

Visualization

+

Image Analysis



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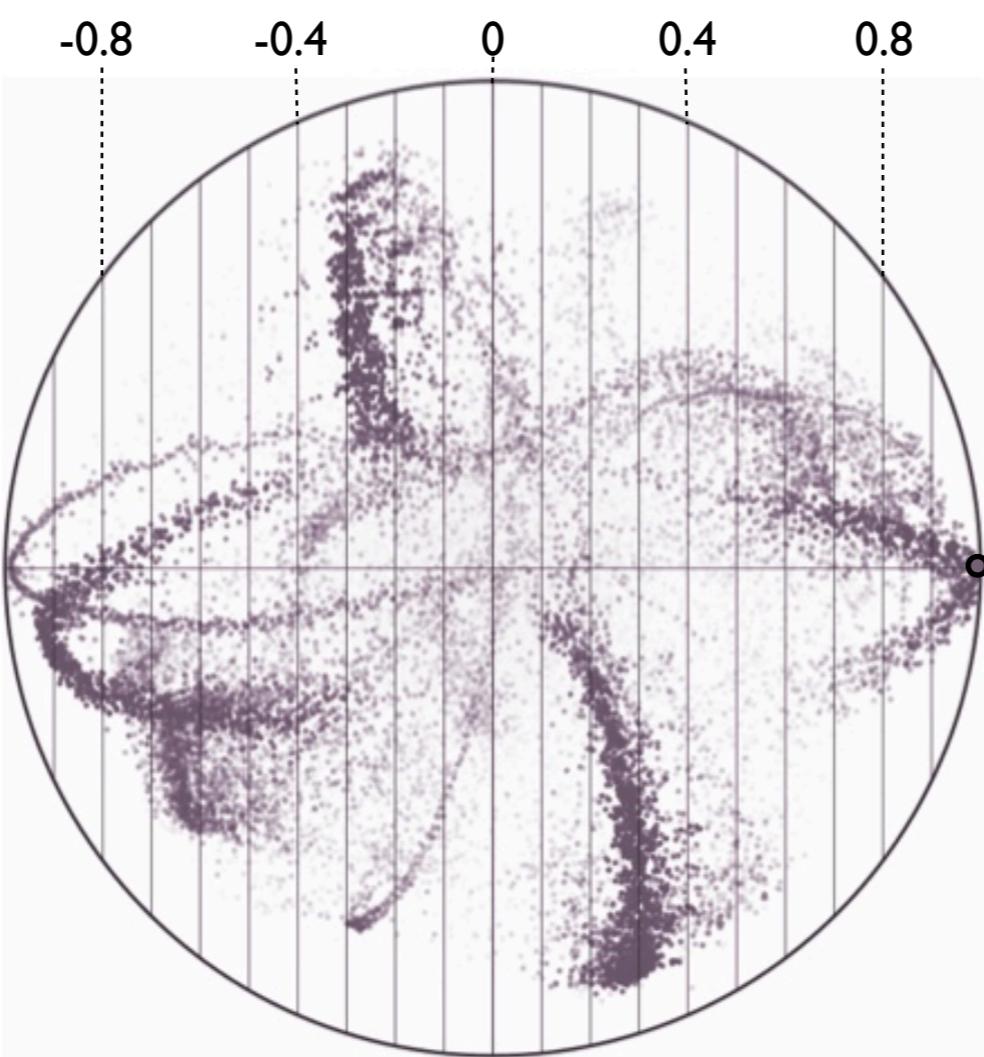
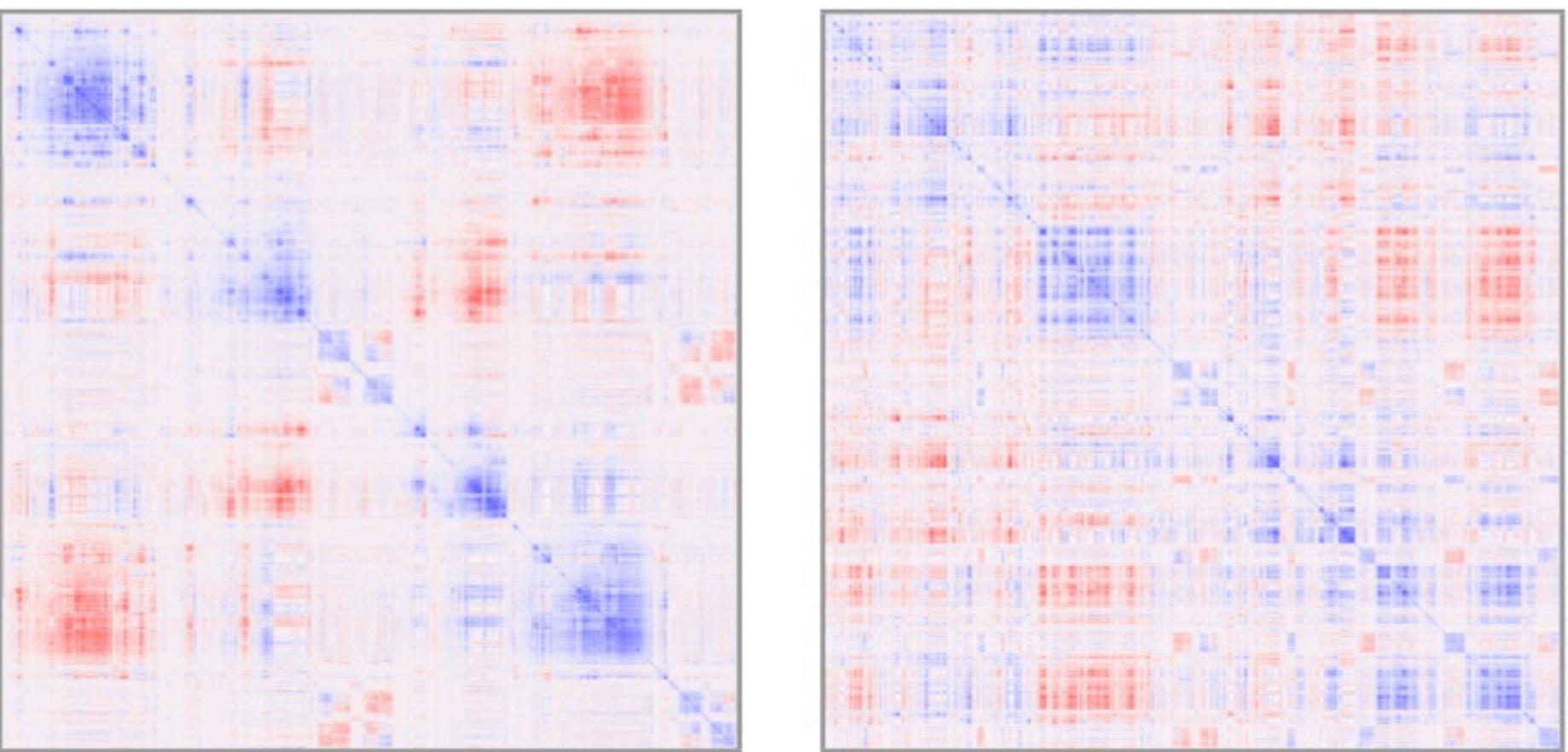
The SCI Team

- Miriah Meyer - Visualization
- Tom Fletcher - Image Analysis
- Brandon Zielinski - Pediatric Neurologist
- Sam Gerber - High-dimensional Data Analysis
- Sean McKenna - Visualization
- Wei Liu - Image Analysis
- Kris Zygmunt - Research Software Engineer



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"iCorrPlot: An Interactive Plot for Exploring Correlation". S. McKenna, M. Meyer, C. Gregg, S. Gerber. Under review.

