

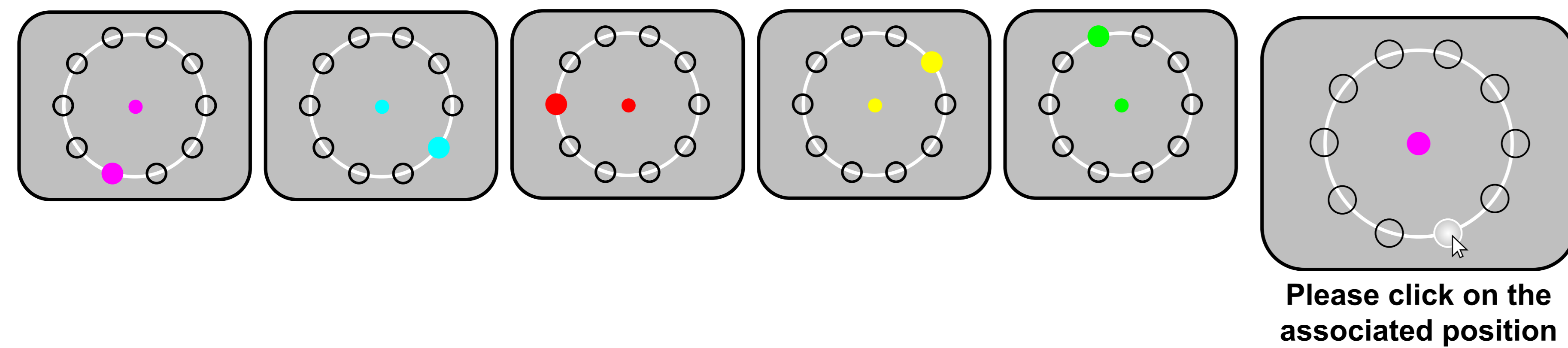
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Background

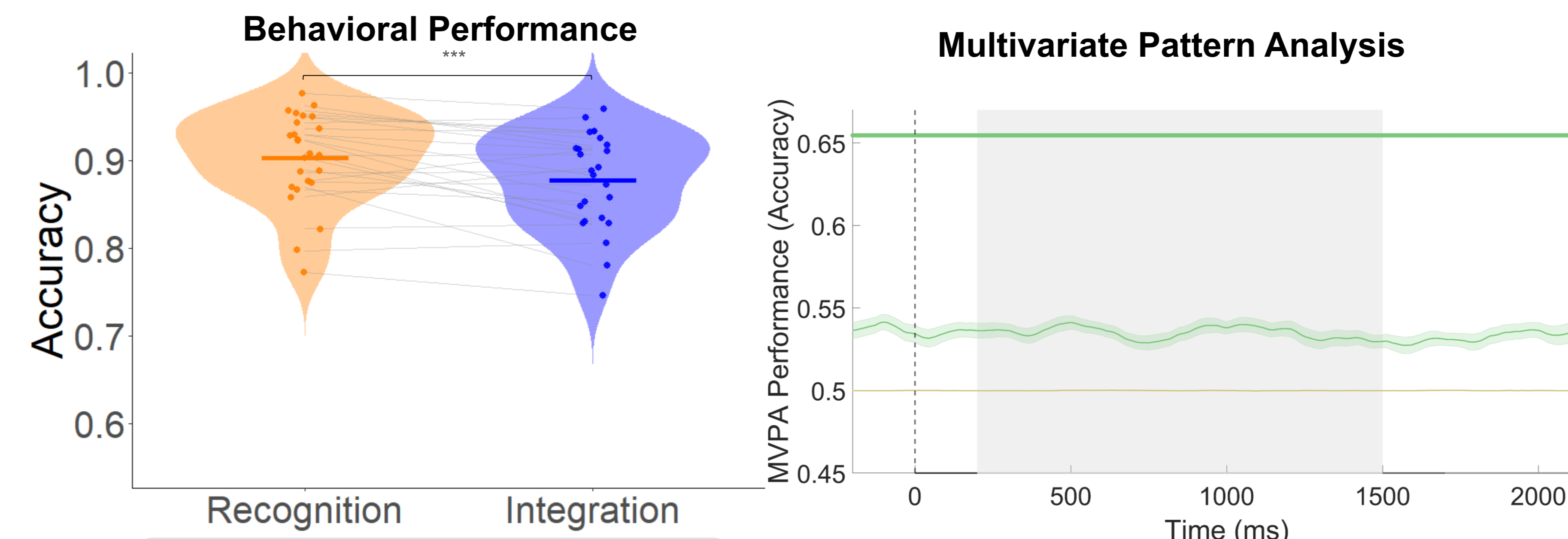
Working memory (WM) supports mental operations, but evidence largely comes from tasks using novel information.

