Codes +data folders for generating figures for Fotowat and Engert 2023

Figure 1.
Resp_Amp_Trials_baselinesubtracted.m
For classifying response types run **All_Trials_Classify_Escape_v2.m**

Figure 2.

Calculate_First_trial_resp_baselinesubtracted.m (Data in DLDMCB_trial1_comp)
Analyze_behavior_10trials_ISI40_baselinesubtracted_v2.m (Data in Data for DMDL_DLDM_CBDL)

Figure 3.

First run **Preprocess.m**, which reads stimulus, behavior and 2p data
To generate the csv file to be transformed to registered z brain run either **MakeROIpool.**
Trial_Average_PeakEXPCalc_DMDLBRDLCB.m this will save the peak amplitude and the exponential fits. Then run **Trial_Average_Cluster_EXPfit_DMDLBRDLCB_v2.m** to plot the clusters based on trial average stimulus correlations (this one calls the function **ClusterTypes.m** to calculate correlations).
Run **ShowROIonRef_allcells_DMDLBRDLCB_ANTsReg.m** to plot on zbrain. This also plots inhibitory/excitatory cells on the brain. This is also the program that generates the binocularity index file.
Run **histogram_brainreg_dendrogram_ForPaper.m** to plot brain region information as well as the cluster dynamics plot.
Data in DMDLBRDLCB_allbrainpoolPL

Figure 4
Run **Trial_Average_PeakEXPfitCalc_CBDLXXDLXX.m** followed by
Trial_Average_Cluster_EXPfit_CBDLXXDLXX.m.
Data in XXCBDLXXDLXX

Figure 5
Same as Figure 3, and 4 run the same codes but this time with ending ***LXLXCXCX.** To
To generate the figure run **ShowROIonRef_LXLXCXCX_ANTsReg.m.**
Data in LXLXCXCX

Figure 6.
Compare_RespDyn_BinMonDim.m
Data in LXLXCXCX