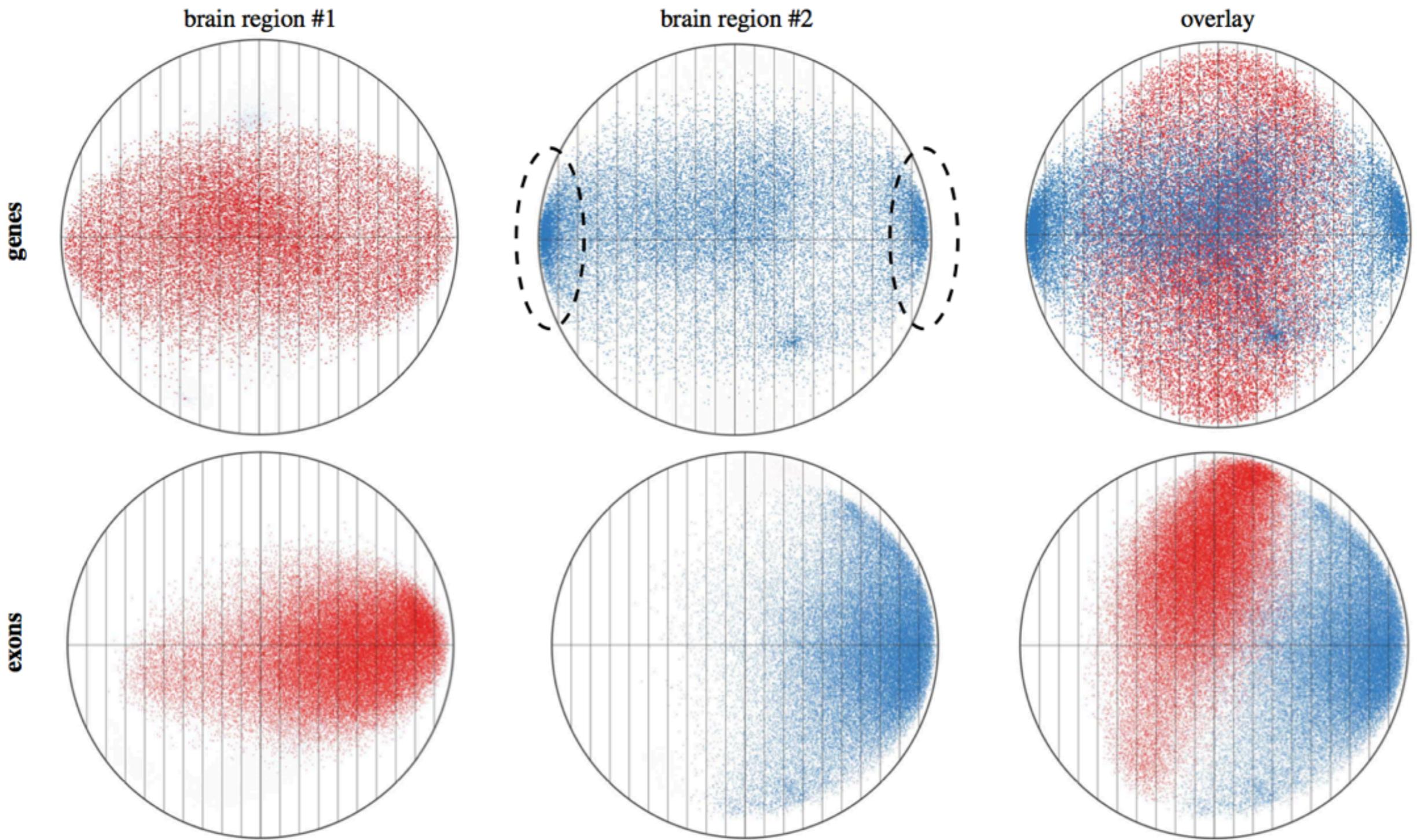
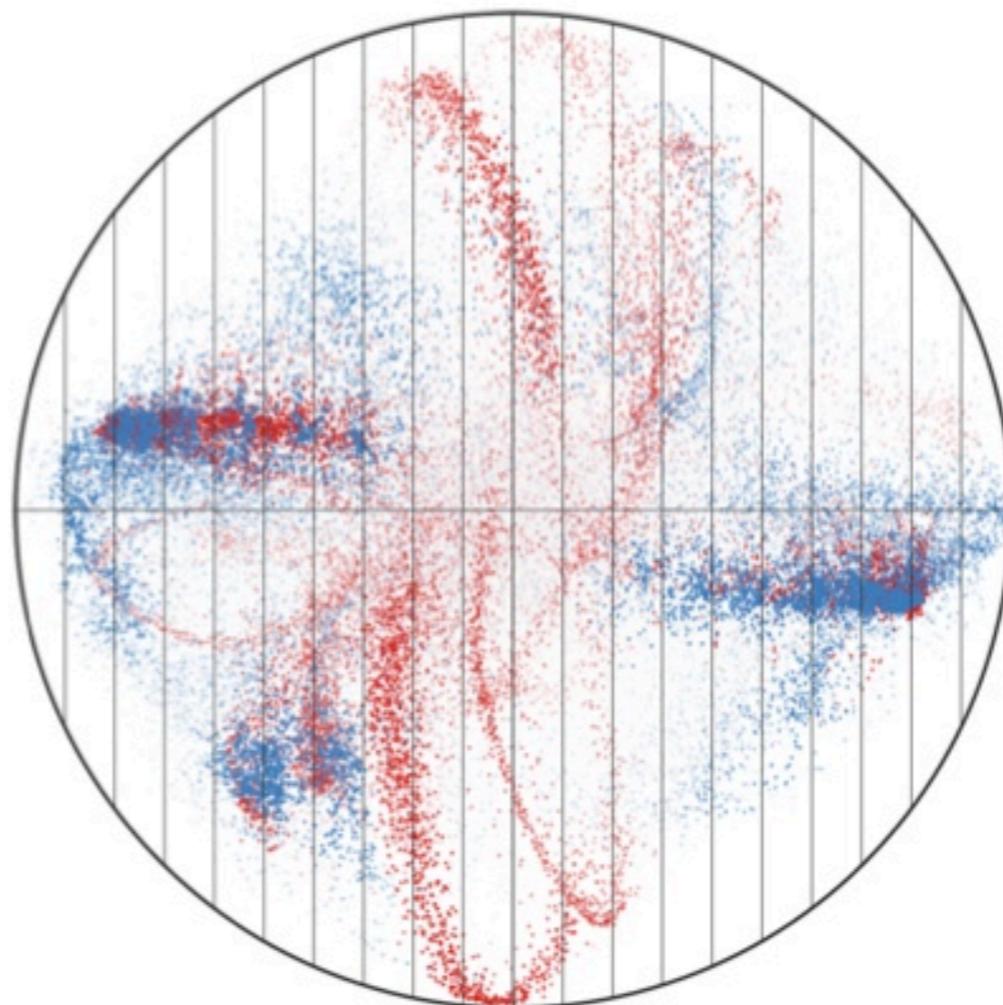


Fig. 9. Two biological data sets containing 76,730 gene variables and 120,000 exons variables, respectively. The different colored variables are labeled according to which of the two brain regions their expression levels were measured in. The iCorrPlot highlights different patterns of correlation in each of these brain regions, indicating potentially significant differences in the biological processes in these parts of the brain.

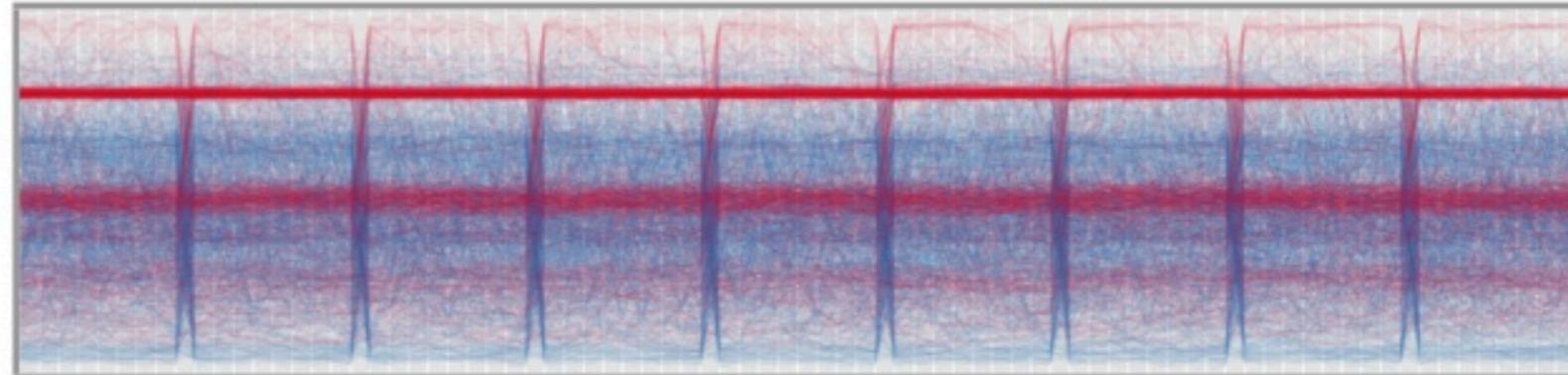
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(a)



