**HW6: Introduction to Time Series Analysis**

You have recorded two neurons with the following parameters:

Sampling frequency 1kHz

Recording duration 7127.914 sec (or 118.7986 min)

Each vector in the attached data set includes the timestamp *in ms* when the neuron fired an action potential, as well as a timestamp, also in ms, for a recurring event.

1. Make raster plots of the first 100 events for each neuron’s response time-locked to the event. Include times from 500ms before the event to 1s after
2. Plot each neuron’s average response over all 699 events as a lineplot or PETH in the same time epoch (make sure your x-axis indicates time relative to the event)
3. Smooth each neuron’s time series using a 200ms moving average, and replot the lineplot from 2