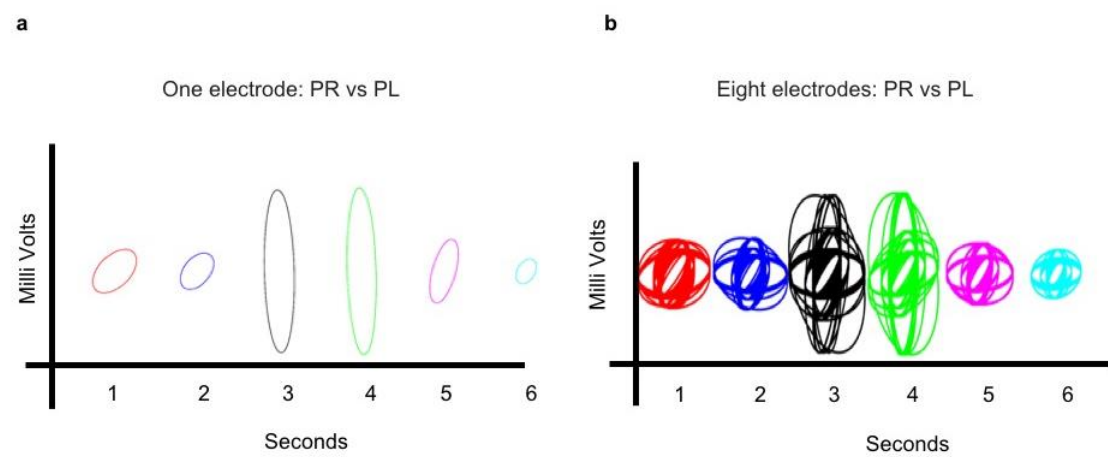


High resolution behavioral and neural activity representation using a geometrical approach

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Supplemental Appendix



Supplementary Fig 1: Example of synchronization of neural activity (represented by ellipse shape) and behavioral performance. **a**, Six ellipses of six seconds of recording. Each ellipse represents the covariance between the left vs. right Putamen. **b**, A bi-lateral comparison of covariance between 8X8 of electrodes along 6 seconds from the left vs. right Putamen, yielding 64 ellipses at each time point. PR, putamen right; PL, putamen left.

	PR-PL	PR-MCR	PL-MCL
Before vs During	$P<0.0001$	$P<0.0001$	$P<0.0001$
Before vs After	$P>0.455$	$P>0.97$	$P>0.516$
After vs During	$P<0.0001$	$P<0.0001$	$P<0.0001$

Supplementary Table 1. Post-hoc Tukey analysis comparing feature B during different phases of a task. The analysis was done on all relevant pairs of brain regions. PR, putamen right; PL, putamen left; MCR, motor cortex right; MCL, motor cortex left.

Supplementary Video 1:

[Video 1.mp4](#)

Synchronization of the behavioral performance with neural activity recordings at any chosen time point.