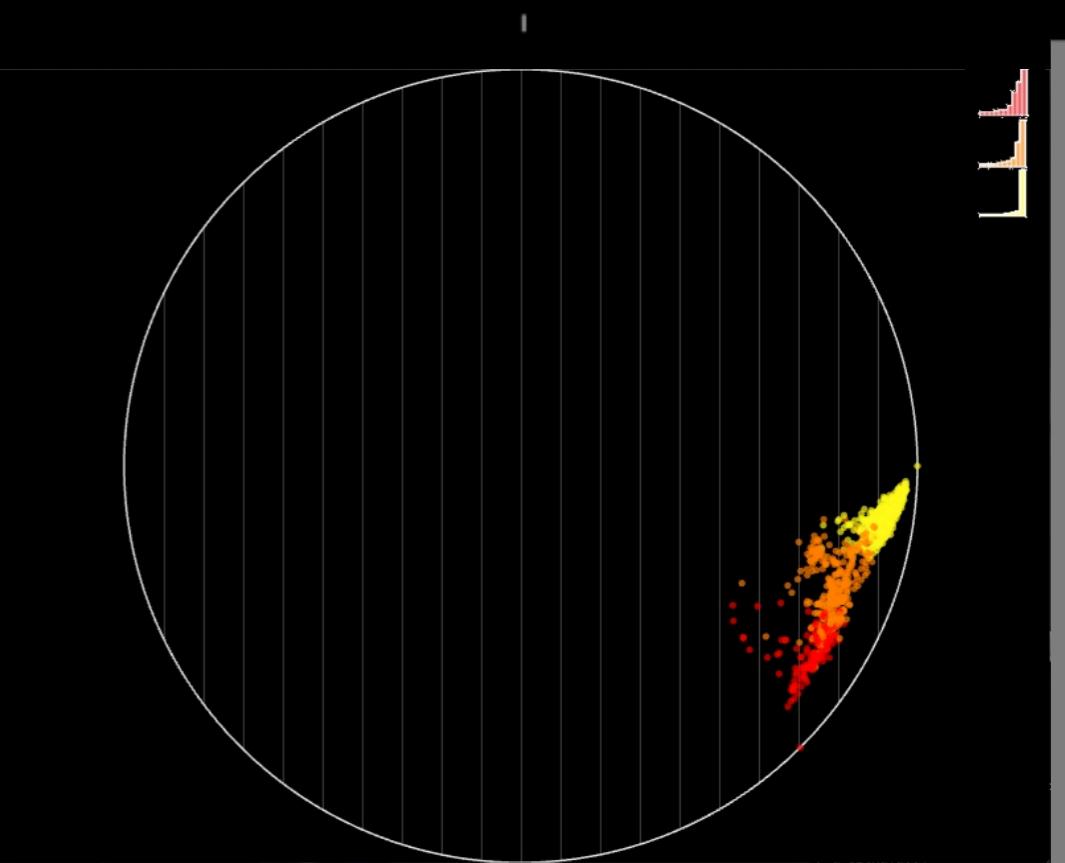
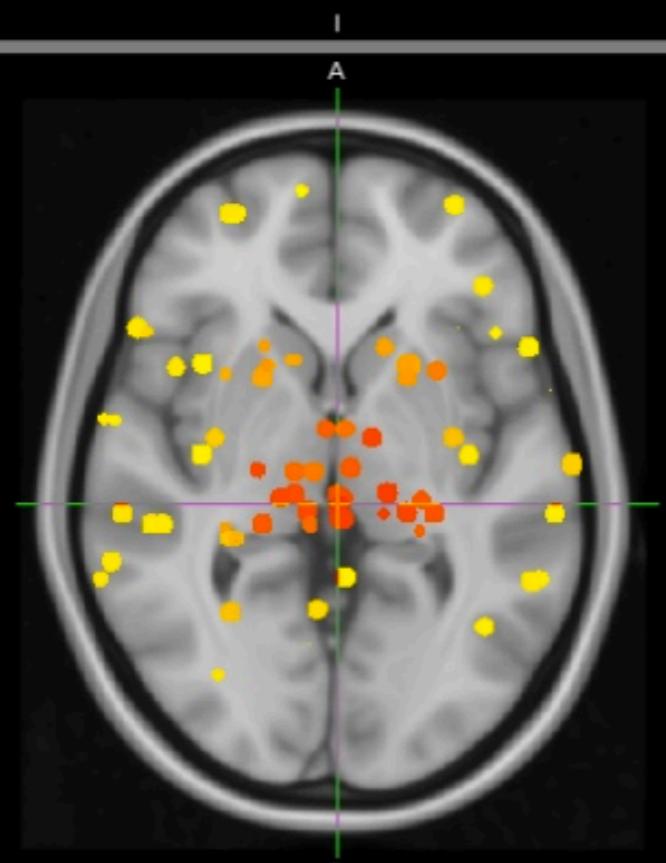
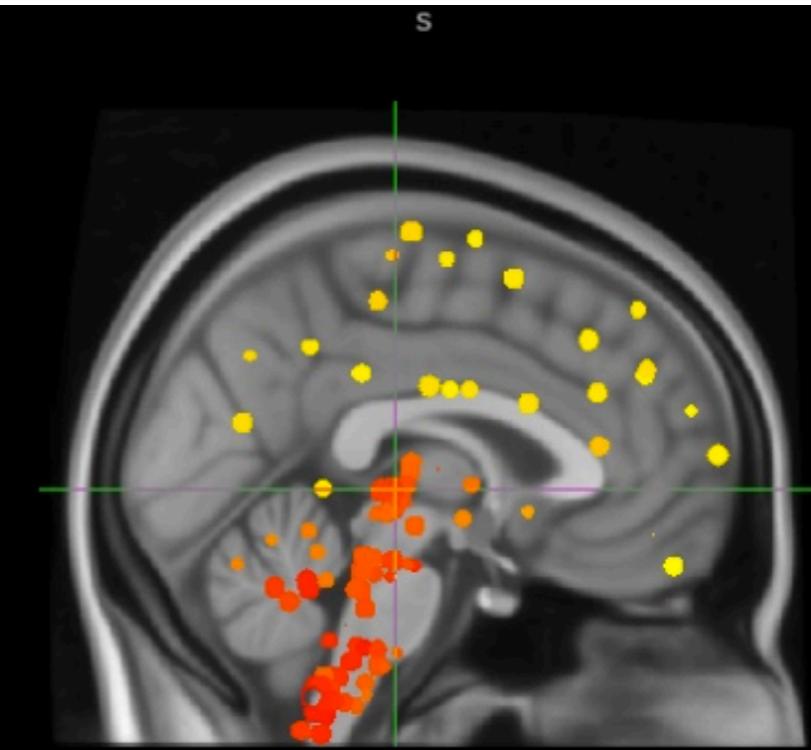
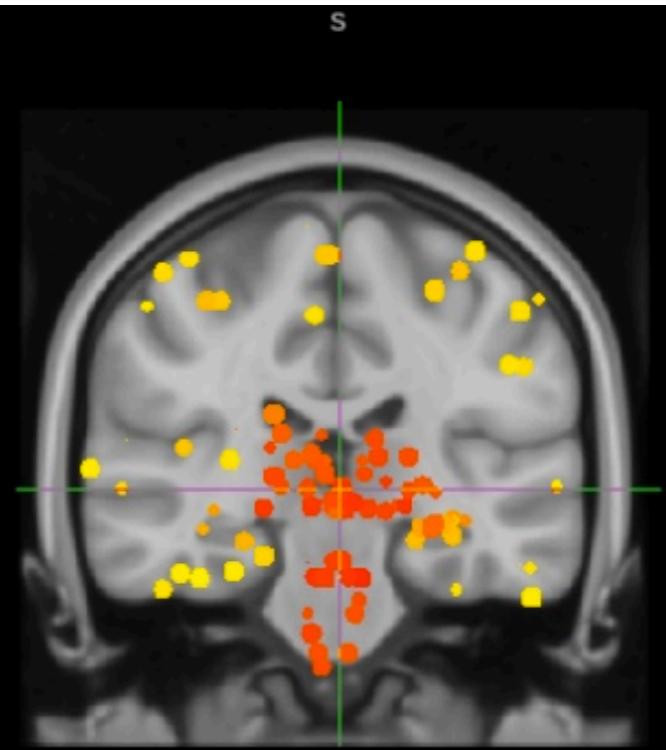
(b)



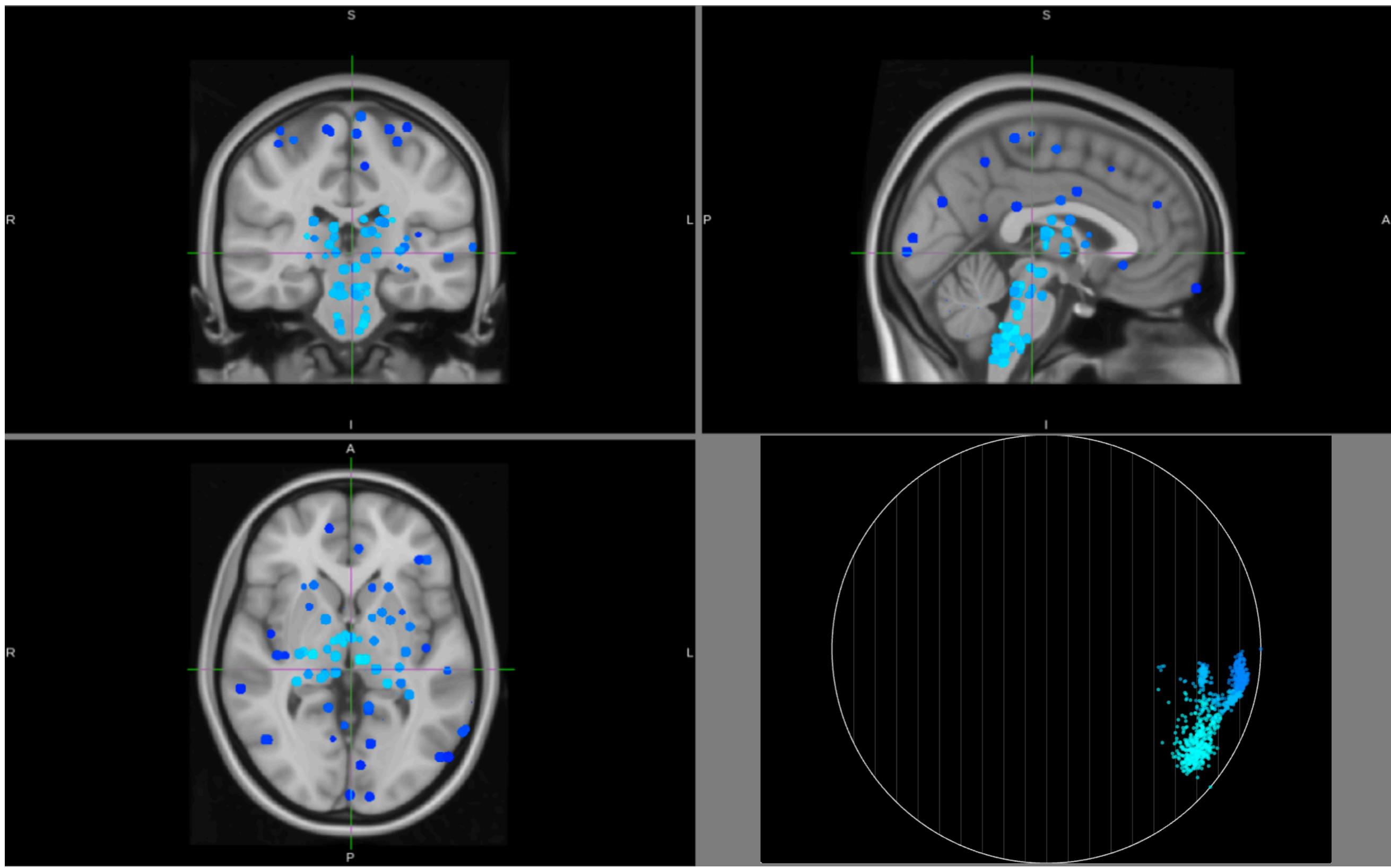
(c)

Fig. 7. Two datasets of image patches extracted from the *House* and *Barbara* images (a). Their outlined colors match the data presented in the iCorrPlot (b), which highlights correlation structures not apparent in an overcrowded parallel coordinates plot, across observations (c).

