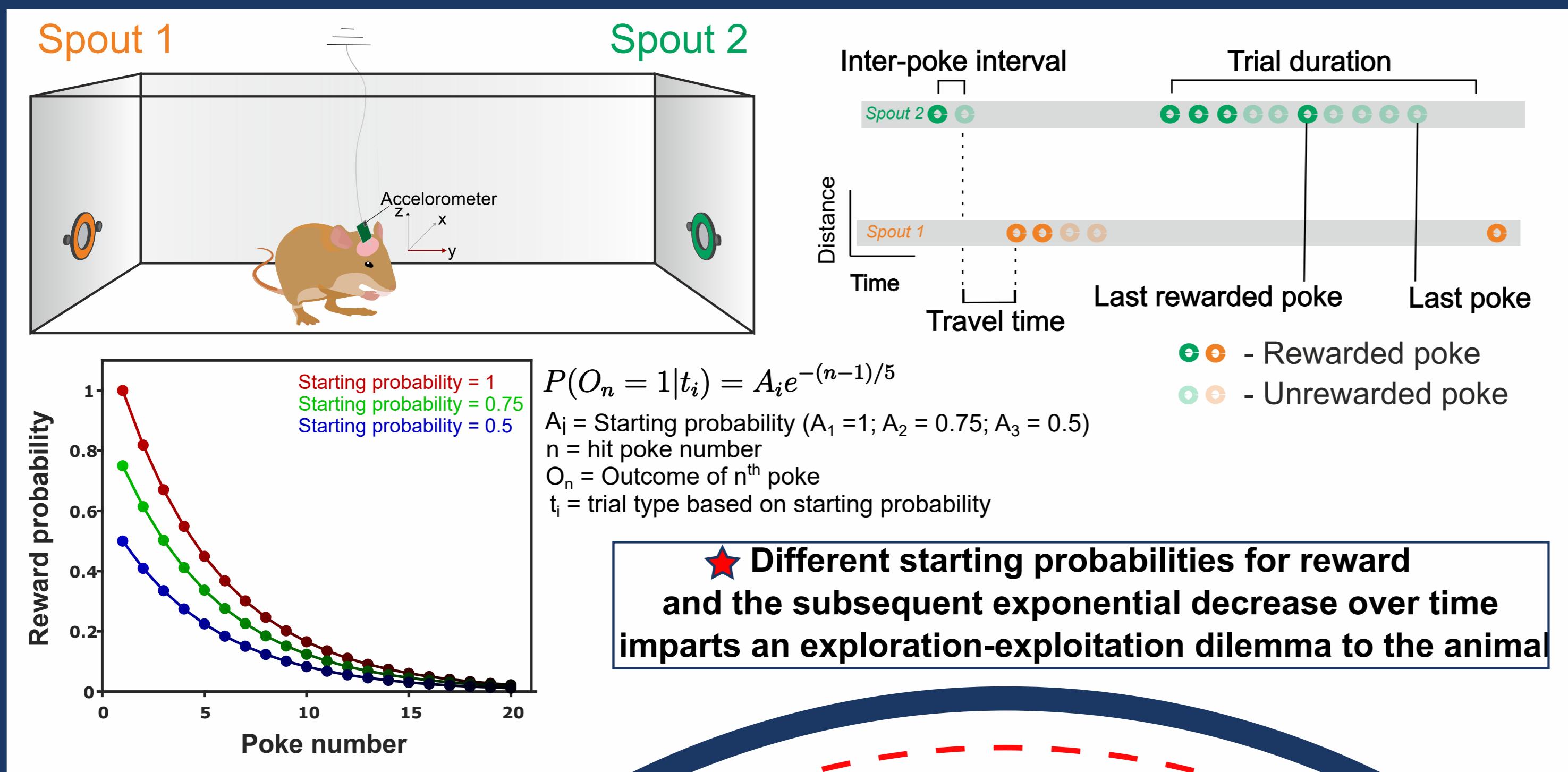


Unraveling the Neural Mechanisms of Decision-Making in Uncertain Environments: Insights from a Probabilistic Foraging Task in Mongolian Gerbils

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The situation - probabilistic foraging task

