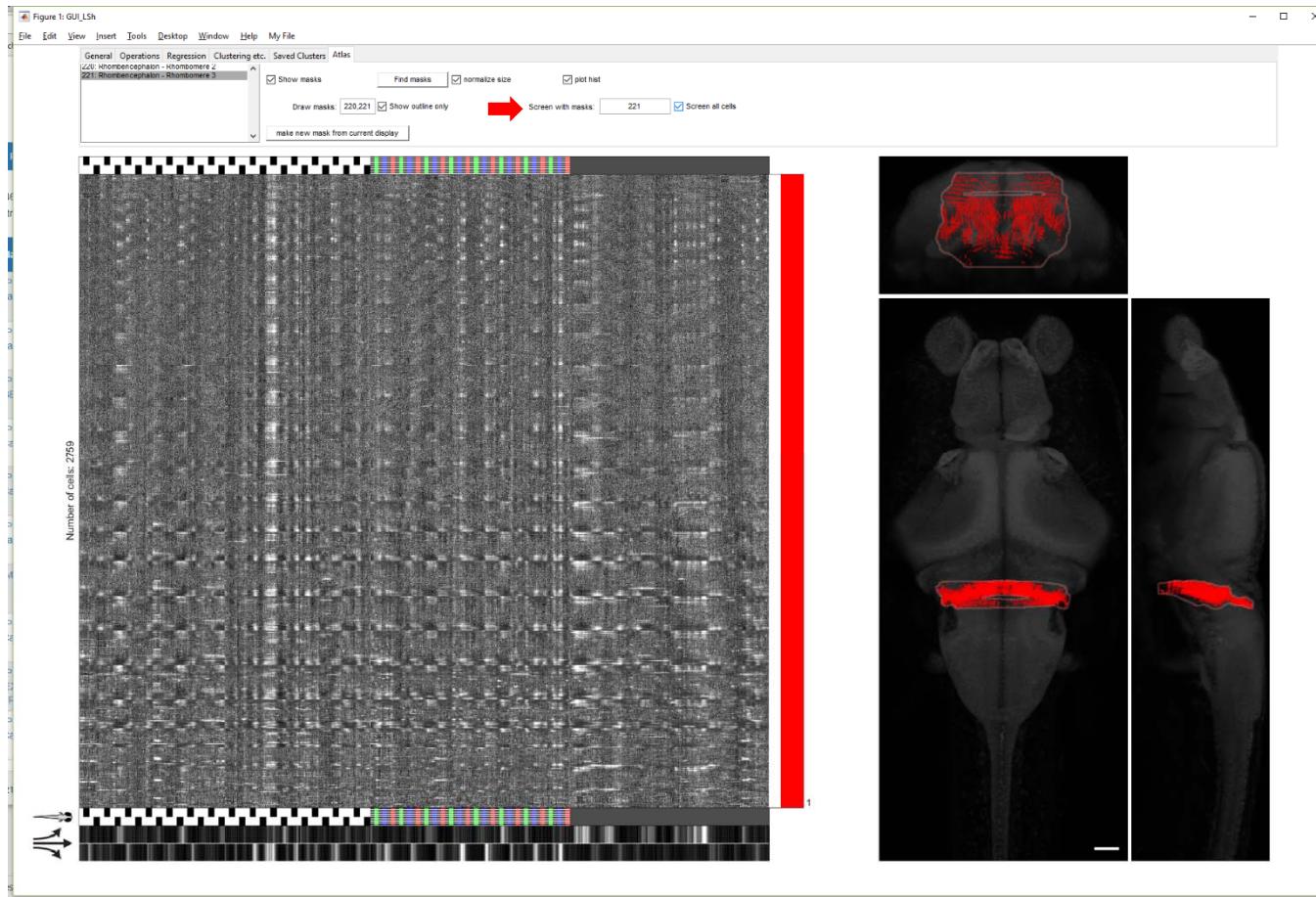


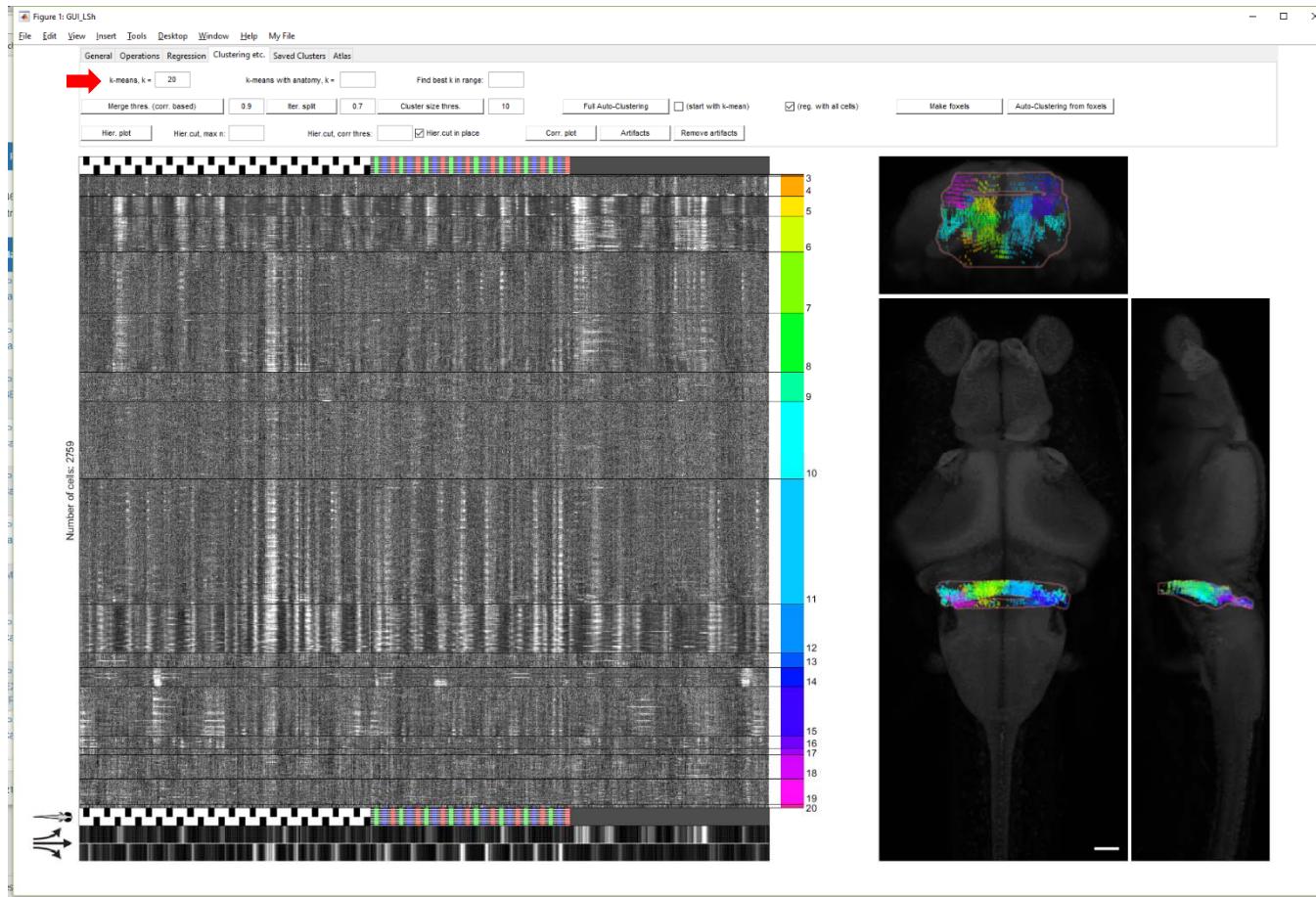
Example 1

Select (all) cells based on a Z-Brain mask
for functional exploration

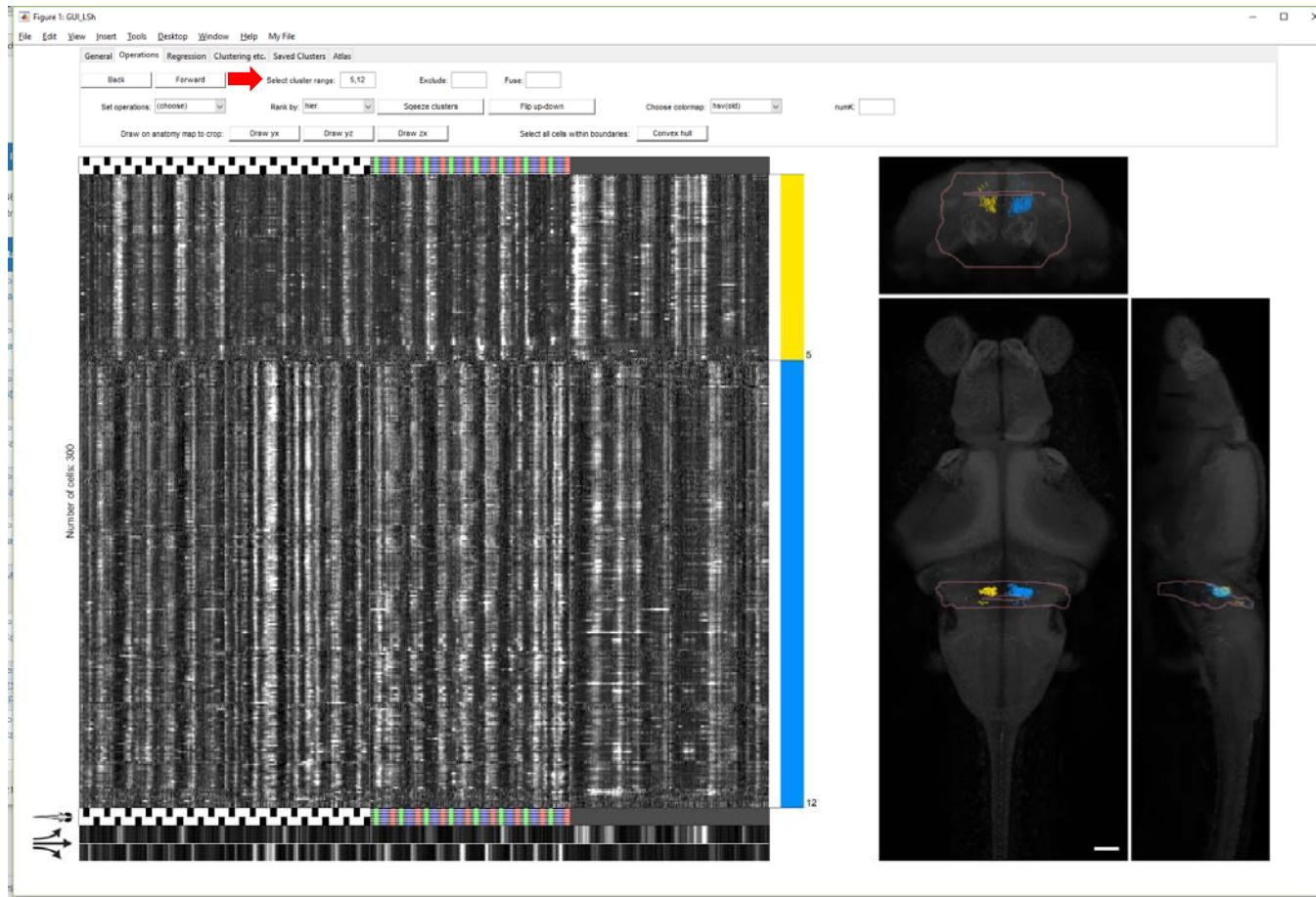