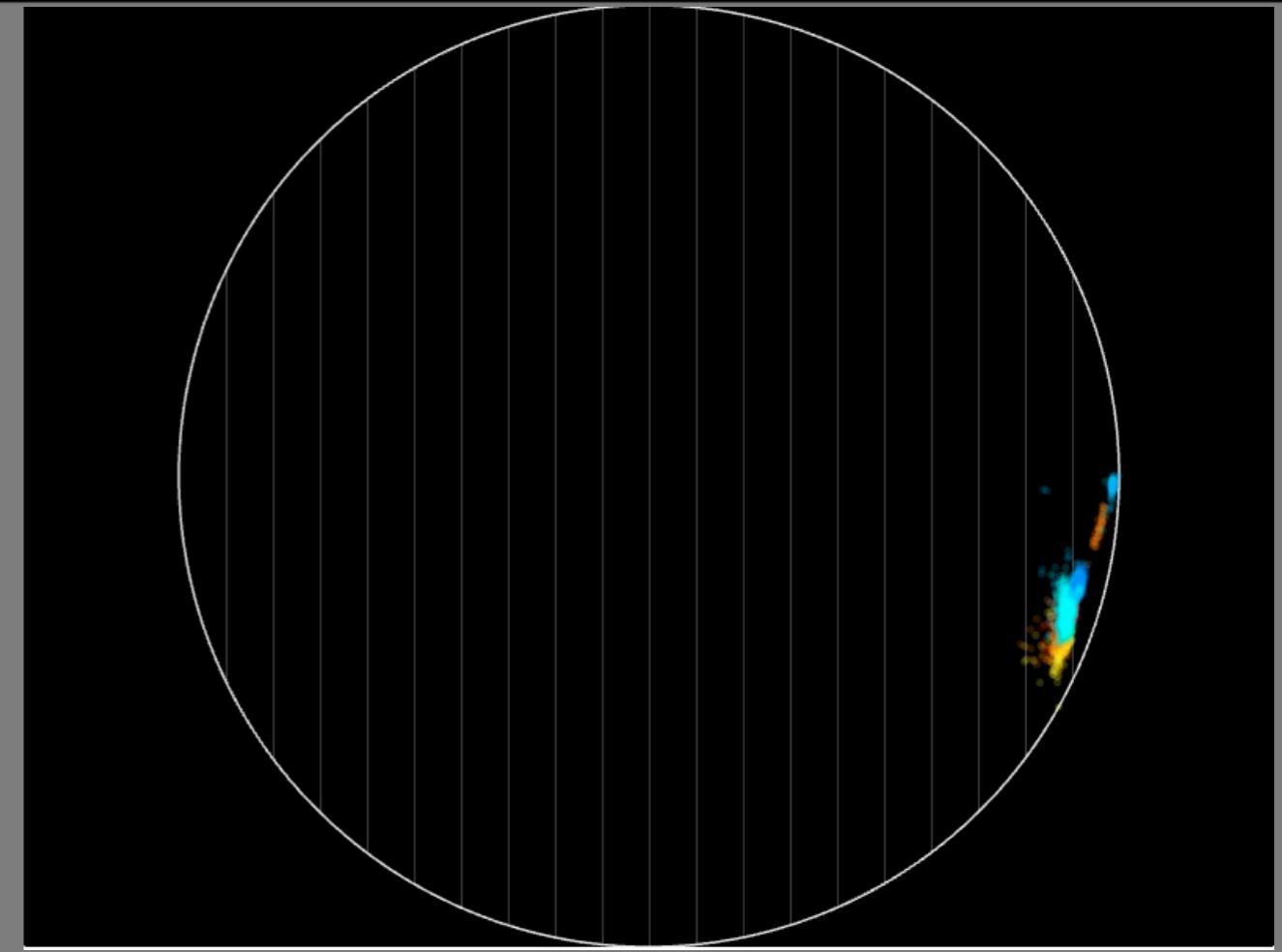
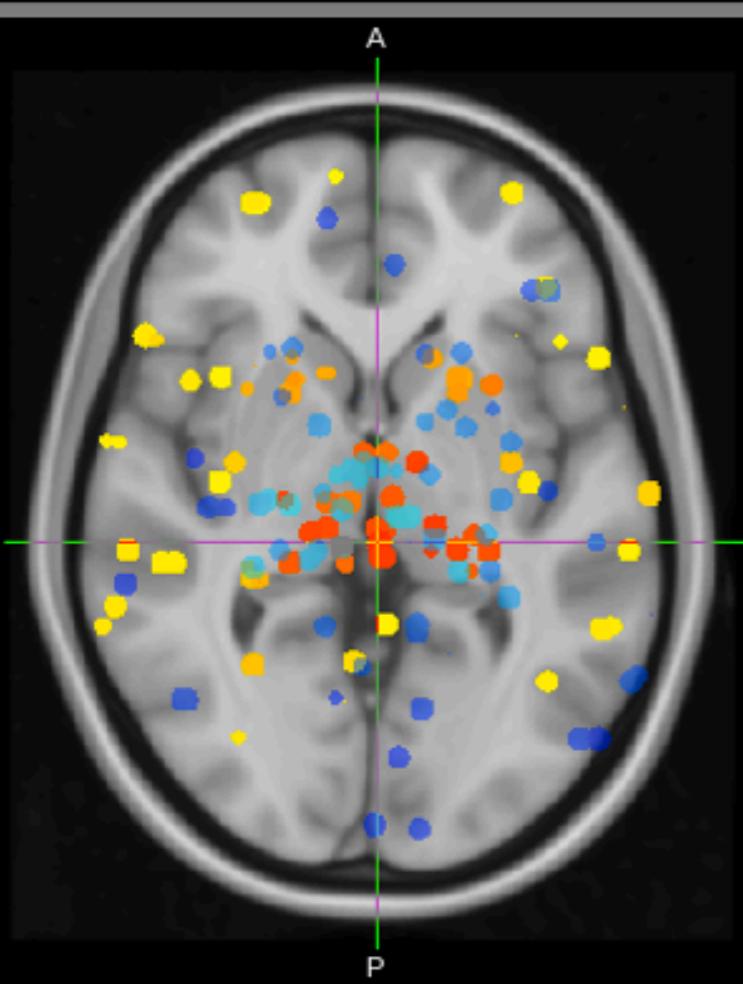
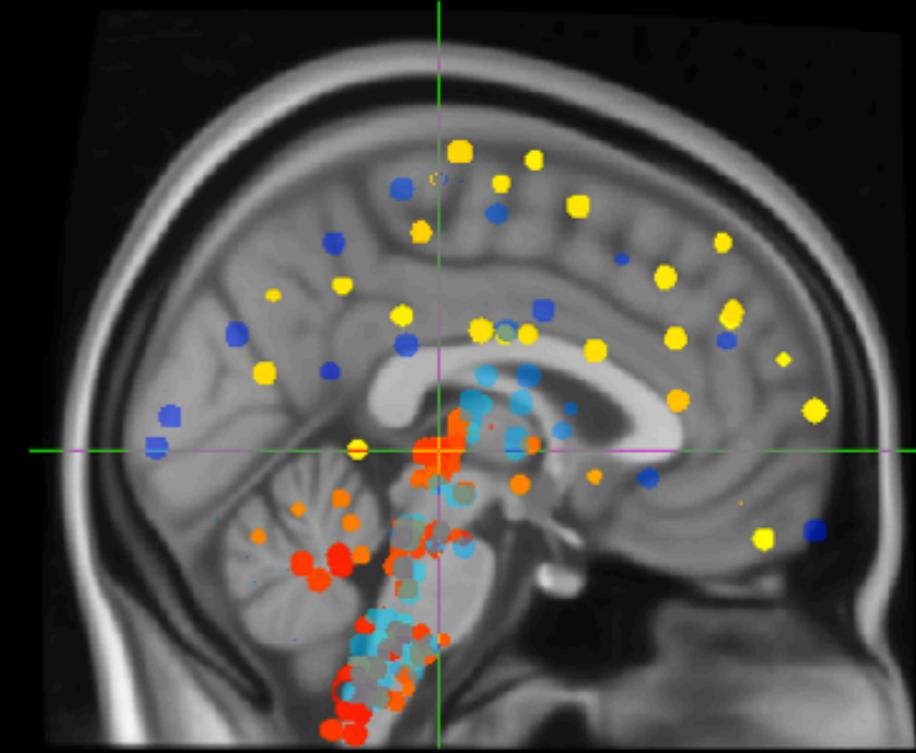
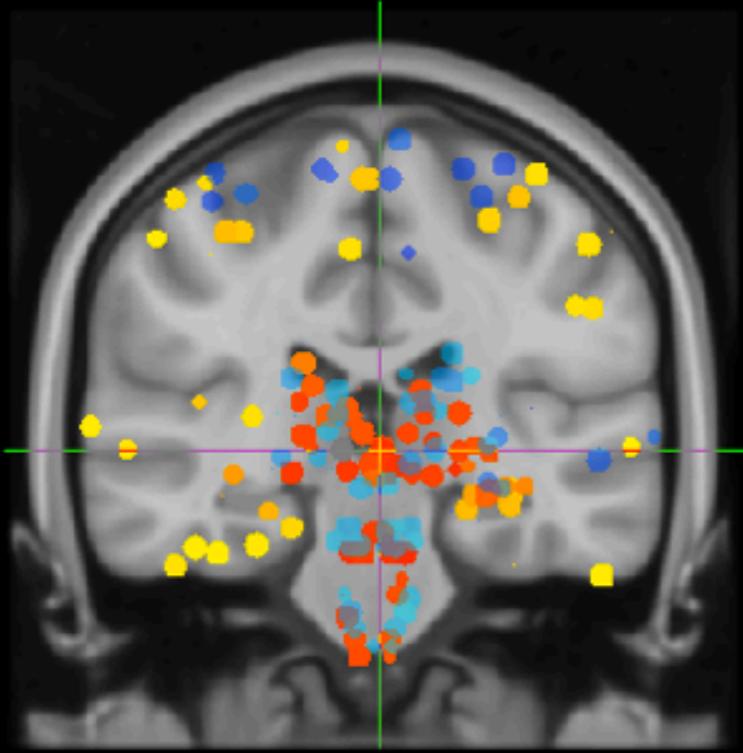
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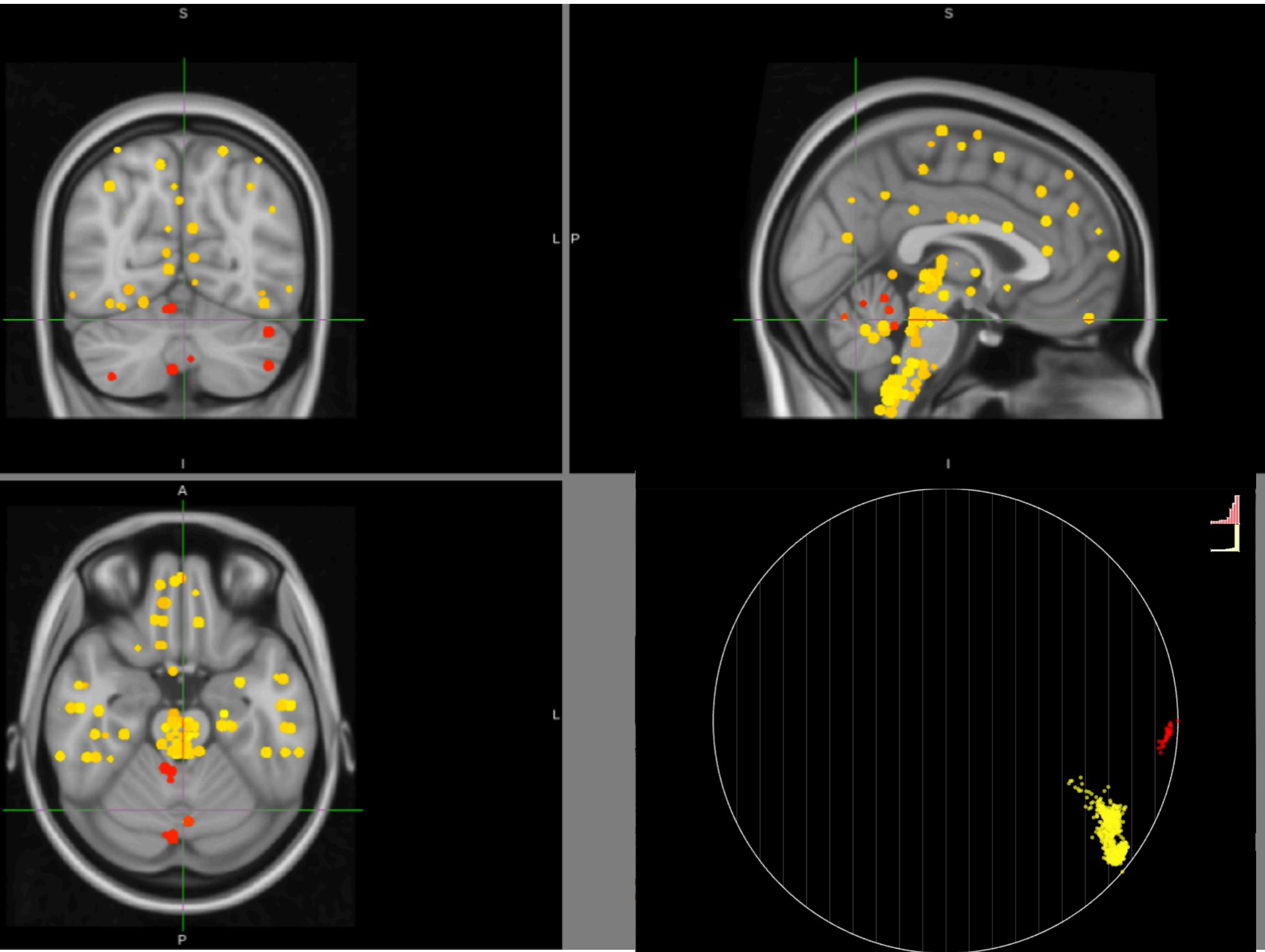