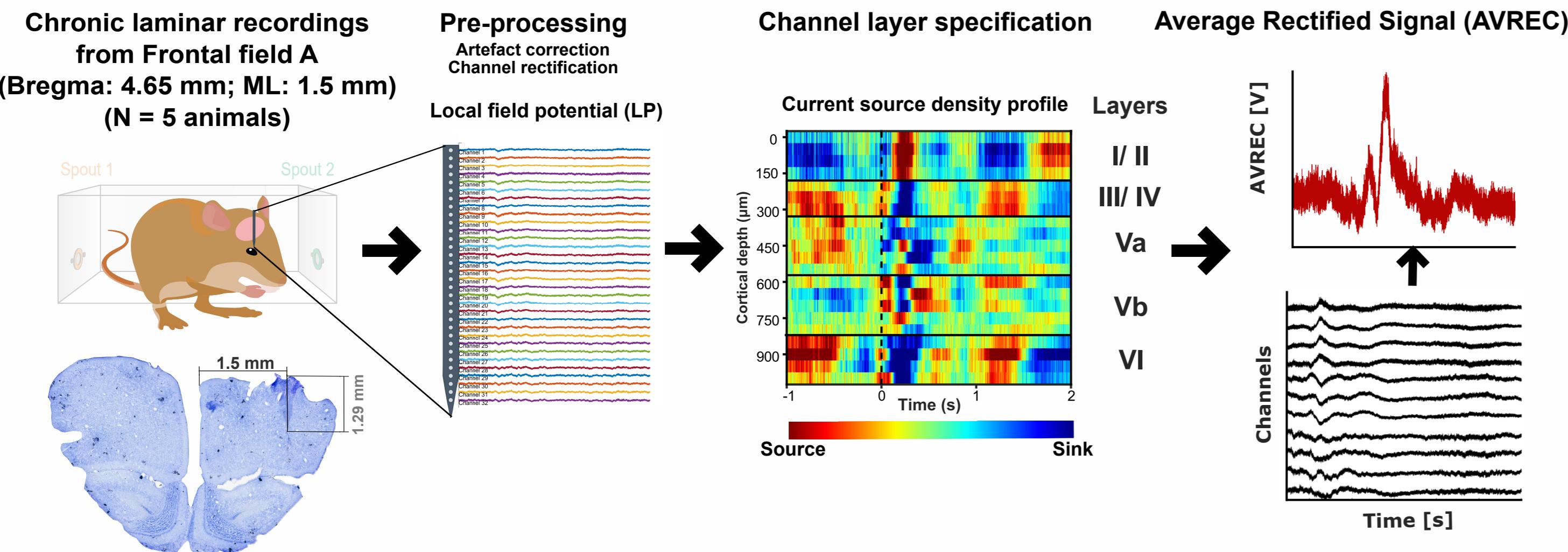


Should I stay or should I go?