Select all cells in Rhombomere 3



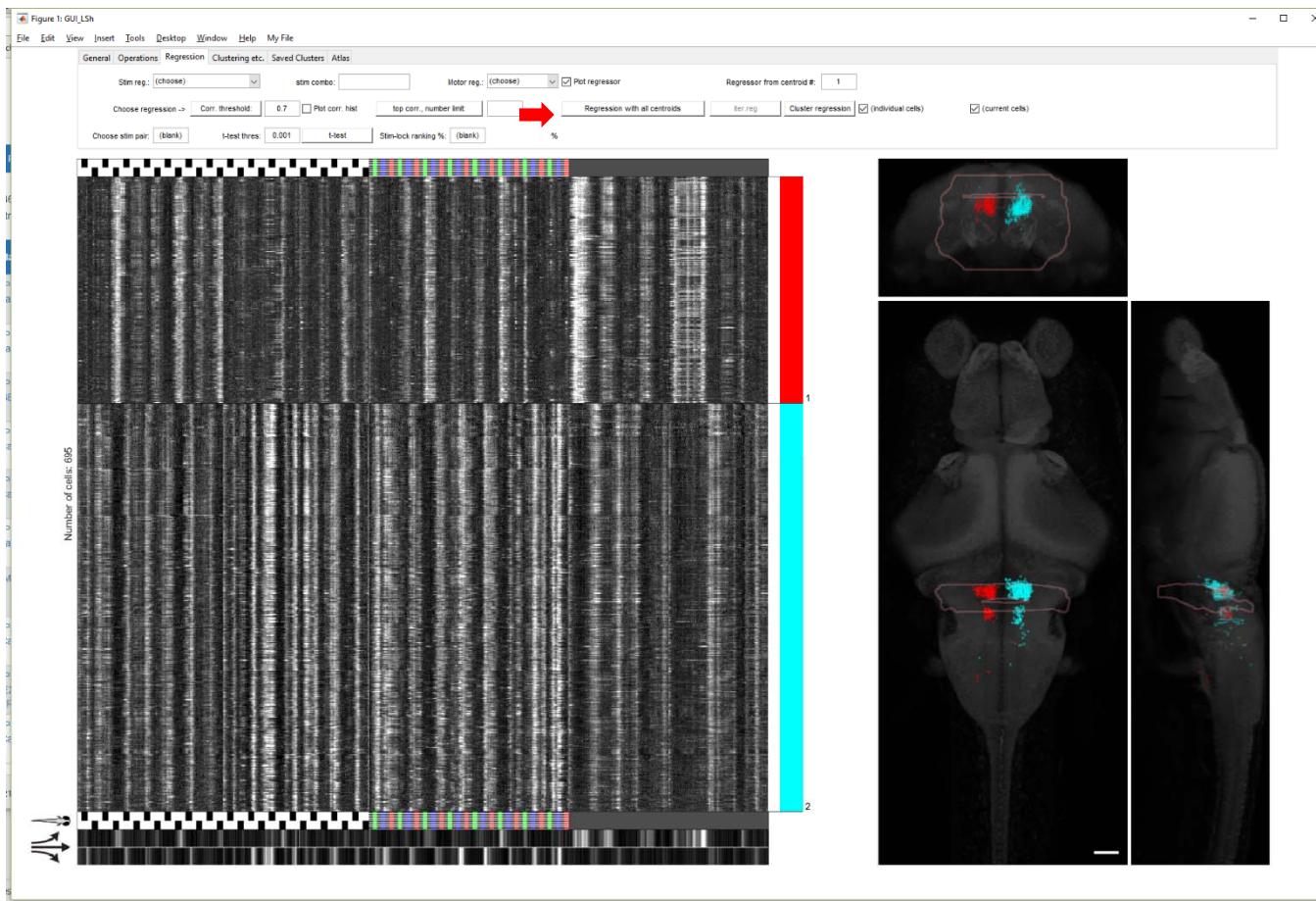
Divide into 20 functional clusters (k-means)



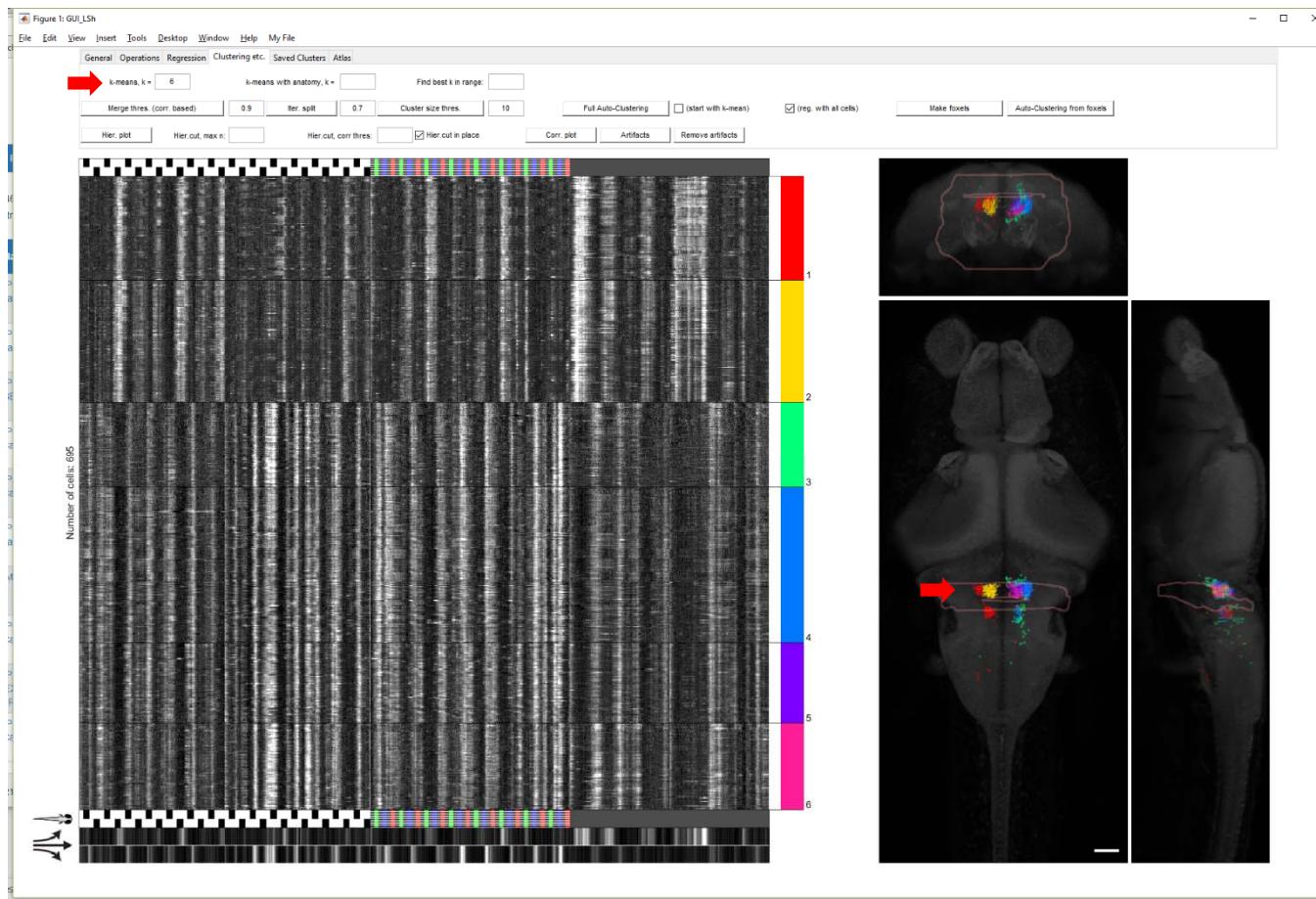
Select clusters #5 and #12 based on functional signature