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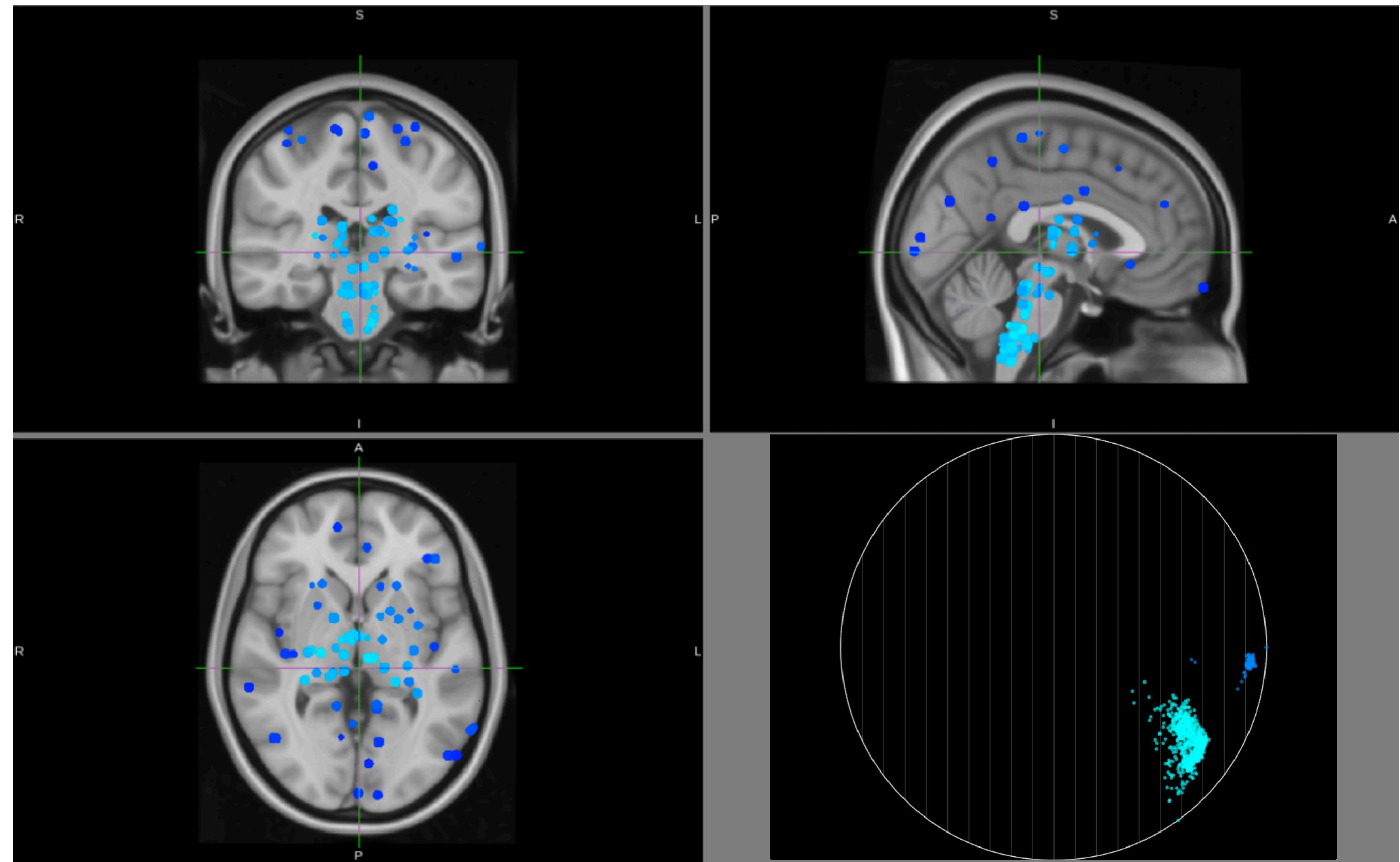
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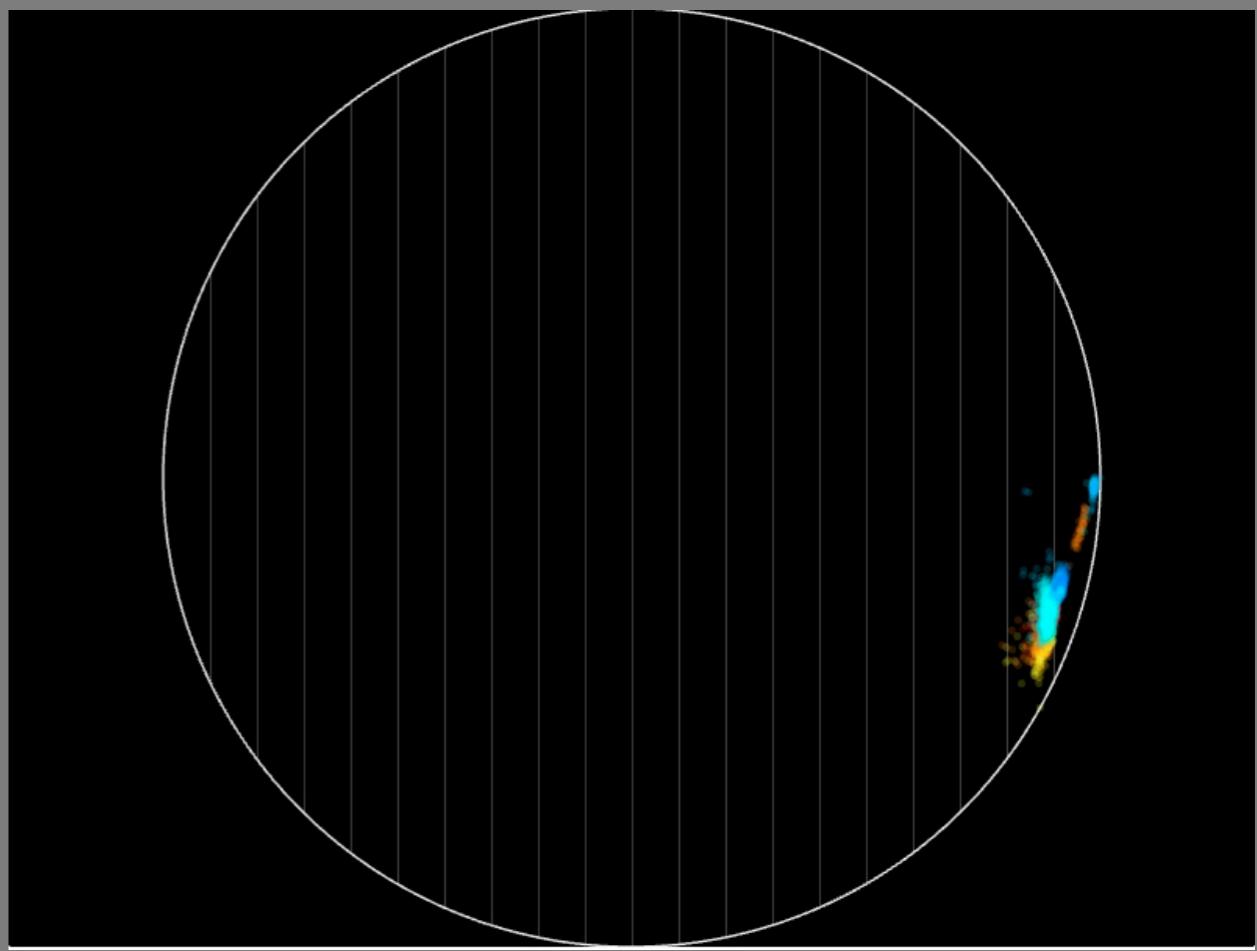
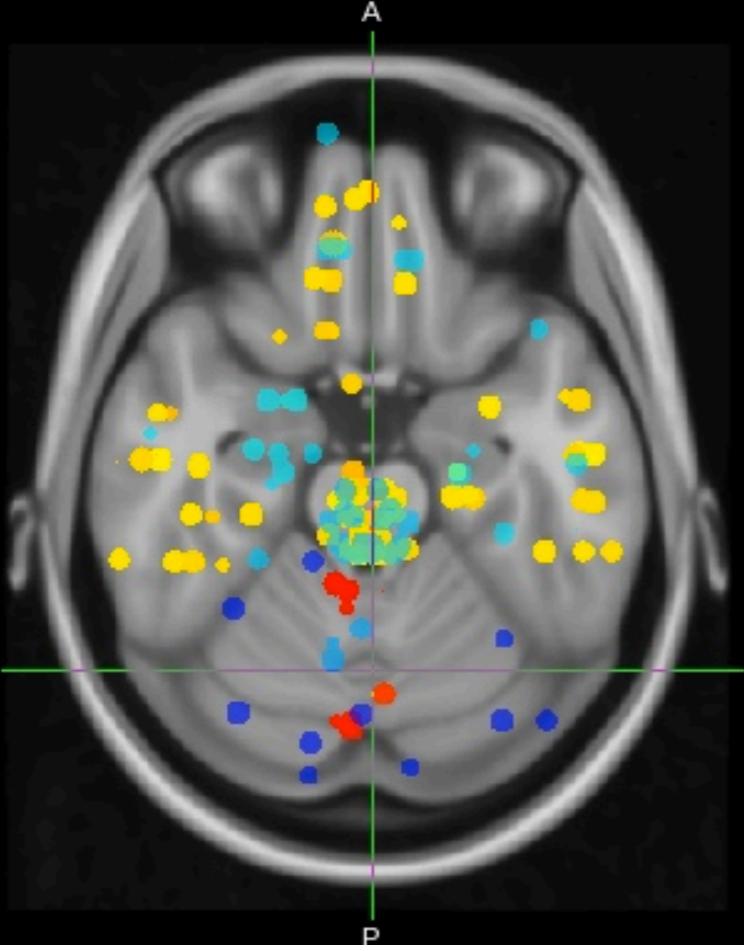