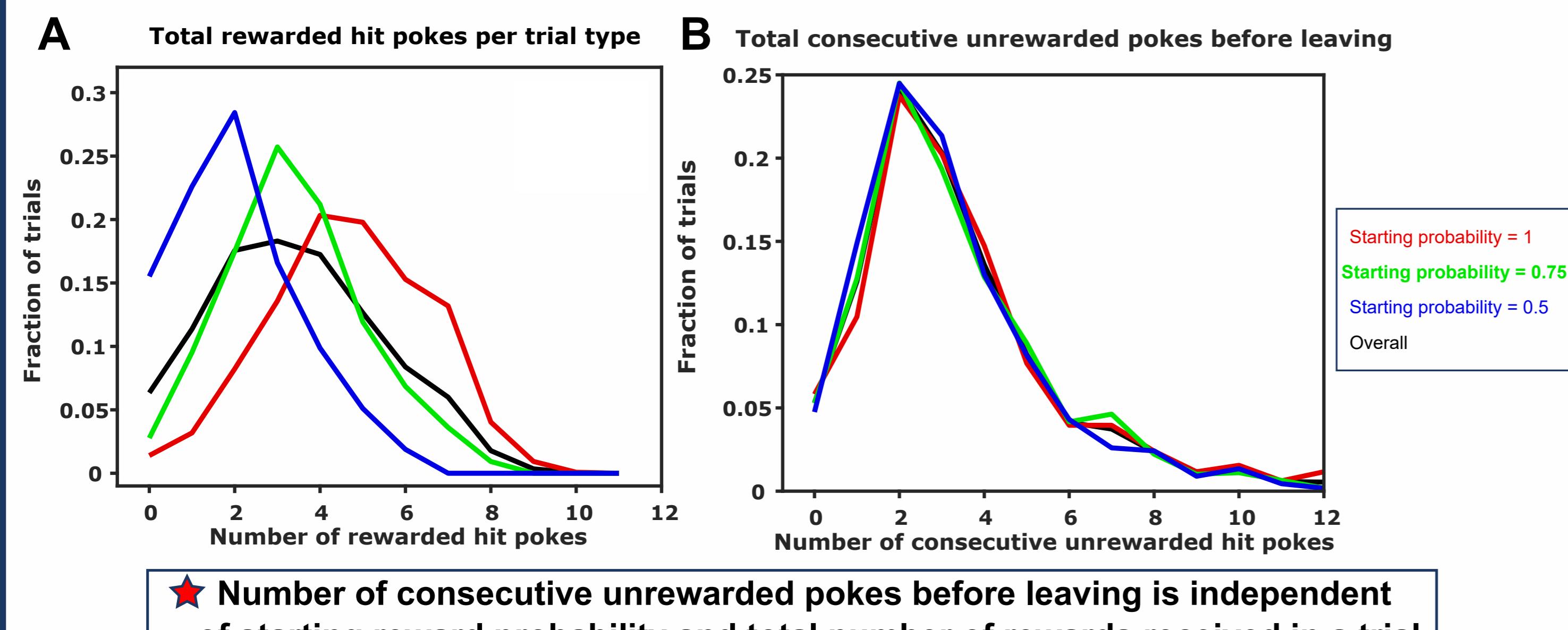


Frontal cortex shapes adaptive decision processes

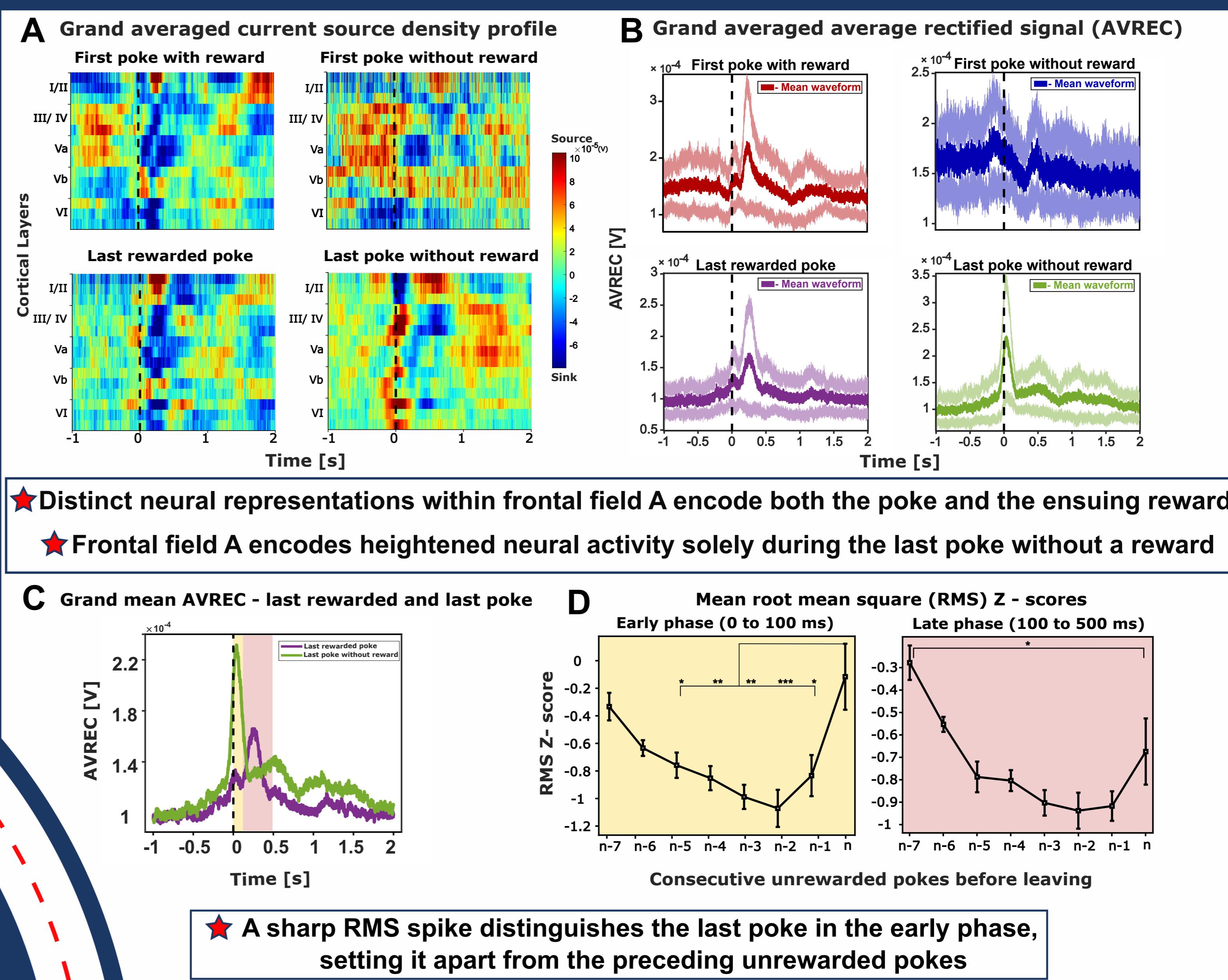
How did we study this?