Regression with cluster-mean, respectively (cutoff threshold = 0.7)



Divide into 6 clusters for better visualization:
the anterior part is the Hindbrain oscillator (4 stripes)

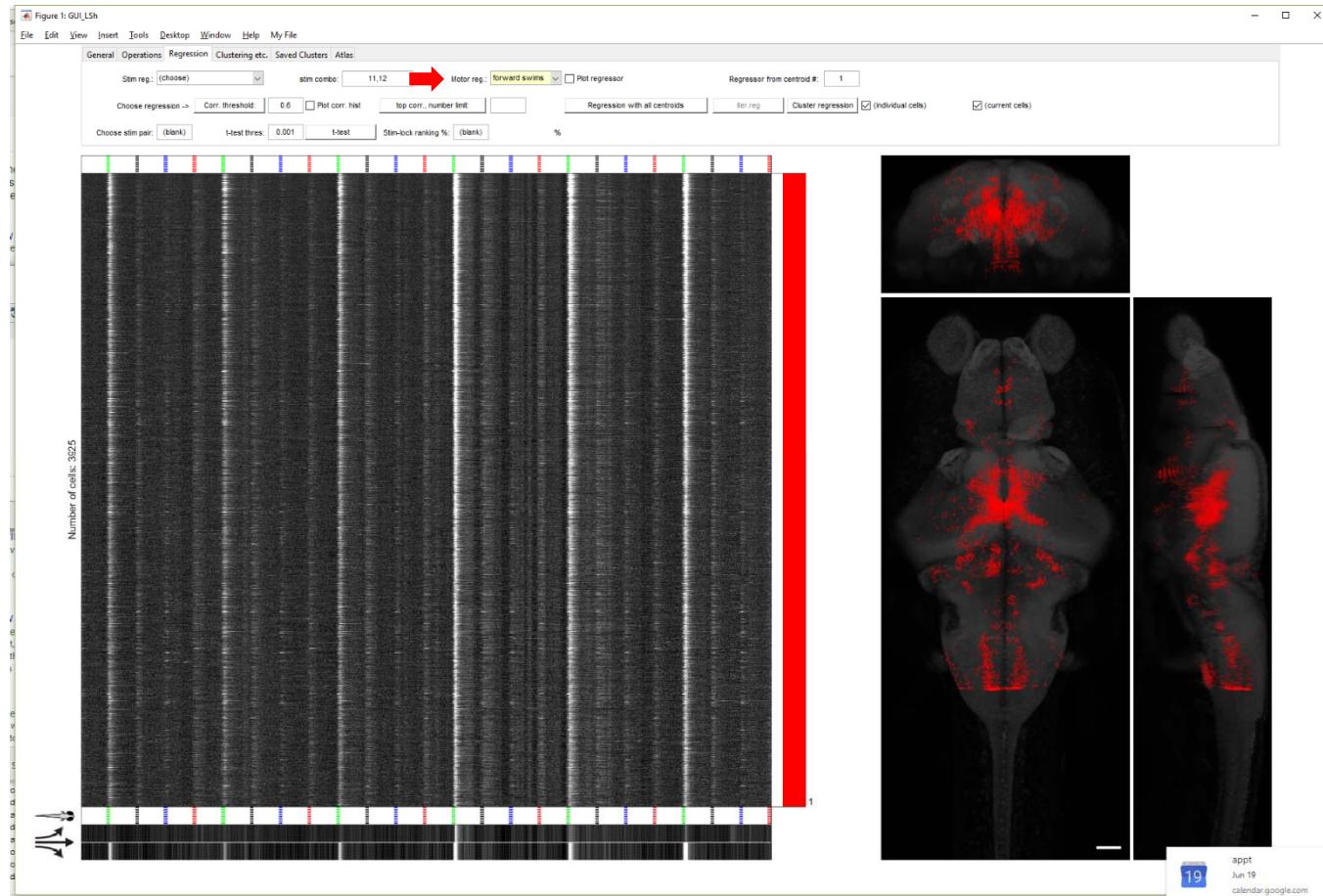


Example 2

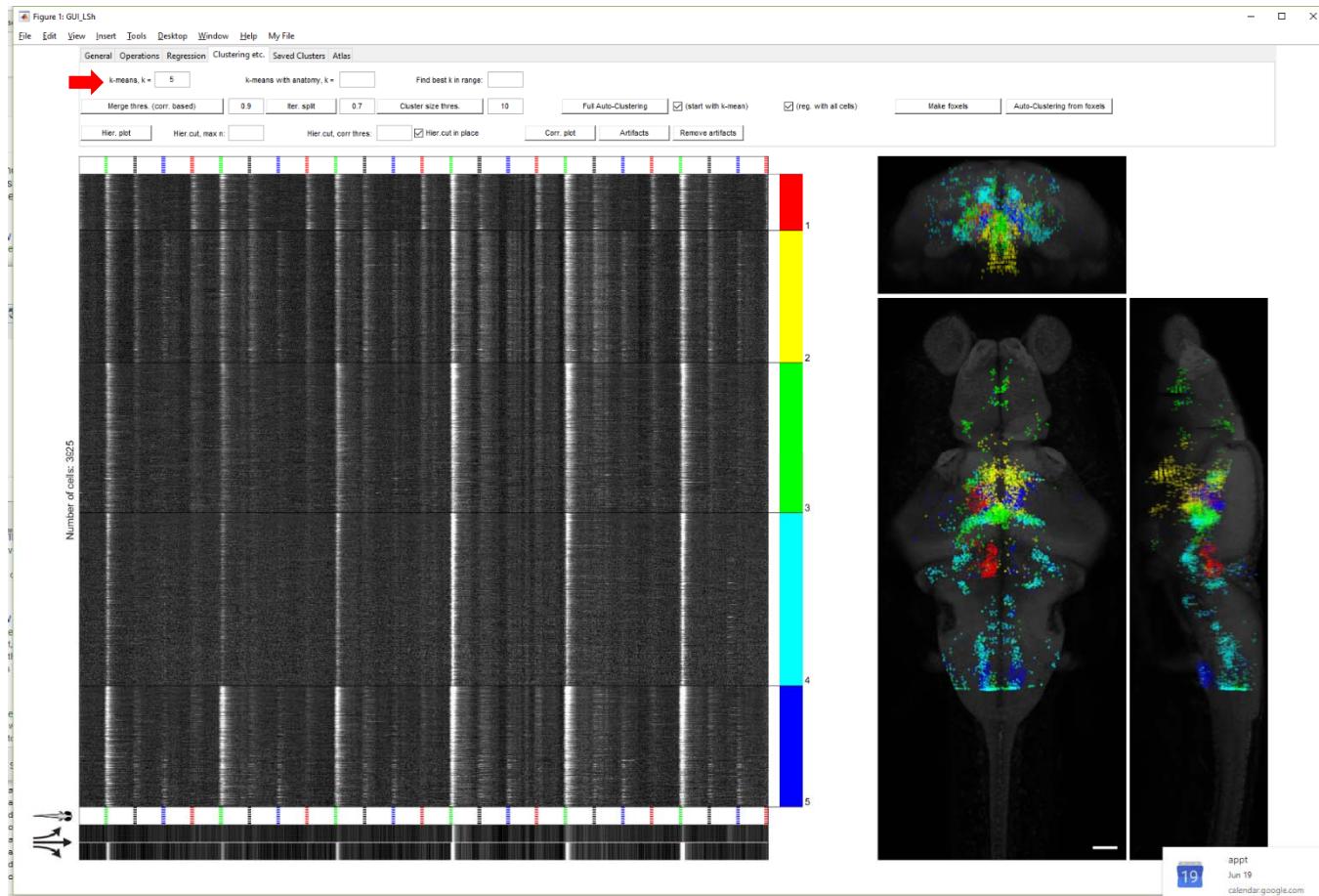
Find Z-Brain masks to characterize functional clusters

