

Method context: steady-state evoked potentials

Participant-visible analytic context derived from the open-access article. Results, captions, target figure identification, and discussion are excluded.

The steady-state visually evoked potential example reanalysed data from an experiment in which sine-wave gratings of different contrasts flickered at 7 Hz. The public data contain 100 participants, 20 experimental conditions, and 80 one-second epochs per condition. Eight 11-second trials were completed at each contrast level; the first second was discarded and the remaining ten seconds were divided into one-second epochs.

Each epoch was Fourier transformed. The retained complex Fourier coefficients preserve amplitude and phase. Responses are evaluated at the fundamental stimulation frequency. The first seven stimulus conditions correspond, in order, to stimulus contrasts of 0%, 2%, 4%, 8%, 16%, 32%, and 64%.

Two aggregation procedures are compared. For coherent averaging, complex epoch values are averaged within participant and condition before taking the absolute amplitude; this retains phase during averaging. For incoherent averaging, the absolute amplitude is taken for every epoch before values are averaged within participant and condition.

For either procedure, participant-level means are then aggregated across the sample. Group uncertainty is calculated from the participant-level standard error and displayed using normal-approximation 95% confidence limits. The public workspace is the analysis input; no published image or saved plot object is supplied to participants.