Many real-world tasks require operating on information retrieved from long-term memory (LTM).

The role of WM for mental operations on LTM representations remains unexplored.

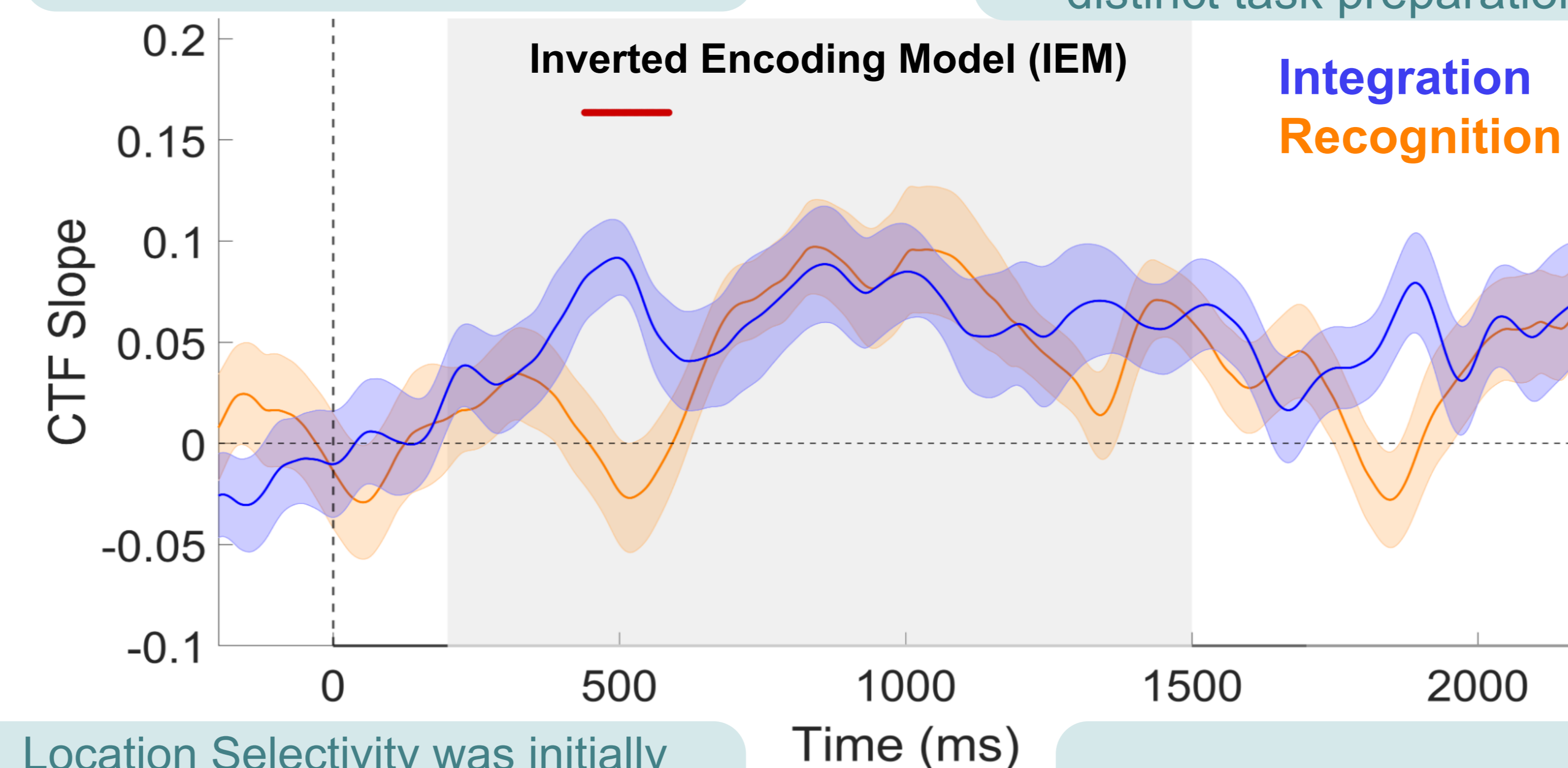


Results (N = 25)