Select forward-swimming related cells:

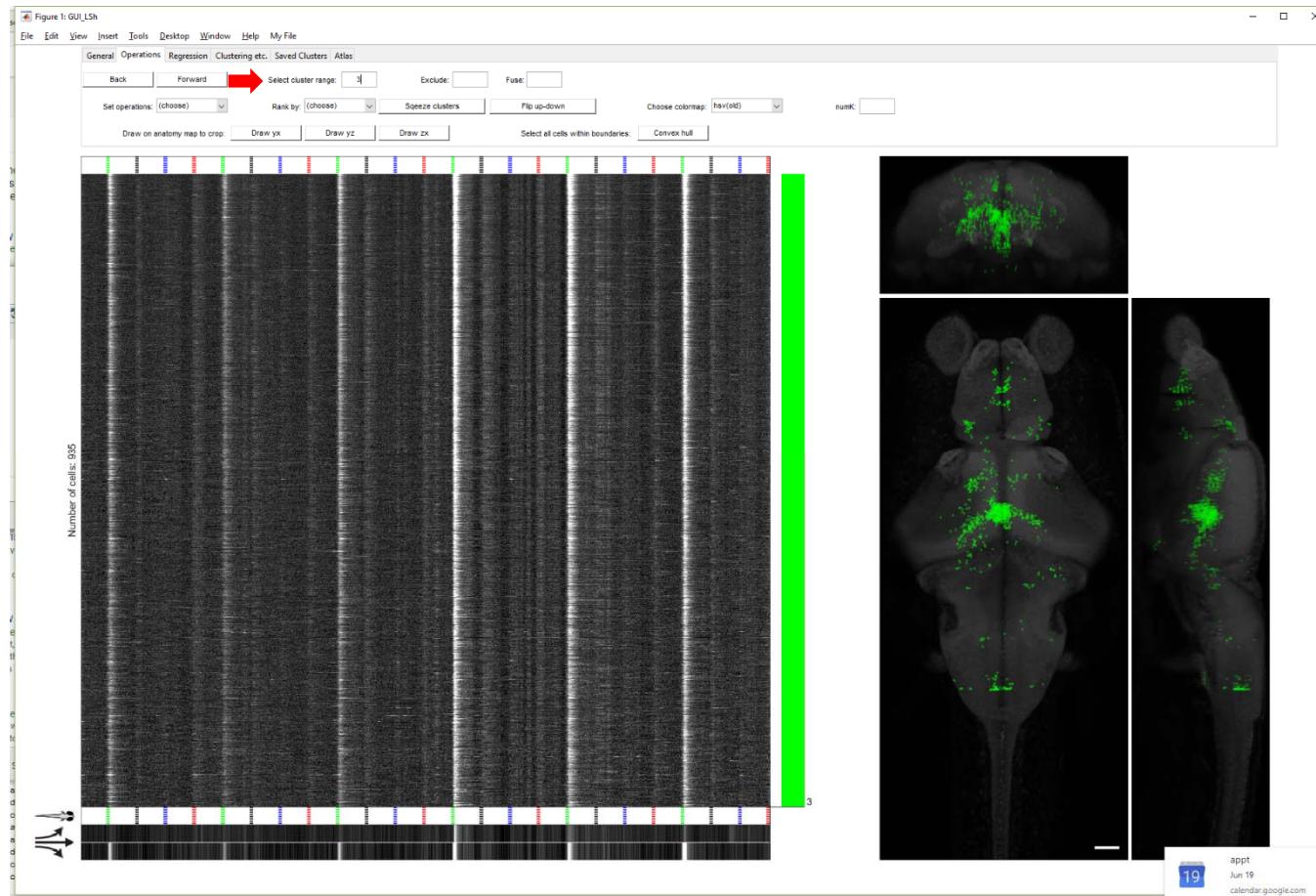
Regression based on forward swimming motor-trace (cutoff threshold = 0.6; also note green stimulus indicator is for forward OMR presentations)



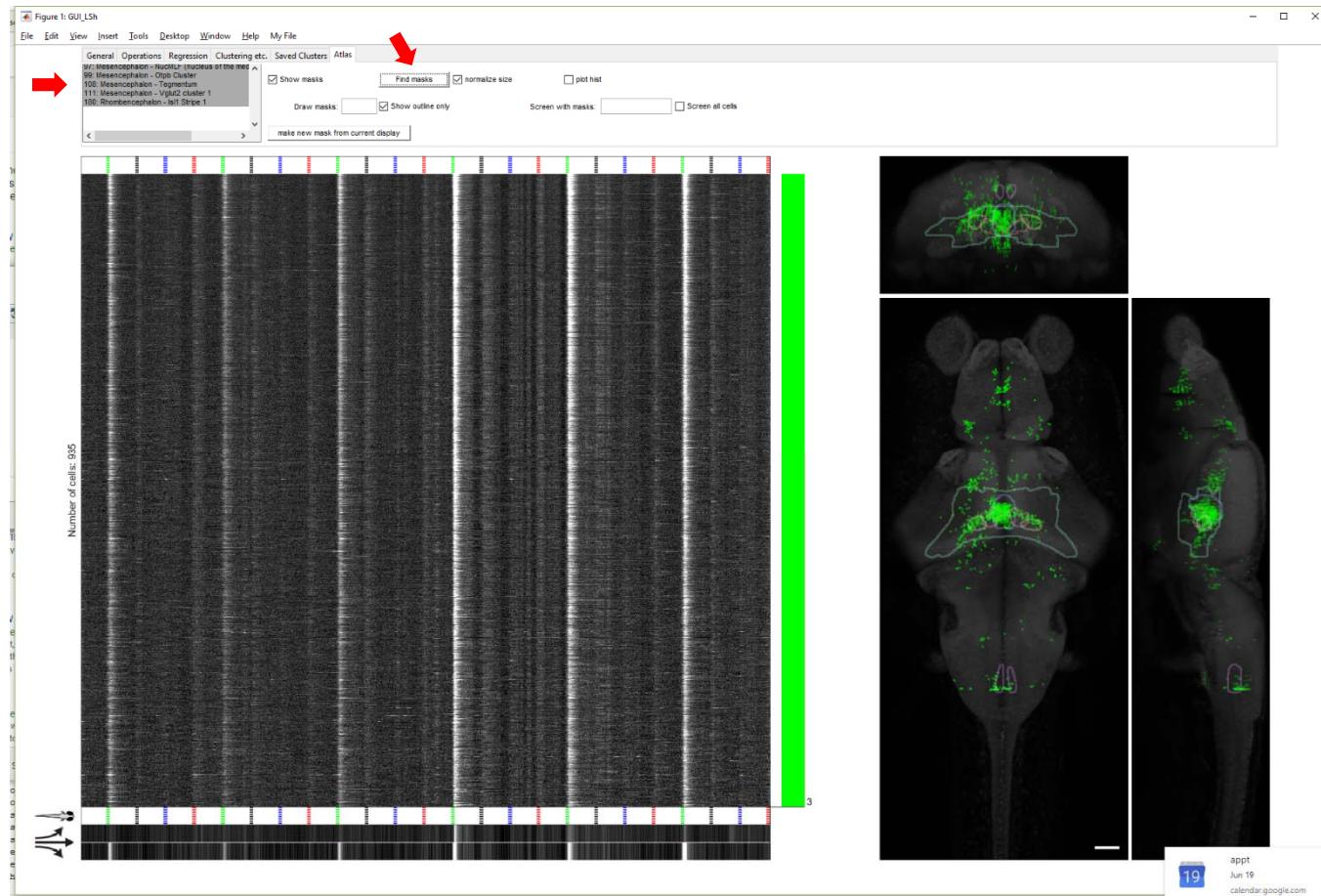
Divide into 5 functional clusters for better resolution



