Context-dependent responses in the rat auditory cortex

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1 Question

How do past events influence auditory cortical responses?

2 Motivation

Psychophysics:

Stimulus context strongly affects perception and auditory scene analysis.

Physiology:

Neural correlates in the auditory cortex (e.g. forward masking).

Neural responses cannot be fully explained by linear models, despite their high trial-to-trial reliability.

3 Conclusion

Context dependence often gets decreased to an undetectable level within a few seconds.

But the dependence can last more than FOUR seconds in the rat primary auditory cortex.

It is not clear yet what stimulus properties could contribute to the context dependence.