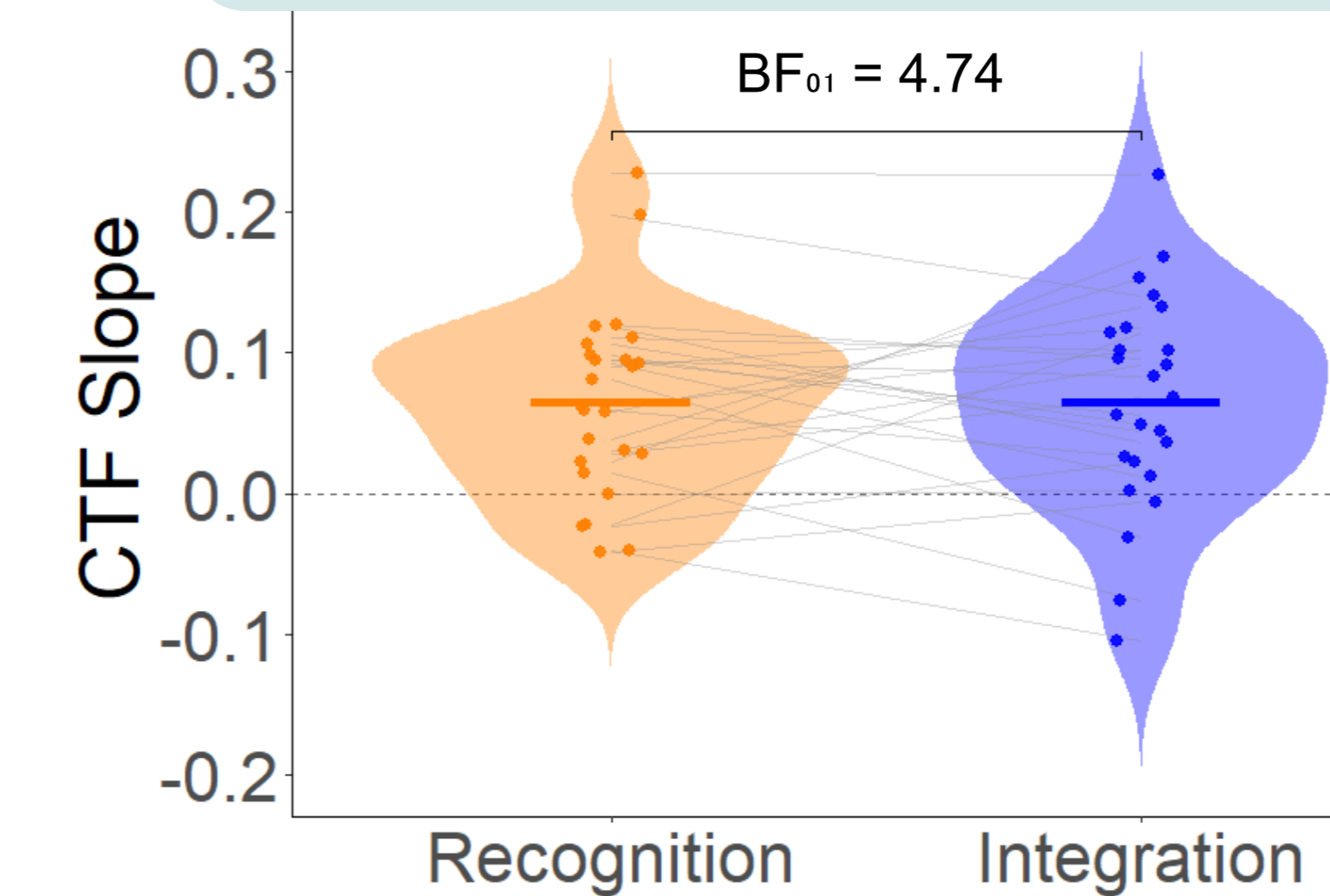
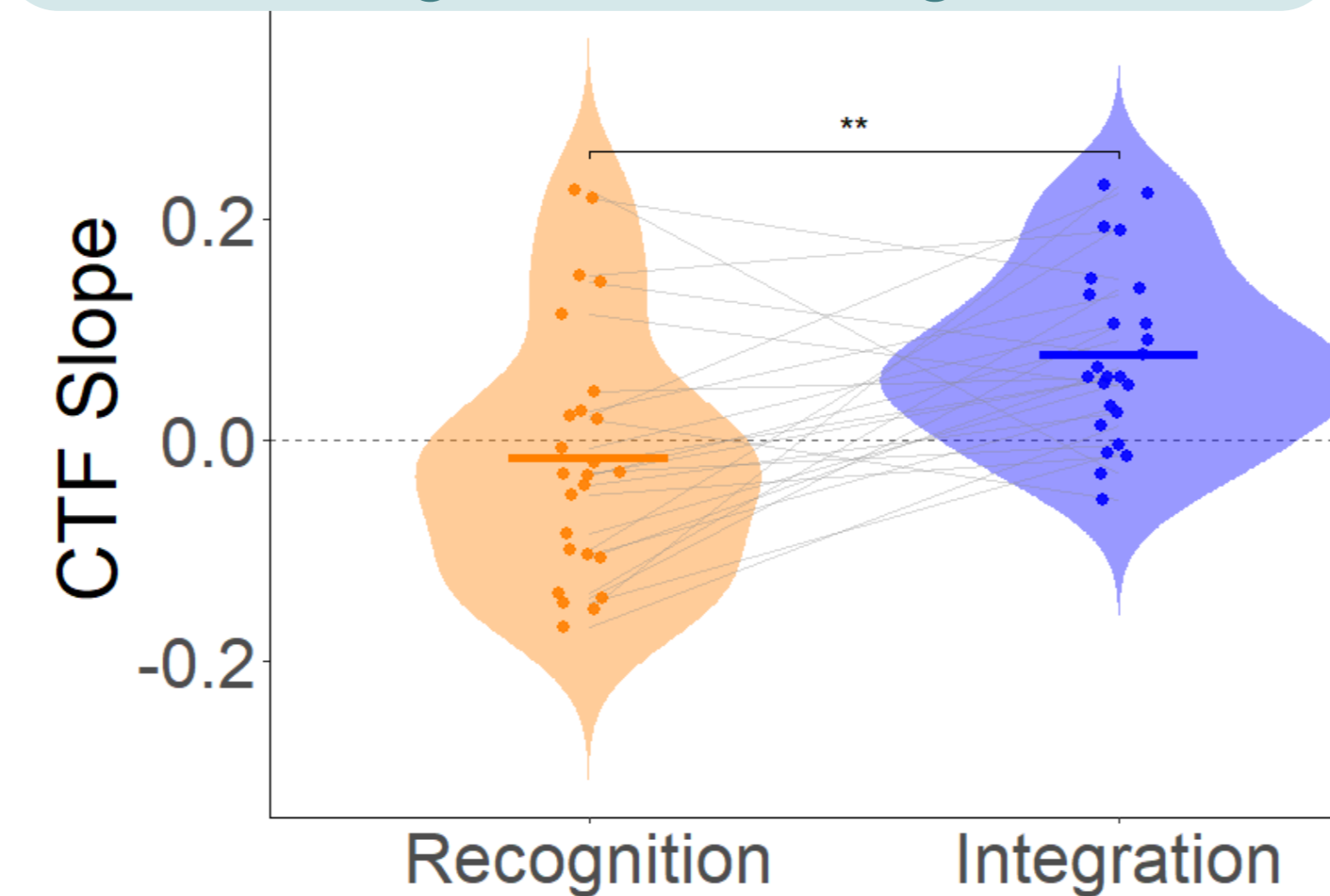
Lower accuracy ($BF_{10} = 24.46$) for integration vs recognition.