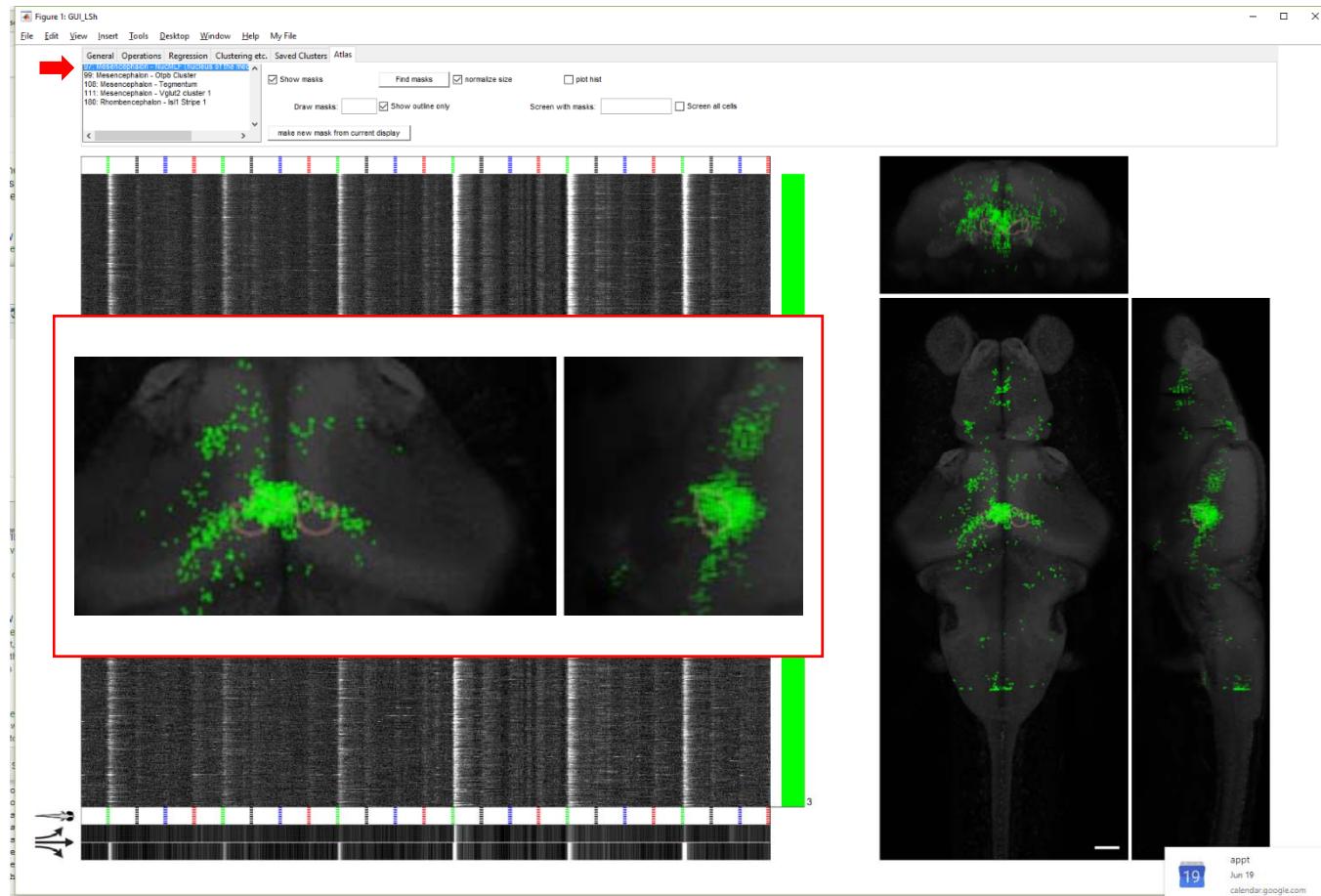
Select cluster 3 for interesting anatomical distribution



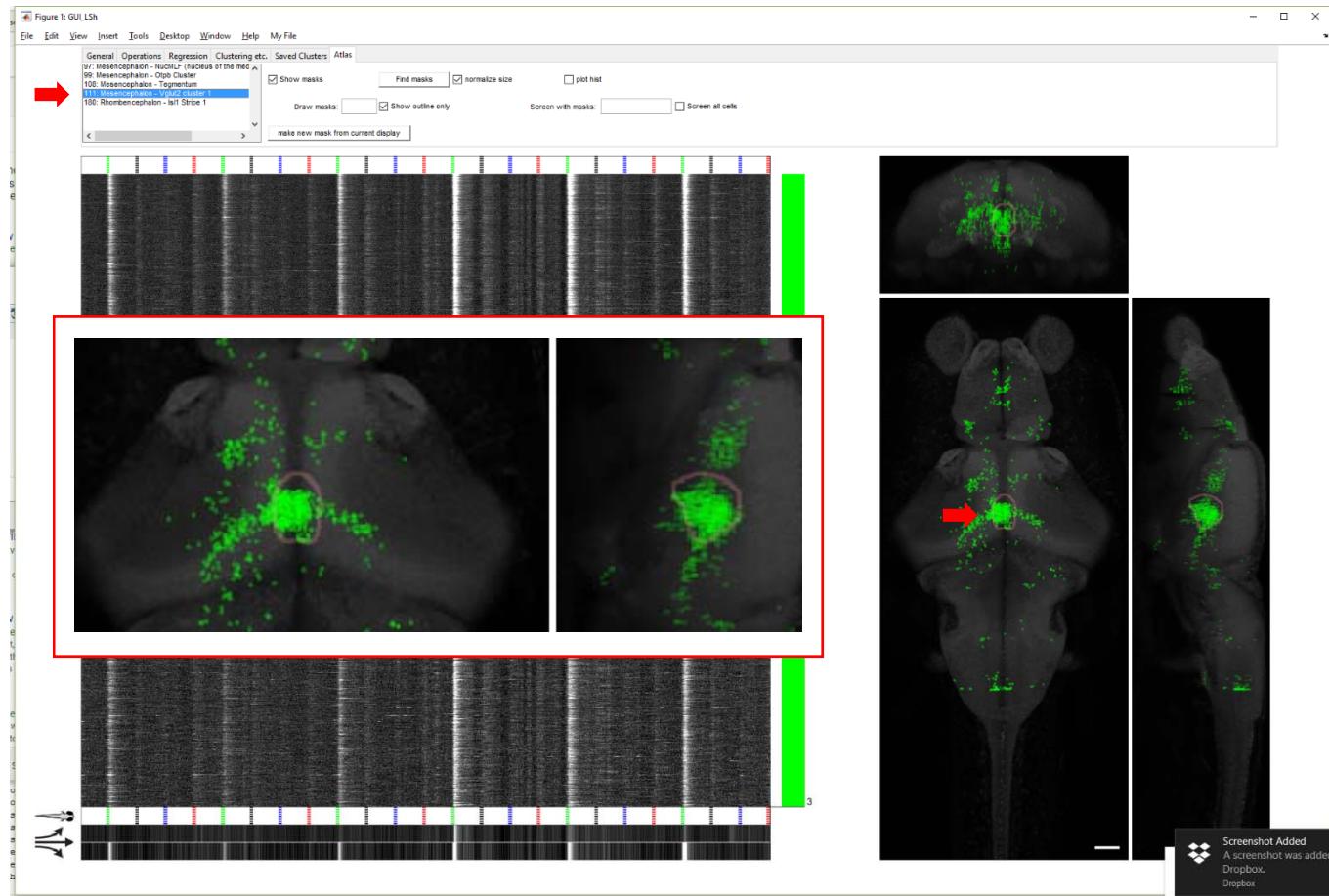
Identify candidate masks (automatically)



