Broadband shifts in EEG power spectra are correlated with single-neuron activity in humans
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1 Introduction
- We studied the relationship between the EEG power spectrum and the firing rates (FR) of individual neurons in the human brain.
- Other researchers have reported high correlations between the power of high frequency (γ) oscillations and FR.
- We developed a statistical framework to distinguish between broadband shifts in the EEG power spectrum and the firing rates (FR) of individual neurons.

2 Methods
- We also examined the correlation between FR and EEG power at narrow frequency bands, including γ.

3 Results
- We found high correlations between FR and EEG power spectrum.
- We developed a regression framework to distinguish between narrowband and broadband effects.
- In agreement with the literature, we found both narrowband and broadband effects.

4 Conclusions
- More cells show broadband shifts than narrowband shifts.
- Broadband power contains information about FR not contained in any individual frequency band.

Bibliography