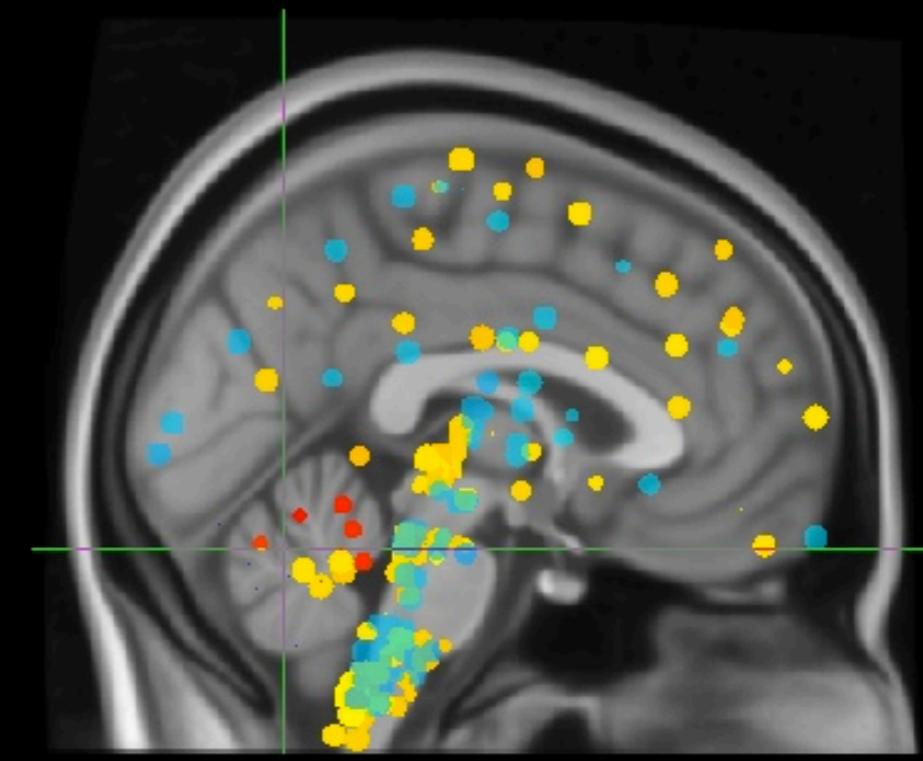
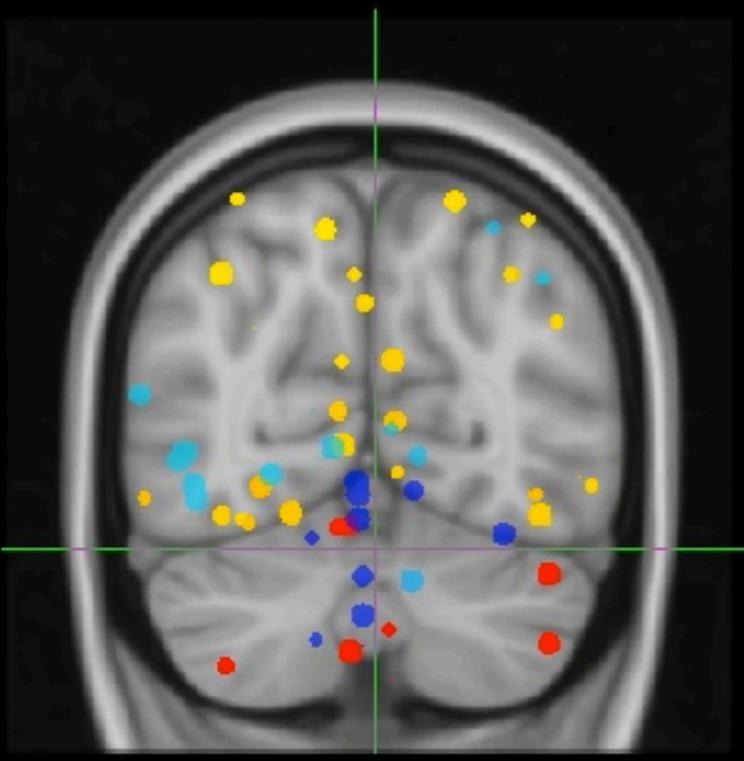
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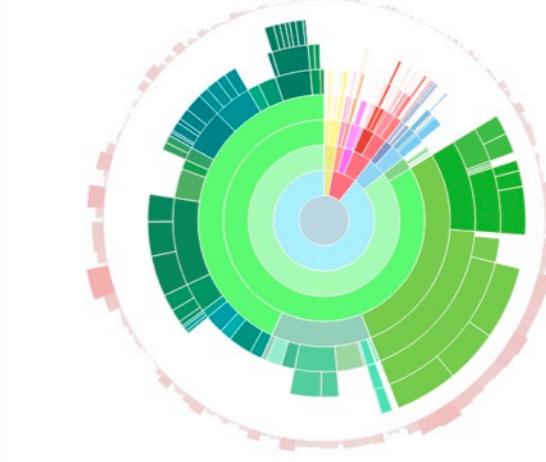
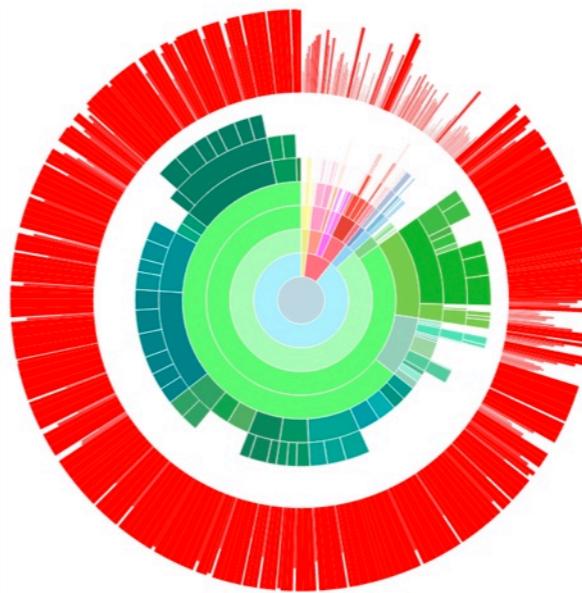
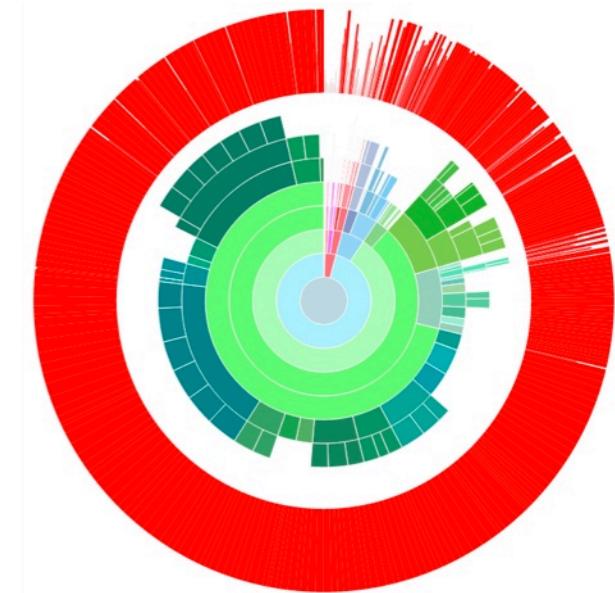