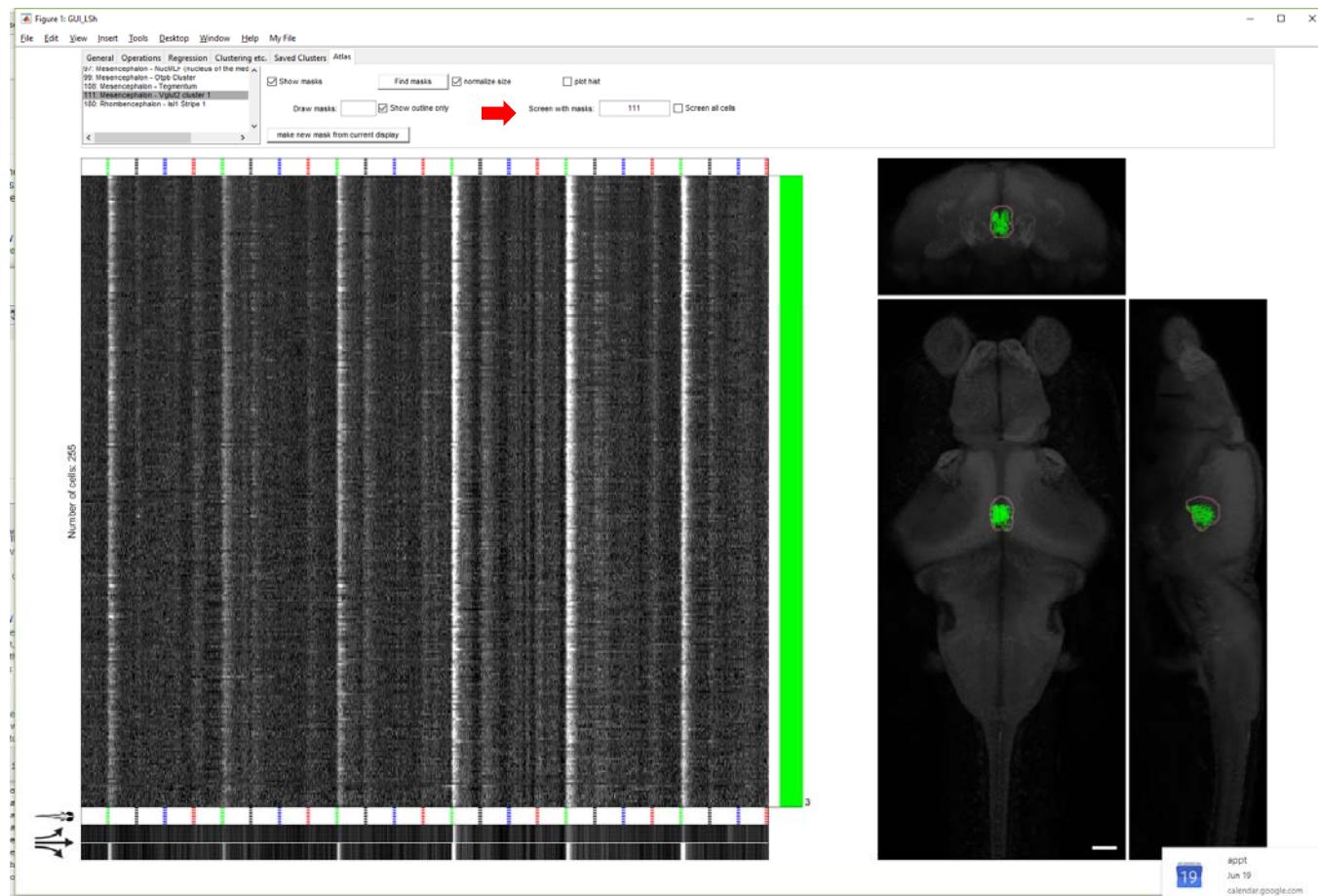
View individual mask: #97: Mesencephalon - nucMLF



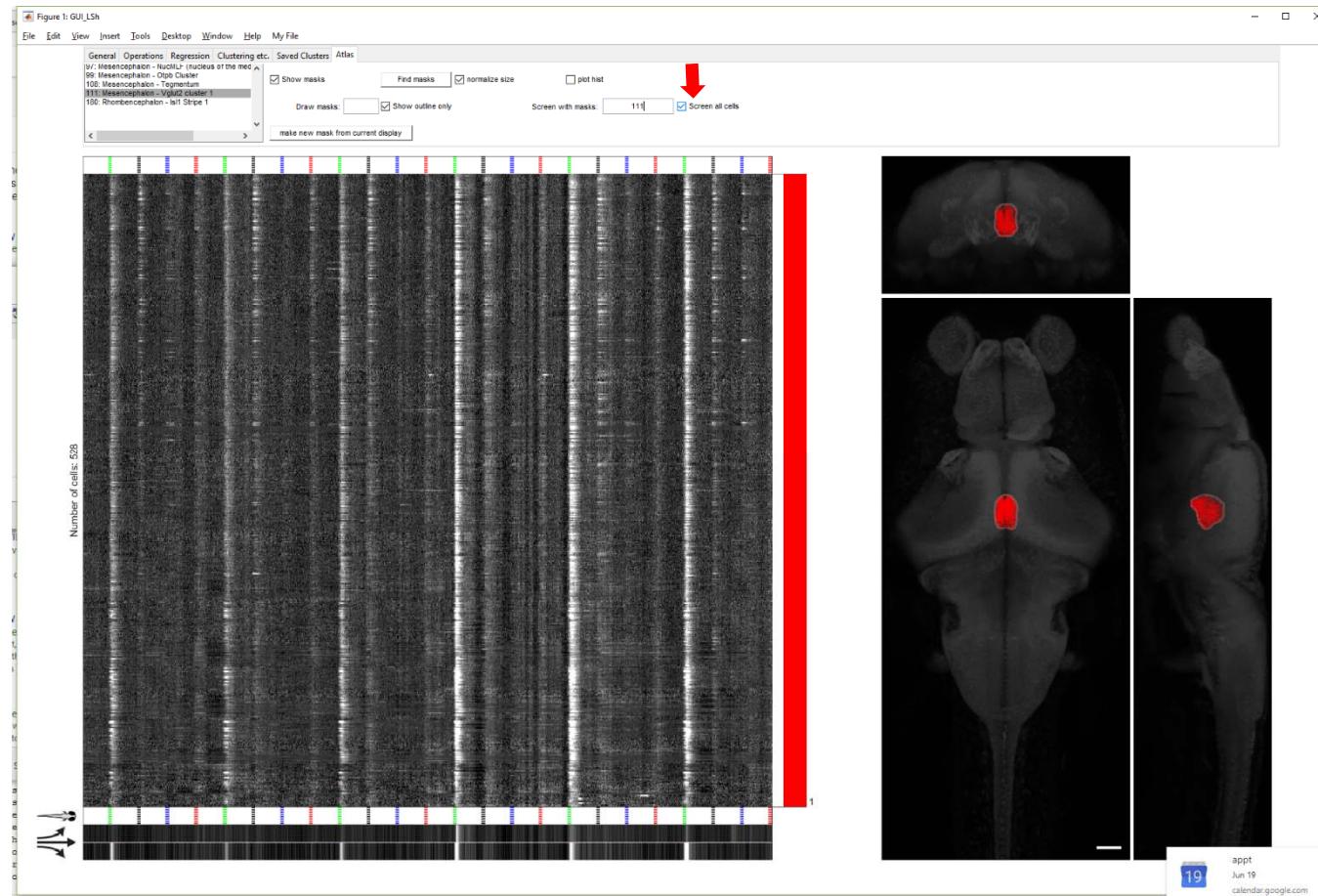
View individual mask: #111: Mesencephalon – Vglut2 Cluster 1



Exclude cells outside of this mask
(n = 255 cells within this mask)



View all cells within this mask (n = 528 cells, all with similar functional characteristics)

