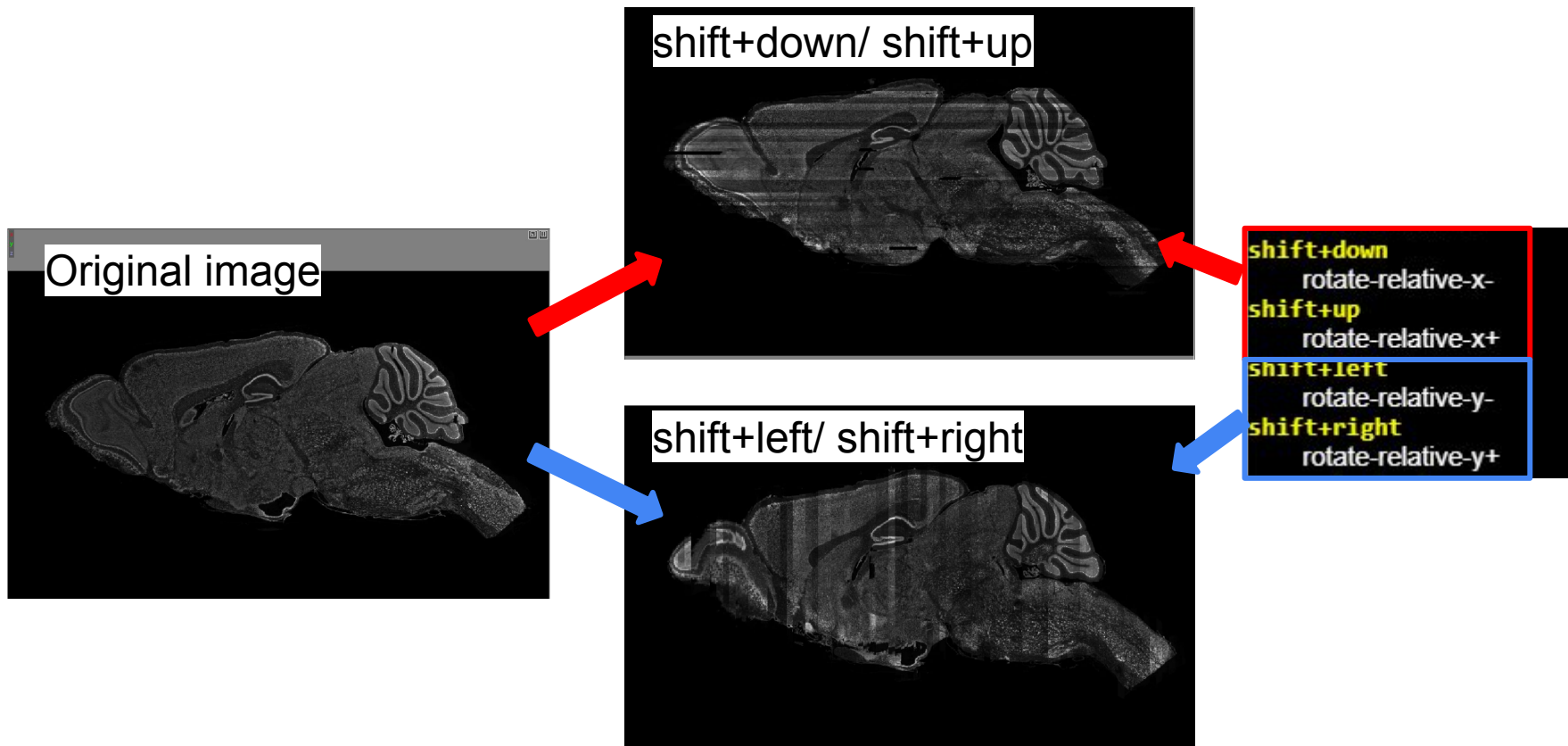
Clockwise rotation



Counter-clockwise rotation



# Command unclear using key arrows on both Mac/PC



# Polygon Annotation Tools

Should be grouped together under the same section

# Rewrite command for creating annotation

Change the following:

1. Old: *control + mousedown0* → annotate

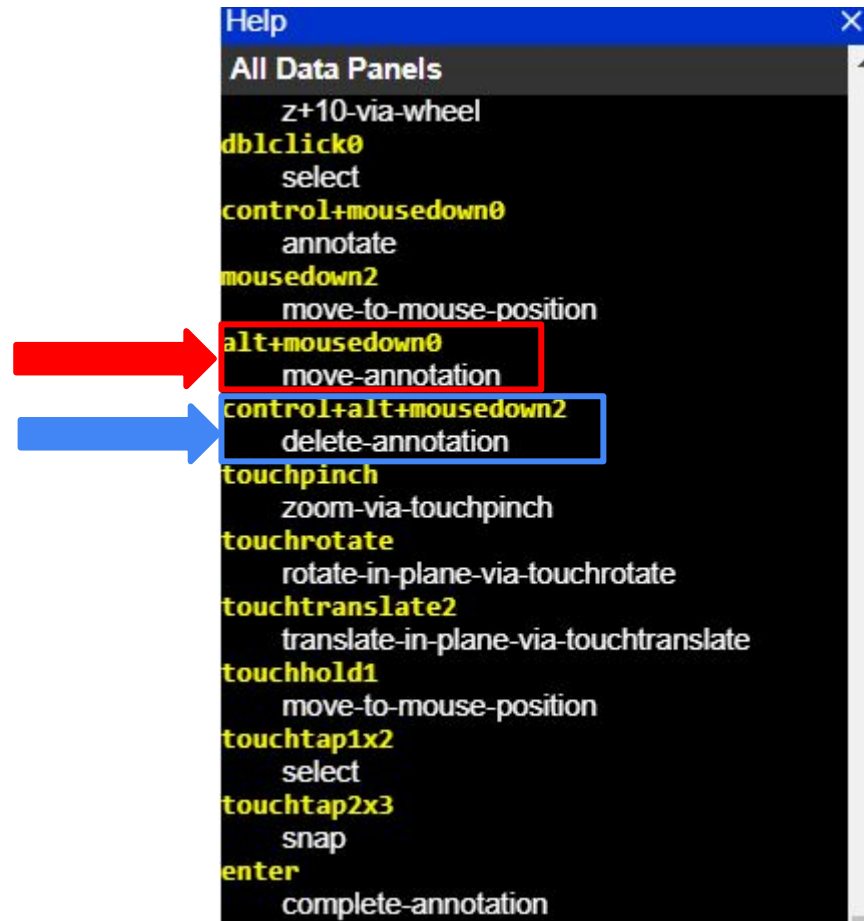
**PC New:** *control + left-click* → create annotation vertex

**Mac New:** *control + one-finger click* → create annotation vertex

2. Old: *mousedown2* → move-to-mouse-position

**PC New:** *right-click* → move-to-mouse-position

**Mac New:** *two-finger click* → move-to-mouse-position



# Suggested edits for moving annotations commands

Change the following:

3. Old: *alt + mousedown0* → move-annotation

**PC New:** *ctrl + left-click* → create annotation vertex

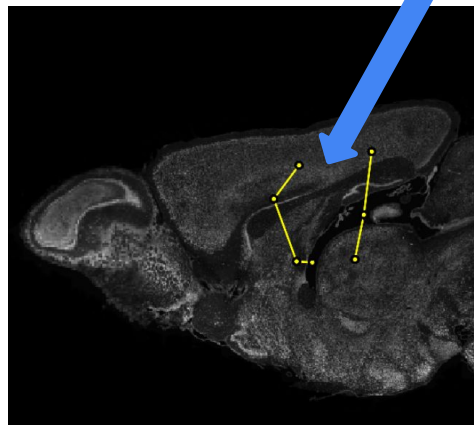
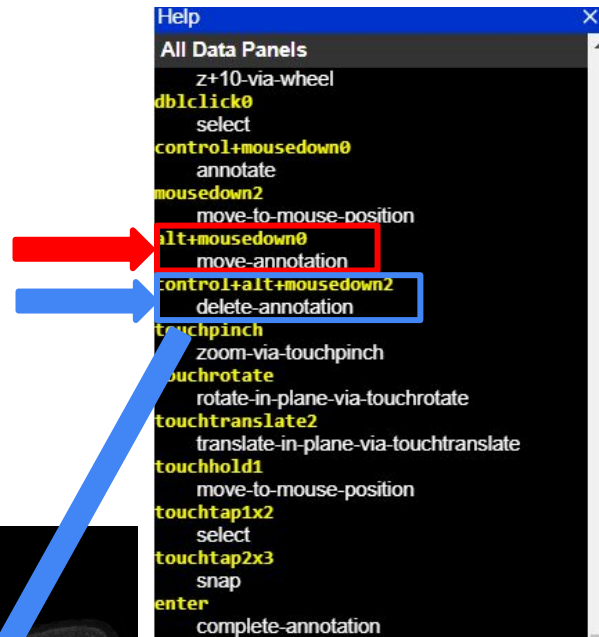
**Mac New:** *command + one-finger click* → create annotation vertex