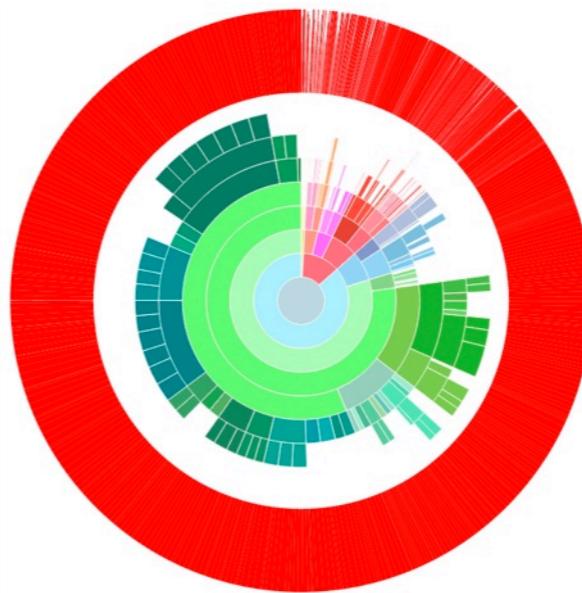
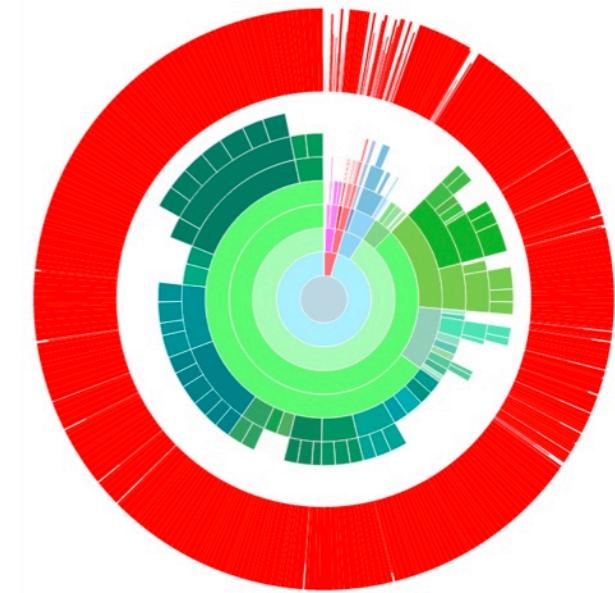
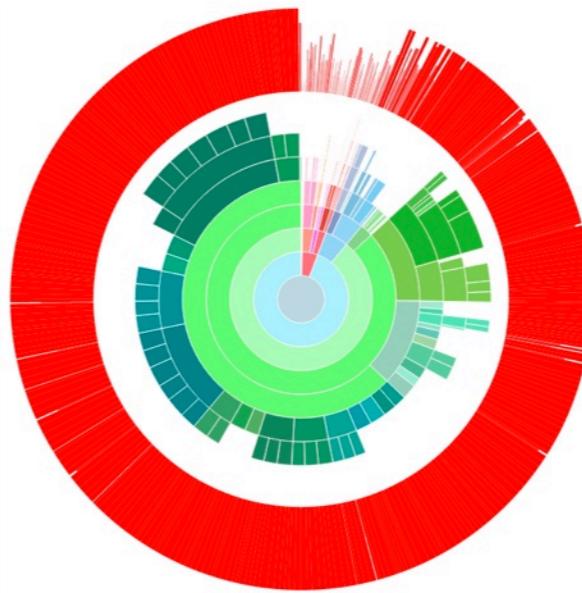
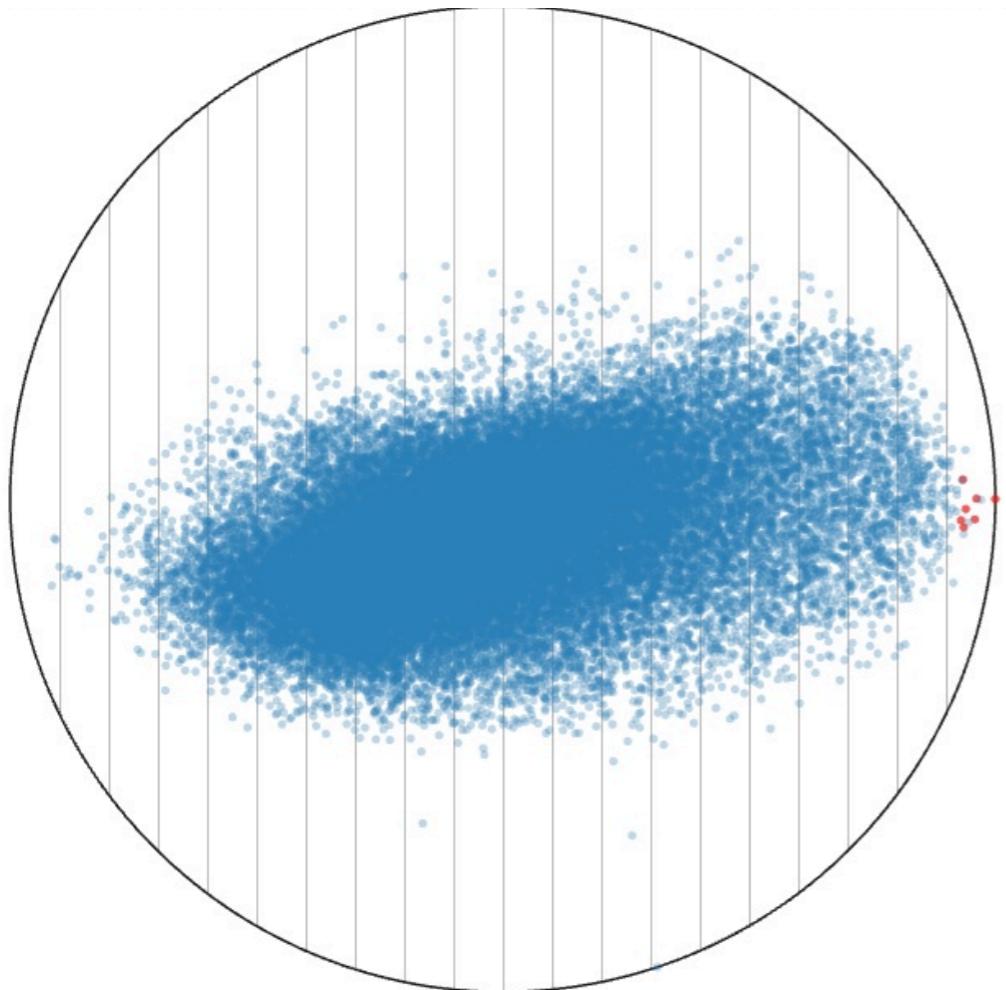
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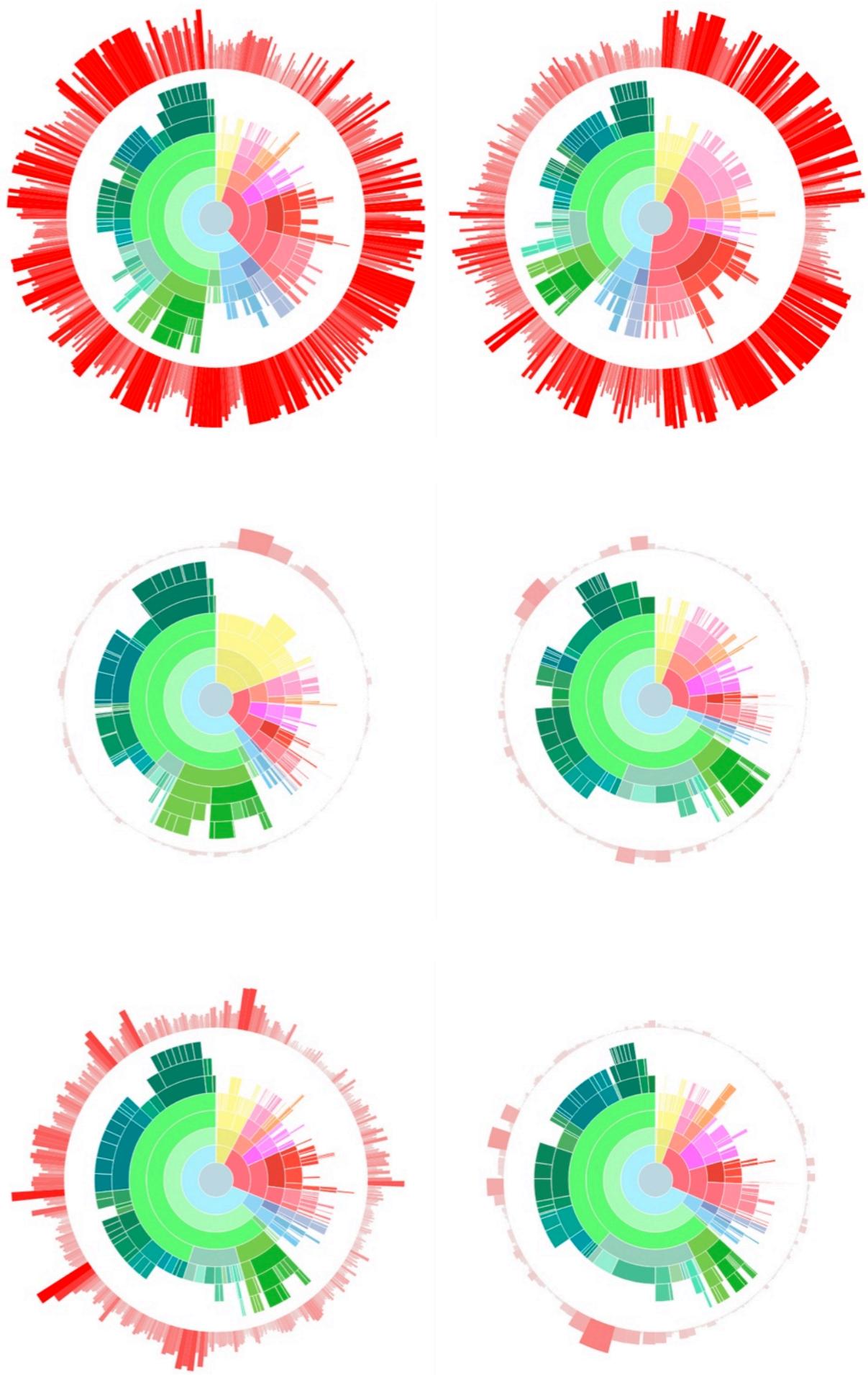