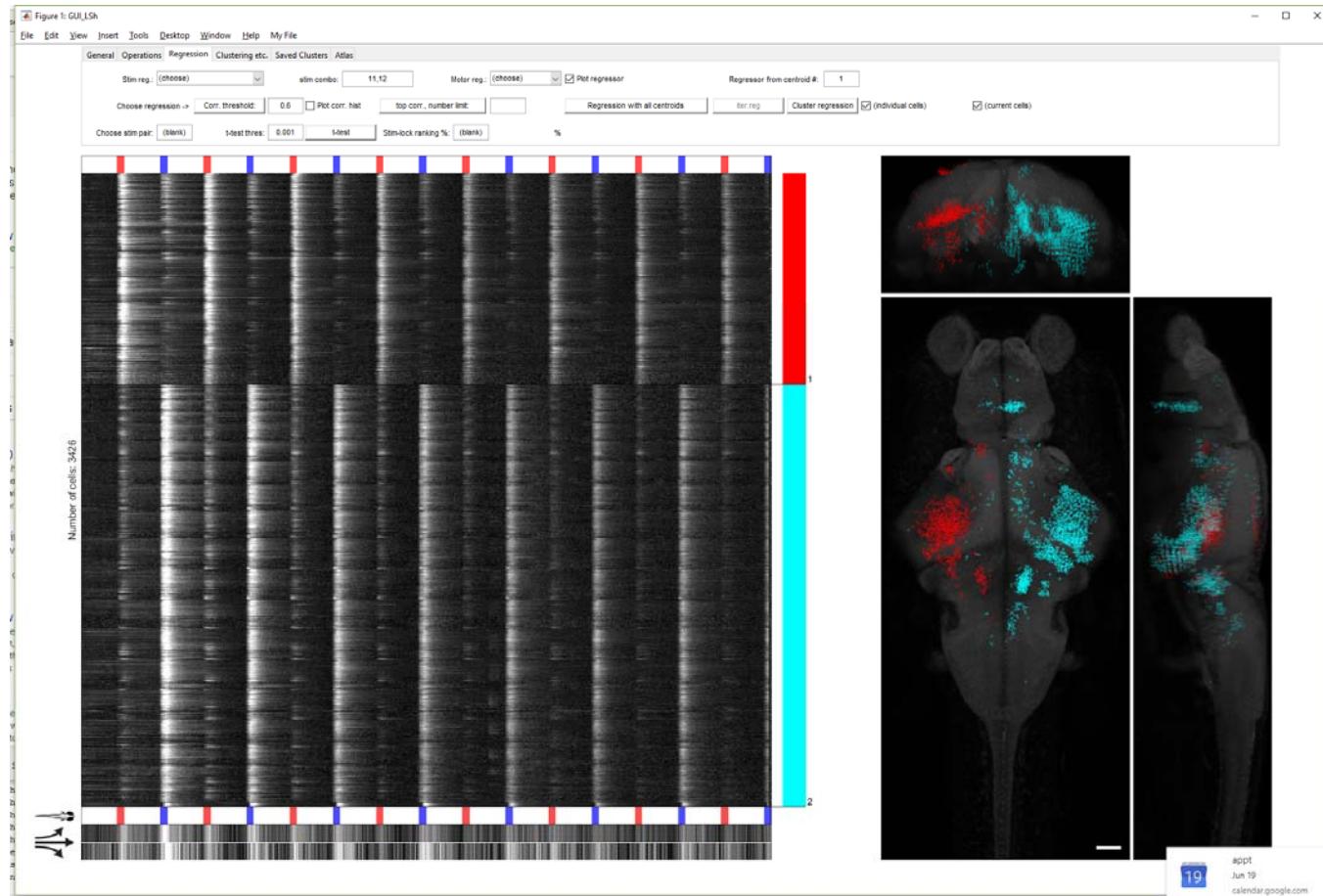


Example 3

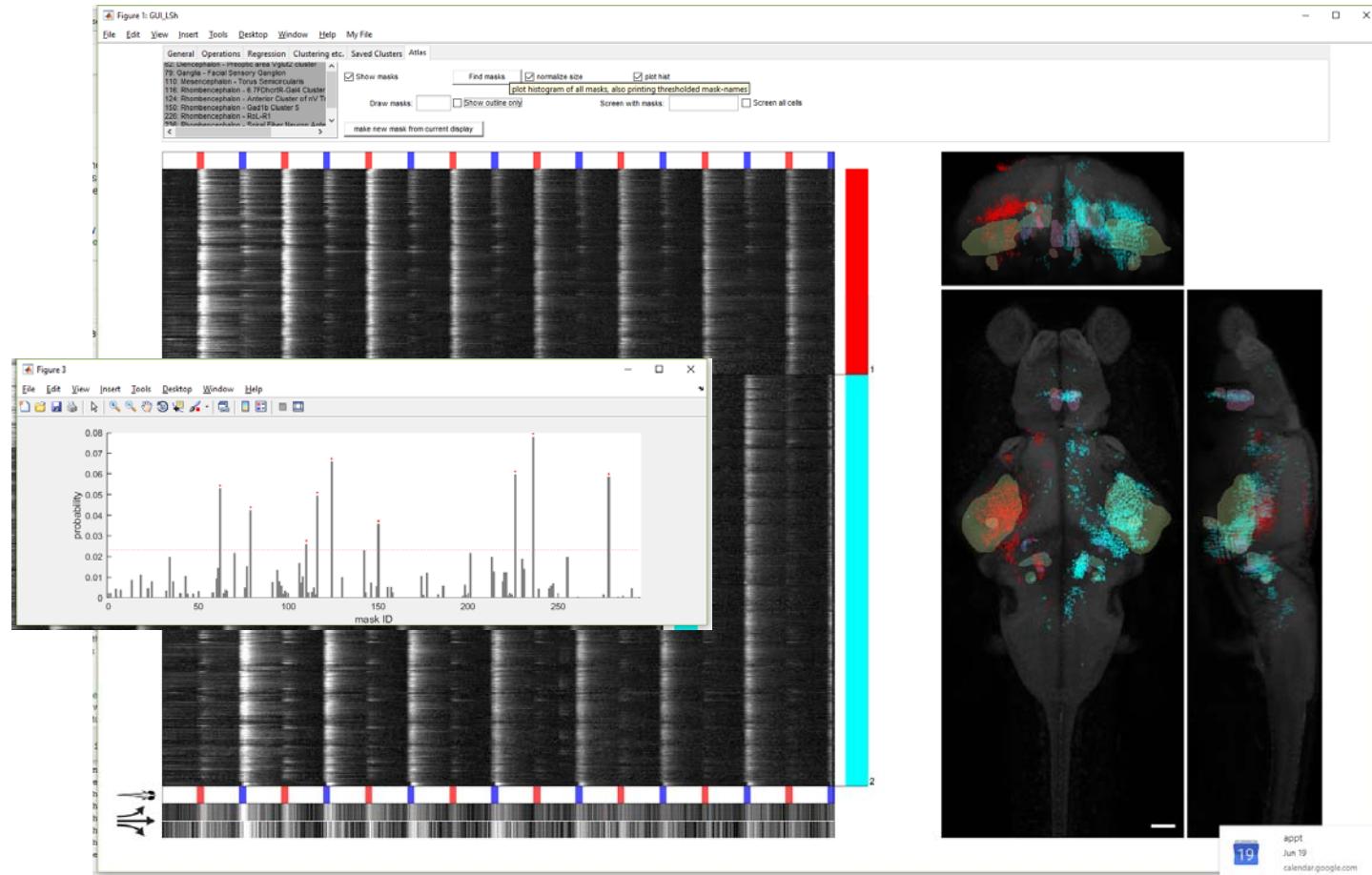
Find Z-Brain masks to characterize functional cluster...