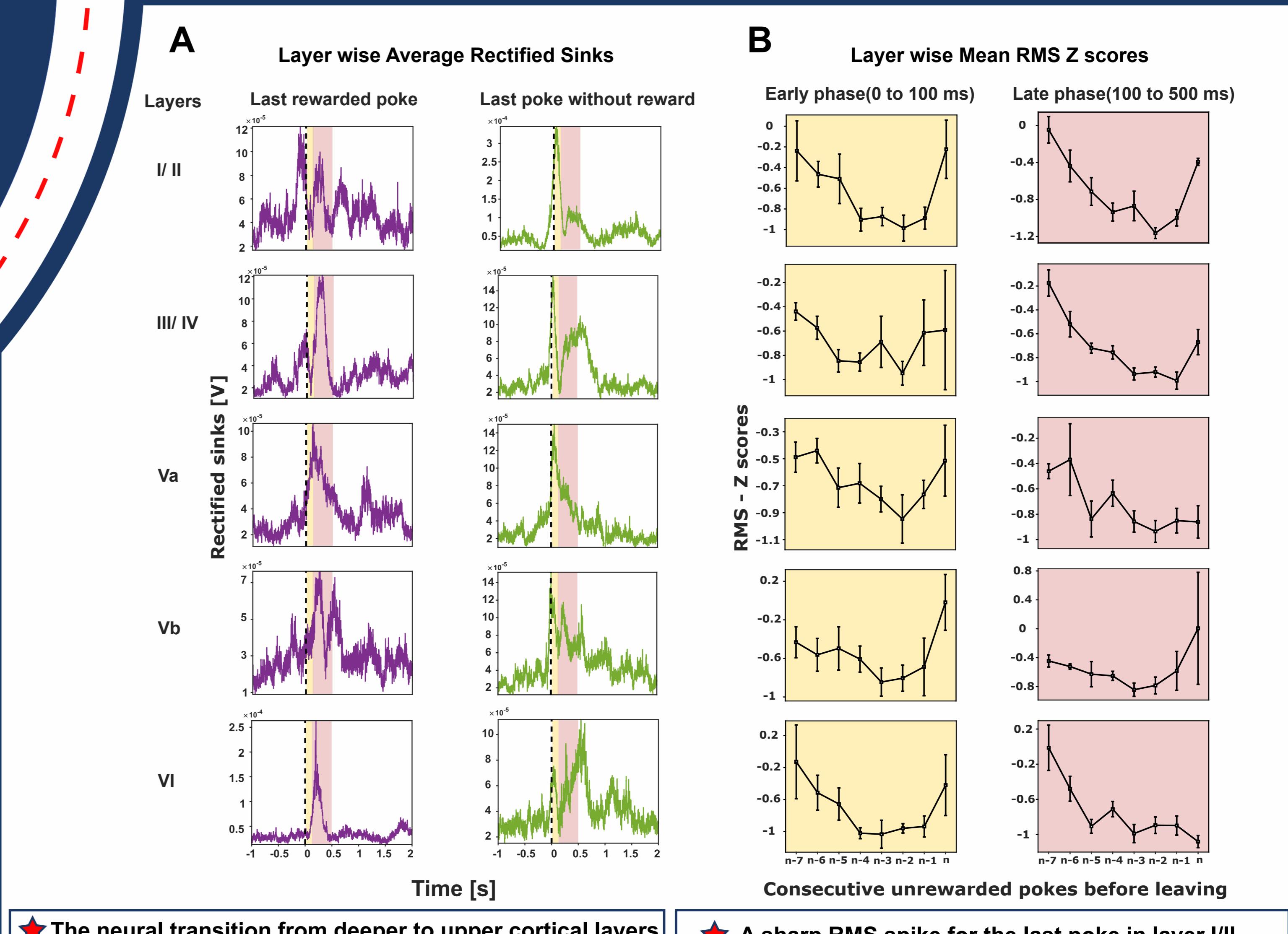
Animals make inference-based decisions



Distinct motor- and reward-related frontal activity



Layer-specific frontal motor- and reward-related activity



Concluding insights & perspectives

Conclusion

- ◆ Probabilistic foraging in the Mongolian gerbil can be used to investigate the role of frontal cortex in exploration/exploitation dilemma and attentional resource allocation
- ◆ Cortical layers in frontal cortex seem to play a decisive role to integrate current reward expectation and adequate search strategies
- ◆ Reinforcement Learning Modeling can help to investigate the trial-by-trial parameters, that underlie animal's inference-bound adaptive decision-making behavior, providing insights into the neural circuitry of attentional resource allocation

Perspectives

Acknowledgements

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