Significant task decoding throughout the trial, revealing distinct task preparation.



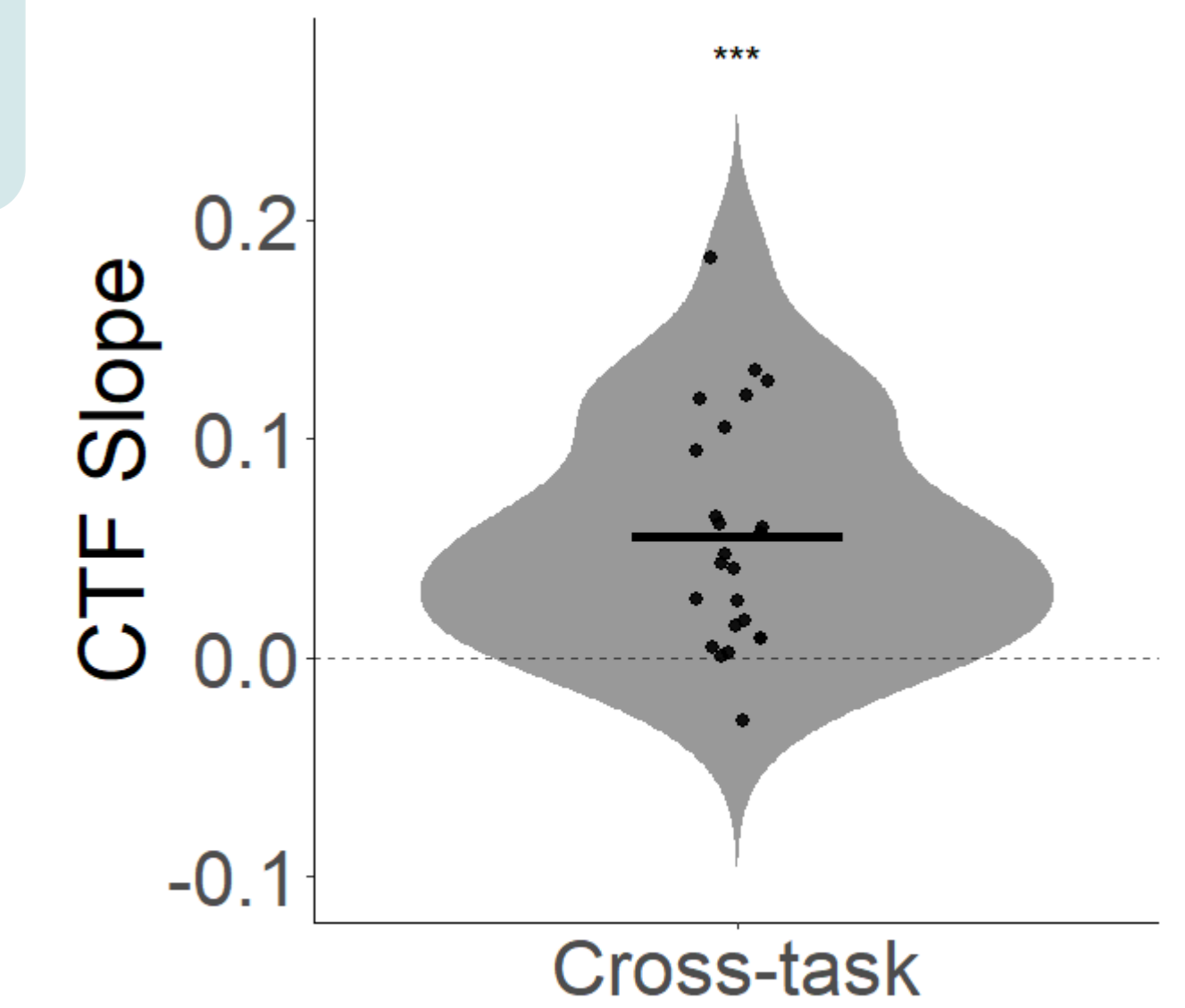