4. Old: *control + alt + mousedown2* → delete-annotation

- This does NOT delete a vertex, instead it deletes the line segment between vertices
- This was not previously used for annotating

**PC New:** *alt + ctrl + right-click* → delete line segment annotation

**Mac New:** *control + option + two-finger click* → delete line segment annotation



# Moving Vertices

**PC New:** *alt + left-click and drag* → move single annotation vertex

**Mac New:** *option + one-finger click and drag* → move single annotation vertex

**Important:** vertex size should be large enough to place pointer in the middle of the vertex





# Shifting Polygons

Include commands for:

The following commands work if user selects any part of the polygon:

**PC:** *Alt + Shift + left-click* → translate polygon

**Mac:** *Option + Shift + one-finger-click* → translate polygon



# Add/ delete vertex points on polygons

- escape → undo-annotation
  - Hitting “esc” key should undo annotation, but could not get this to work on Mac/PC

Change the command wording:

- shift+dblclick0 → add-vertex-polygon

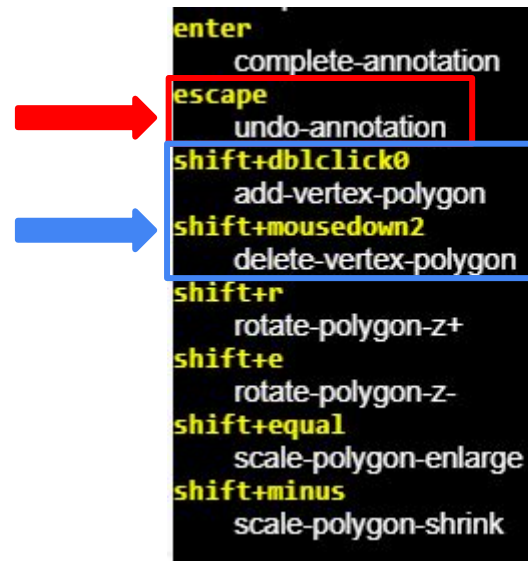
**PC :** Change to *shift + double-left click*