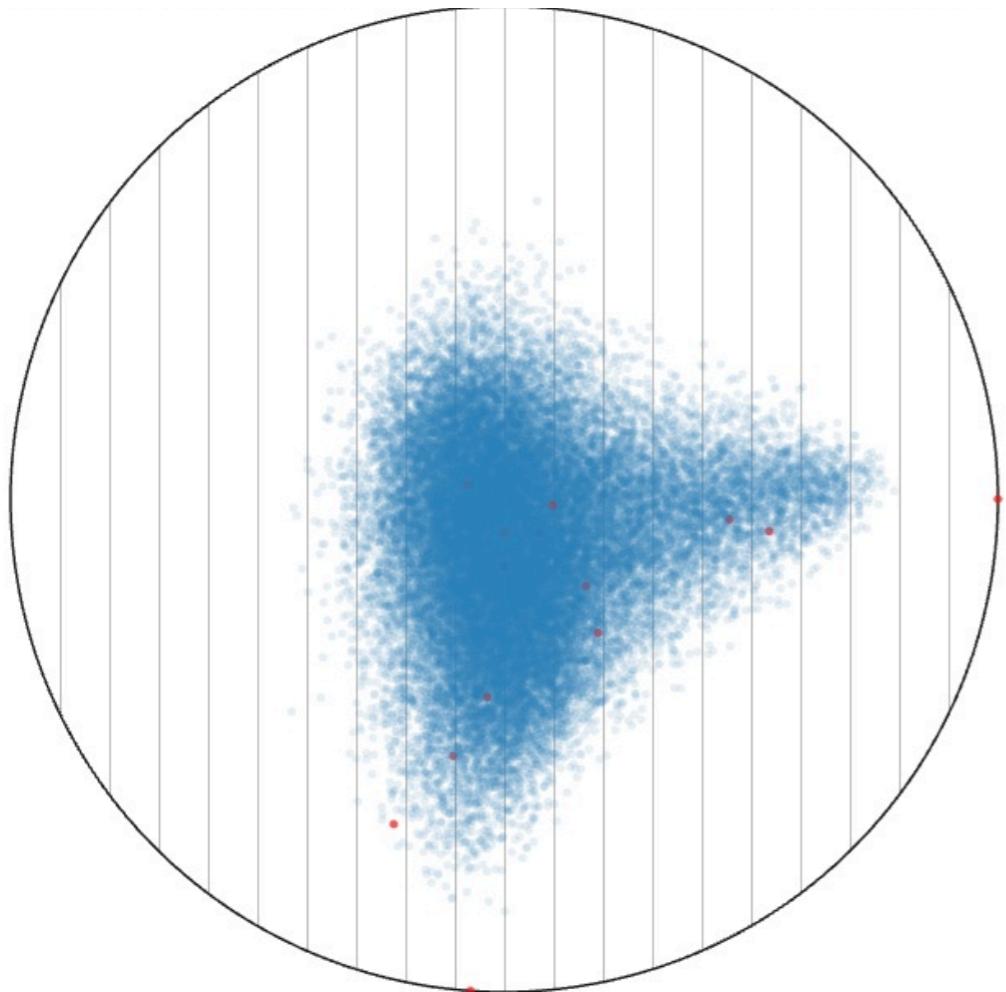
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Further Directions

- Overlay data from multiple brains
 - Look at cross-species data



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