Data for Coleman et al

FILES ################################

 ChronicCompleat2020c.mat The data

 wData.m Bookmark reference for data

 wFigure1spectrogramplot.m Generates figure 1 spectrogram/oscillogram

 wPlotHistsFigure.m Generates figure 2 plots

 wTransitionsPlot.m Generates figure 3 A-D plots

 wStatsPlots.m Calculates analyses for figures 3 E-F and 4 A-B

 wGetISI.m Calculates behavioral analyses

 Video1022duet.mov Video of duetting wrens

 w1022MovieMaker.m Generates video with rolling spectrogram and

spike sounds for 1022

 wMakeRollingSpectrogramVideo.m Can generate video with rolling spectrogram

and spikes sounds for any entry

 bs\_swPSTH.m Produces ‘sliding window’ PSTH plots

 README.txt This file

These scripts and data work with Matlab '9.7.0.1261785 (R2019b) Update 3' as of November 2020.

DATA ################################

>> load ChronicCompleat2020c.mat

The data are in a single Matlab structure, “w”, with the fields:

 duet The audio recording

 tim A time sequence for the audio recording. 0 is set to the start of the duet.

 Fs Sample rate (Hz) of the audio recording (10 kHz)

 id The identifier string for each recording

 wrensex Either an ‘M’ or an ‘F’

 sexy A redundant field, 1 for male and 2 for female

 sylsex A cell array with the sex of each syllable (1 for male, 2 for female)

 syltype unused

 syl.tim The start and stop time of each syllable

 Cspikes Cell array with spike times for each channel in seconds, awake

Aspikes Cell array with spike times for each channel in seconds, urethane

Males are odd indices in w, female are even. Each pair (i.e. 1 and 2) are data for a single singing performance in which the male (odd) and female (even) participated.

Look at the code wData.m to better understand the organization of the data structure.

SCRIPTS ################################

Load data: >> load ChronicCompleat2020c.mat

wFigure1spectrogramplot.m Script generates figure 1 spectrogram with no arguments.

wPlotHistsFigure.m Run as: wPlotHistsFigure(w);

 Function generates figure 2 plots and the variable ‘idx’ can

be edited to plot any entry.

wTransitionsPlot.m Run as [M, F] = wTransitionsPlot(w);

Function generates figure 3 A-D plots.

wStatsPlots.m Run as:

For Awake data:

[out, sumdat, stts] = wStatPlots(w, 4, 2); % Duets with male solo syllables

[out, sumdat, stts] = wStatPlots(w, 2, 2); % Duets with female solo syllables

For Urethane anesthetized data:

[out, sumdat, stts] = wStatPlots(w, 4, 1, 0); % Duets with male solo syllables

[out, sumdat, stts] = wStatPlots(w, 2, 1, 0); % Duets with female solo syllables

Generates the data (in output structure “sumdate” used in figures 3 E-F and 4 A-B

wGetISI.m Run as: out = wGetISI(w)

 Produces some of the behavioral stats in the manuscript

Do not use separately:

wData.m Used by wStatsPlots.m, wPlotHistsFigure.m, wGetISI.m

bs\_swPSTH.m Used by wPlotHistsFigure.m