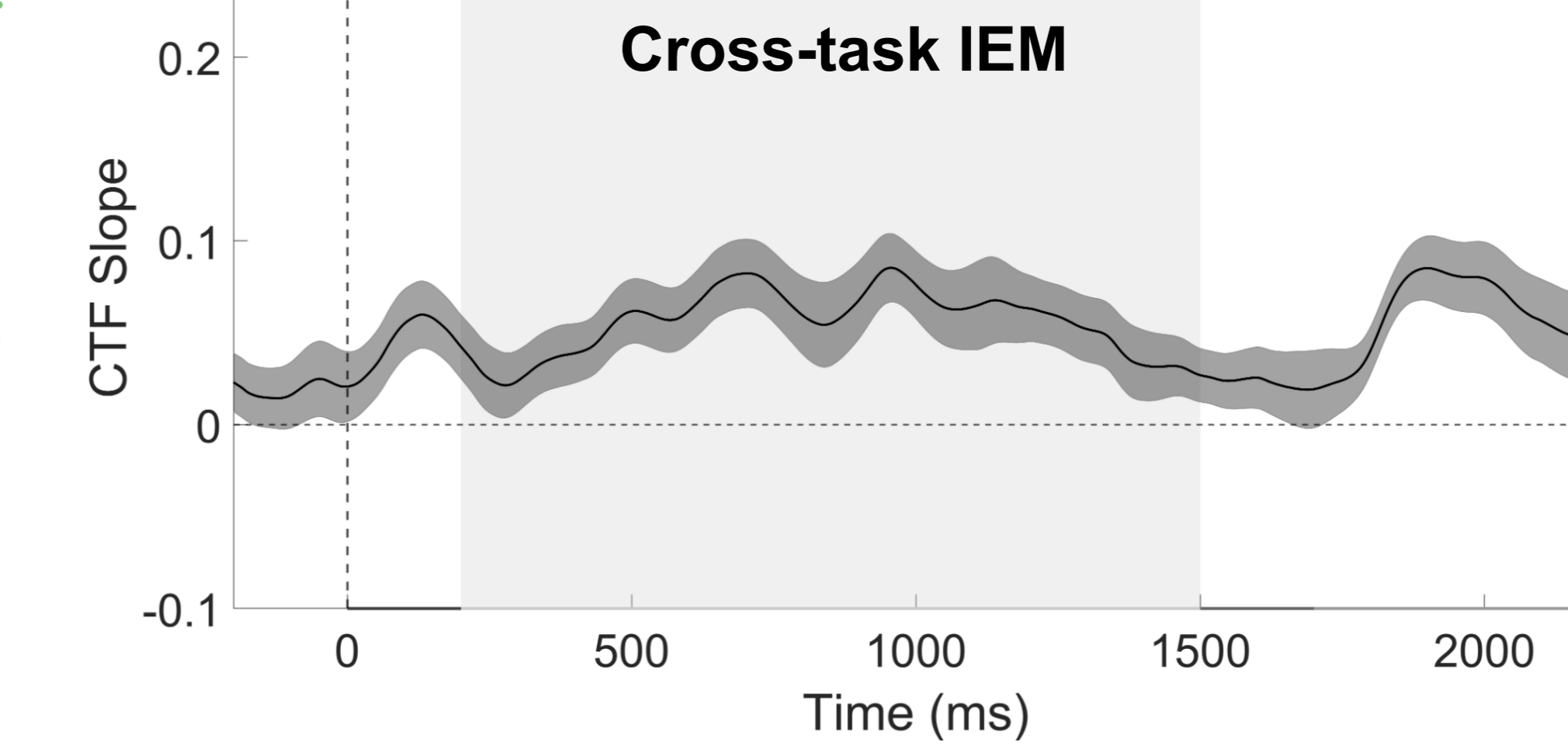
Location Selectivity was initially higher ($BF_{10} = 14.87$) for integration vs recognition.