**Mac:** Change to *shift + one-finger double-click*

- shift + mousedown2 → delete-vertex-polygon

**PC :** Change to *shift + right-click*

**Mac:** Change to *shift + two-finger click*

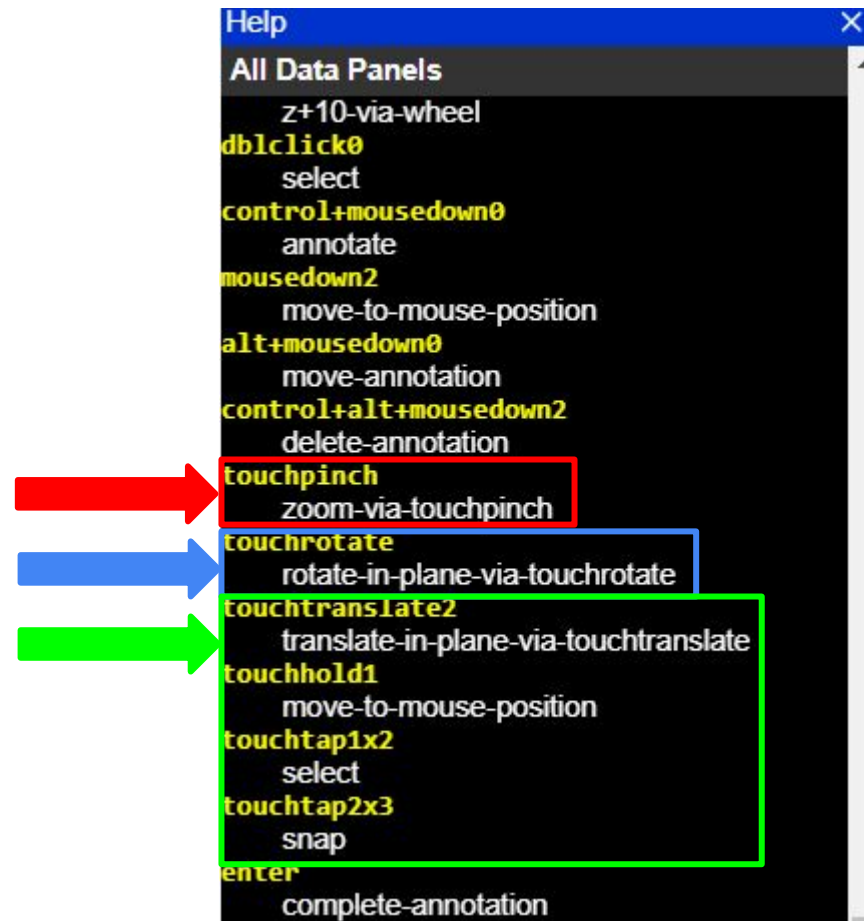


# Track-pad specific commands

- touchpinch → zoom-via-touch
  - On trackpad, pinch two fingers together to zoom in on tissue
  - Worked on both Mac/PC
- touchrotate → rotate-in-plane-via-touchrotate
  - Could not get this to work on Mac or PC

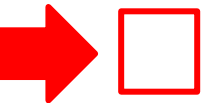
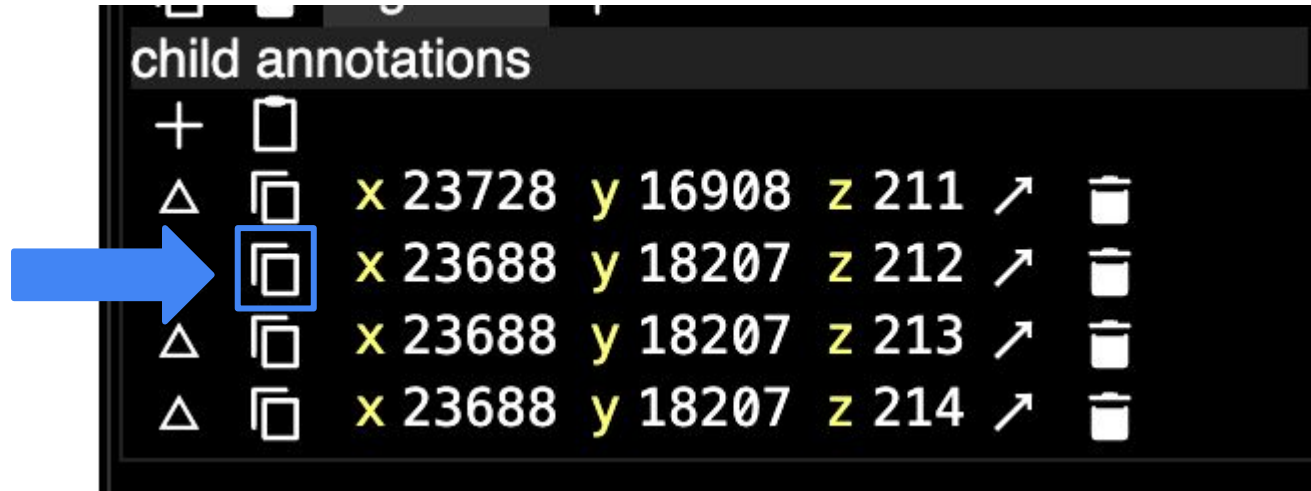
Unsure about what the following commands are:

- touchtranslate2 → translate-in-plane-via-touchtranslate
- touchhold1 → move-to-mouse-position
- touchtap1x2 → select



Not included in Help Menu (are there key shortcuts?)

- **Copy** button copies single polygon in volume.
- New **Paste** button location is below the child annotations section - only pops up after you draw the first polygon.



# Resuming Polygon Annotations for a Volume

If user leaves NG session and returns later to continue adding polygons to a volume they have to:

1. Select the annotation tab with the volume.
2. Select the volume (selecting will highlight the volume in purple).
3. Click on the + below “child annotations” to continue adding polygons to the same volume - otherwise a new volume will be created.