Challenges

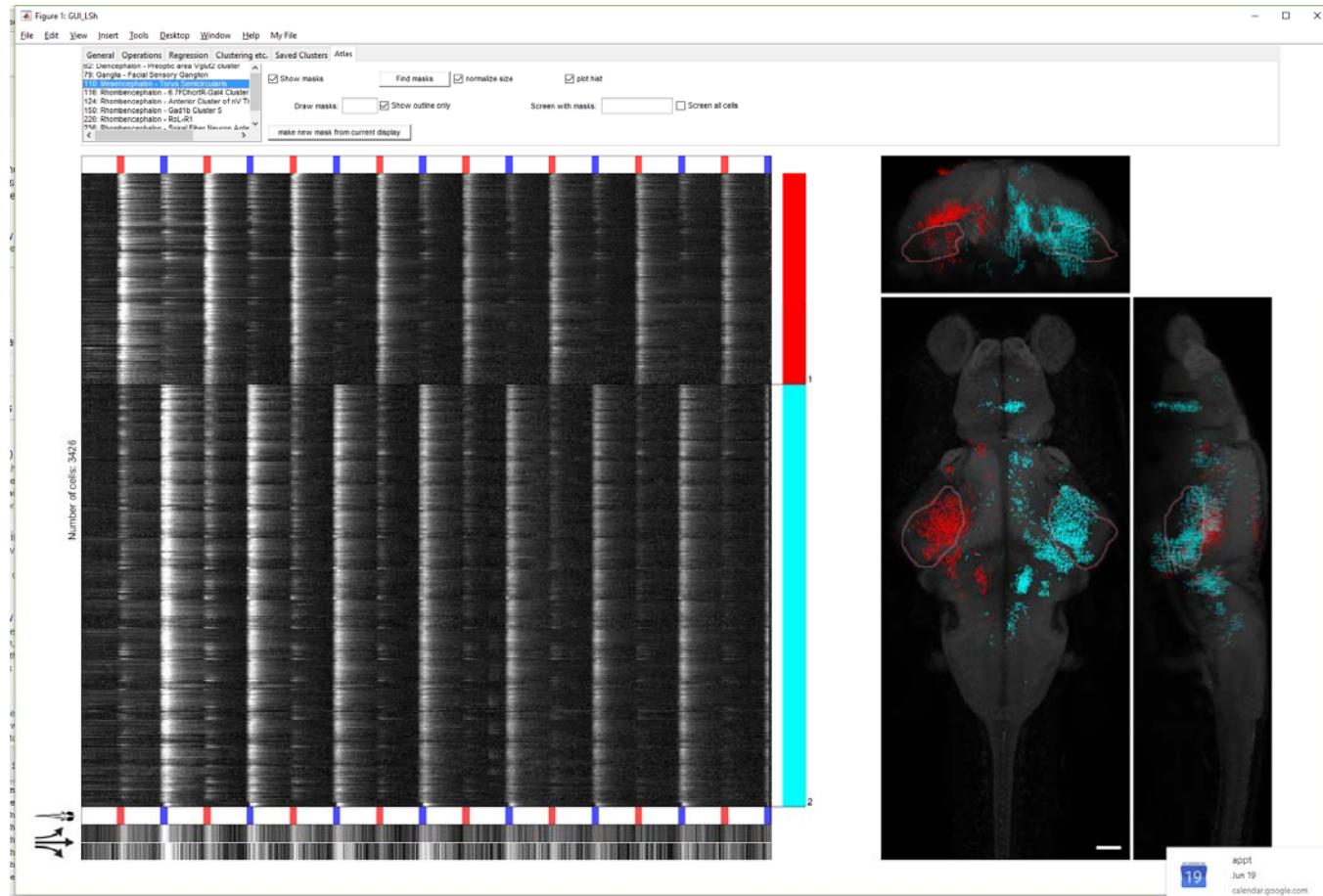
Find Looming related Cells



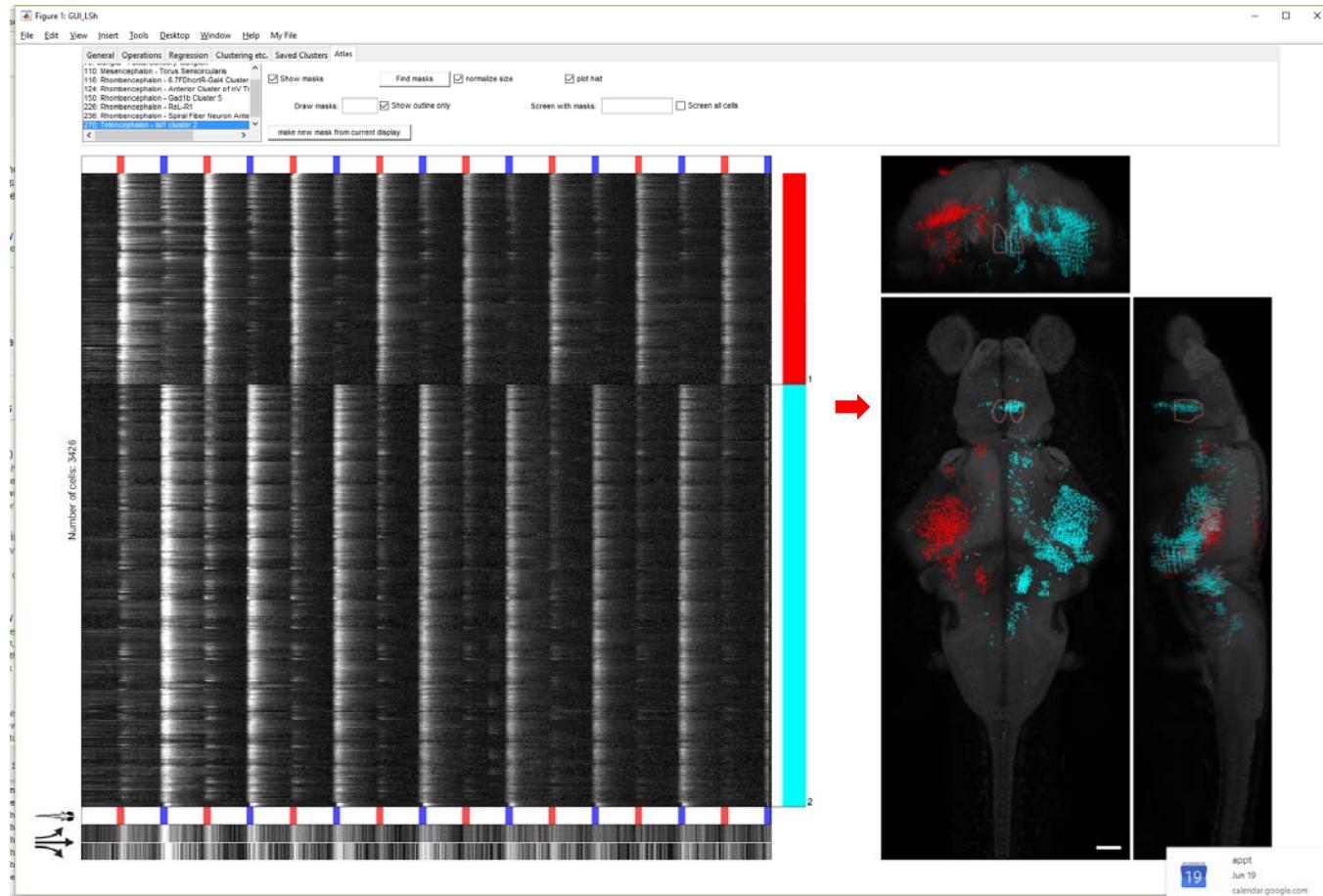
Find best matching masks



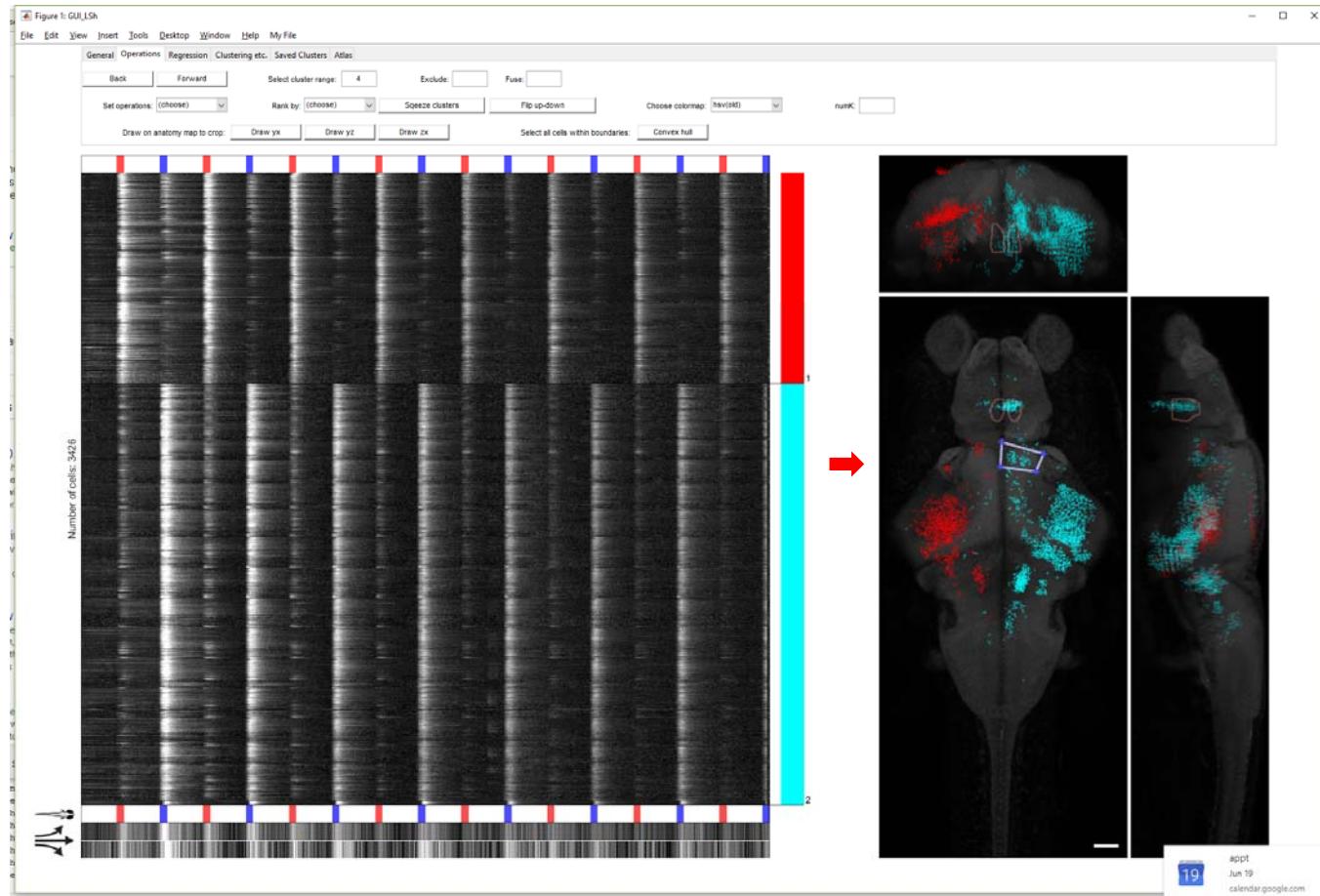
Good Example: # 110: Mesencephalon - Torus Smicircularis



Good Example: #278: Telencephalon - Isl1 cluster 2



Difficult example:



(no particularly good match, inconclusive)