Later, CTF Slopes converged to similar levels ($BF_{01} = 4.74$).

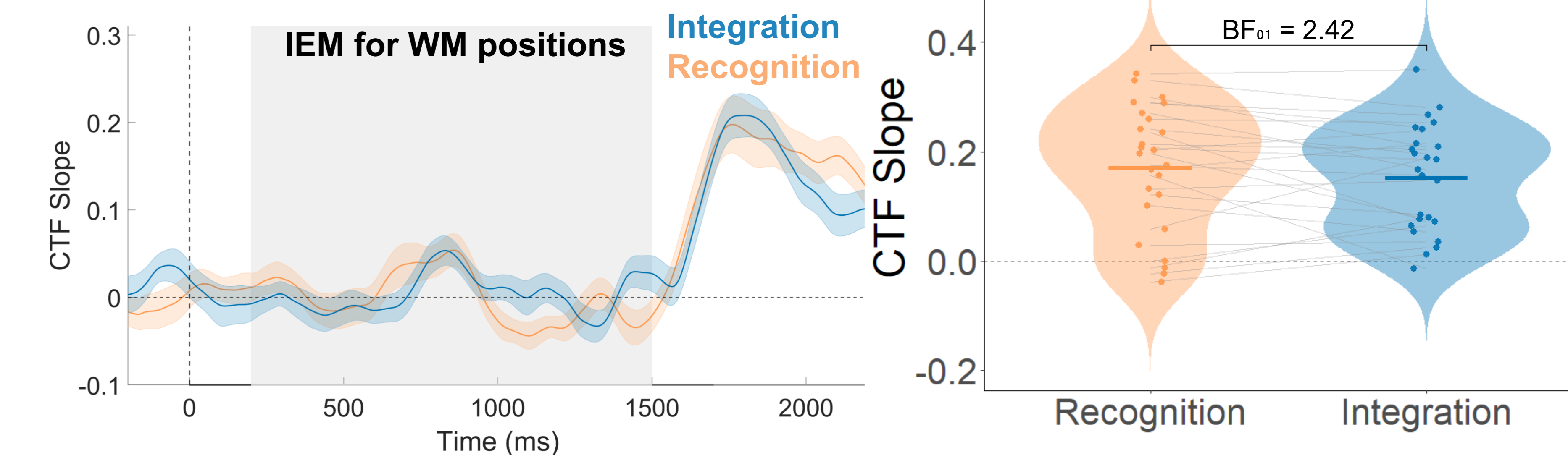


Exploratory Analysis

Representational format for LTM positions was shared across tasks ($BF_{10} = 4122.9$).



For WM position, the location selectivity was equal across conditions ($BF_{01} = 2.42$).



Conclusions

When preparing for a mental operation, LTM information was initially reactivated more strongly, yet this difference disappeared shortly after, indicating comparable representational demands.

Alongside distinct task sets, a common format for position content is observed across recognition and integration tasks.

WM positions showed equivalent selectivity across tasks, supporting the equal content-based storage demands in WM.