**Code**

We used Matlab R2019a. To reproduce the figures in the manuscript, copy all the files into one folder; extract all zip folders (into folders with same name) and copy data from folder trialData1 and trialData2 into one folder named trialData.

Start matlab and navigate to the repository-folder.

cd('/Path/to/this/repo');

The path can be added to the matlabpath too:

addpath(pwd);

Then call one of these functions:

* figure2.m: graphics from Fig2 which are rasterplots, mean instantaneous firing rates and spike density as well as a boxplot for firing latencies responding to seen T2-stimuli.
* figure3.m: graphics from Fig3 which are local field potentials and single-trial P3 peak latencies (small differences in data points are due to reduced upload resolution)
  + dataset can be changed to plot different example (see Data – ERP and Data - trialData)
* figure4.m: graphics from Fig4 which are bar plots of single-trial LFP amplitudes and average T1-related single-trial P3 peak latencies, also displays results for t-tests and binomial tests (4A,B) and gives results for t-tests (4C) in p0,…,p3.
* plot\_units.m: plot all chosen 26 units (density plot and instantaneous firing rate)

Further .m files in the folder func are included because they are called by the above scripts at some point or another.

**Data**

* ERP: data for local field potentials for all channels and sessions, see figure3.m for one example (change name of dataset in line 7 (or 53) to plot different dataset)
* InstantaneousFiringRates: data to plot all chosen units, see Fig2, use code plot\_units.m
* dat:
  + medlat: median firing latency for each session
  + singleTrialShortLag(0-3): peak data for all sessions (latency, amplitude); (un)seen mean peaks across all trials, peaks\_(un)seen single-trials peak latency and amplitude for each trial of each session
  + peakLatenciesLags: data used for figure 4 C
  + example(1-3): data used for figure2
  + amplitude…: data used for figure 4 A, B
* trialData: data for each trial of each session to identify single-trial P3 peak latencies, see figure3.m for one example (change name of dataset in line 26 (or 72) to plot different dataset)