Sundeep Teki

Neural analysis of

real-world sounds

Auditory Cognition Group
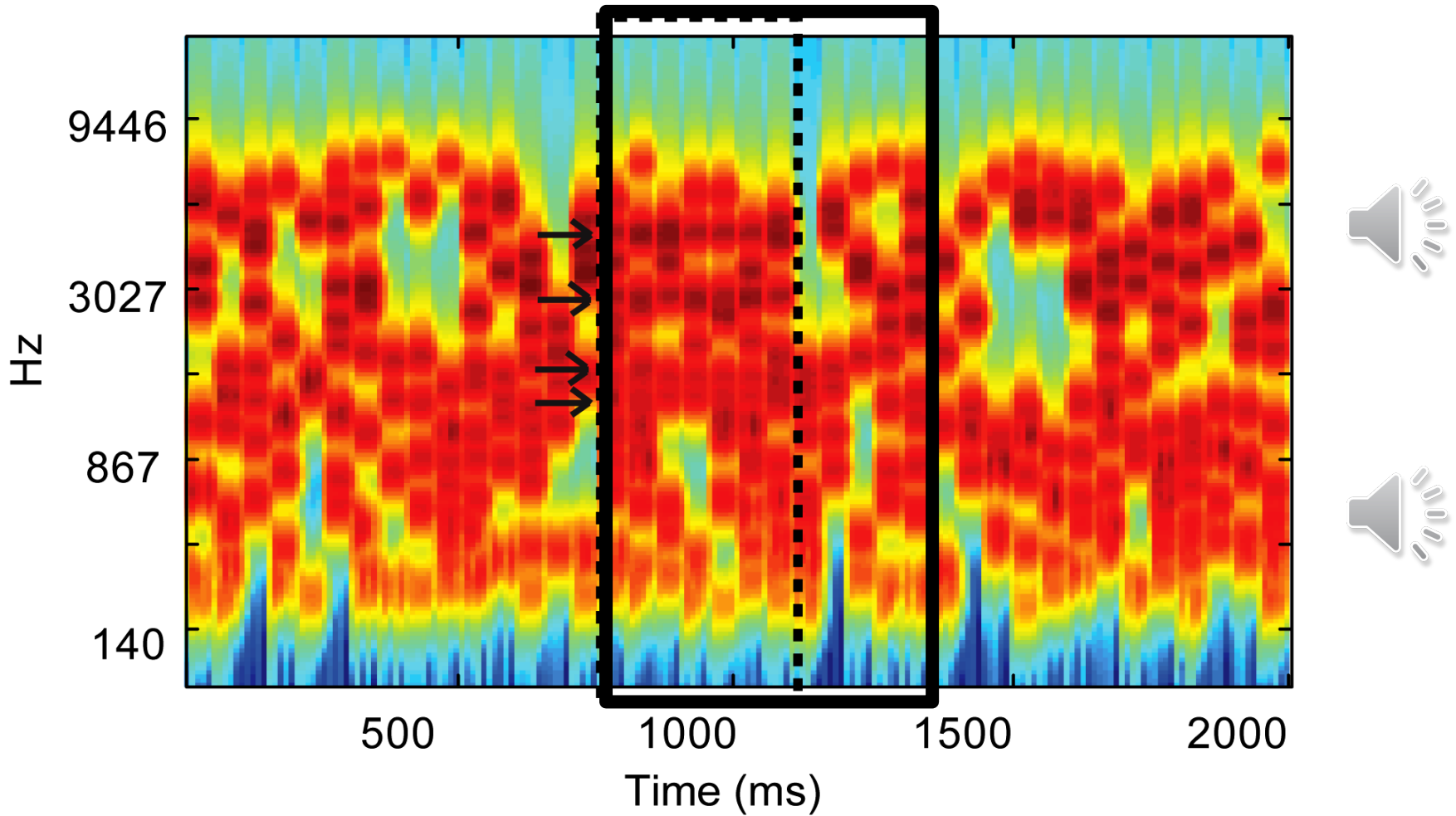**Wellcome Trust Centre for Neuroimaging**

Cocktail party problem

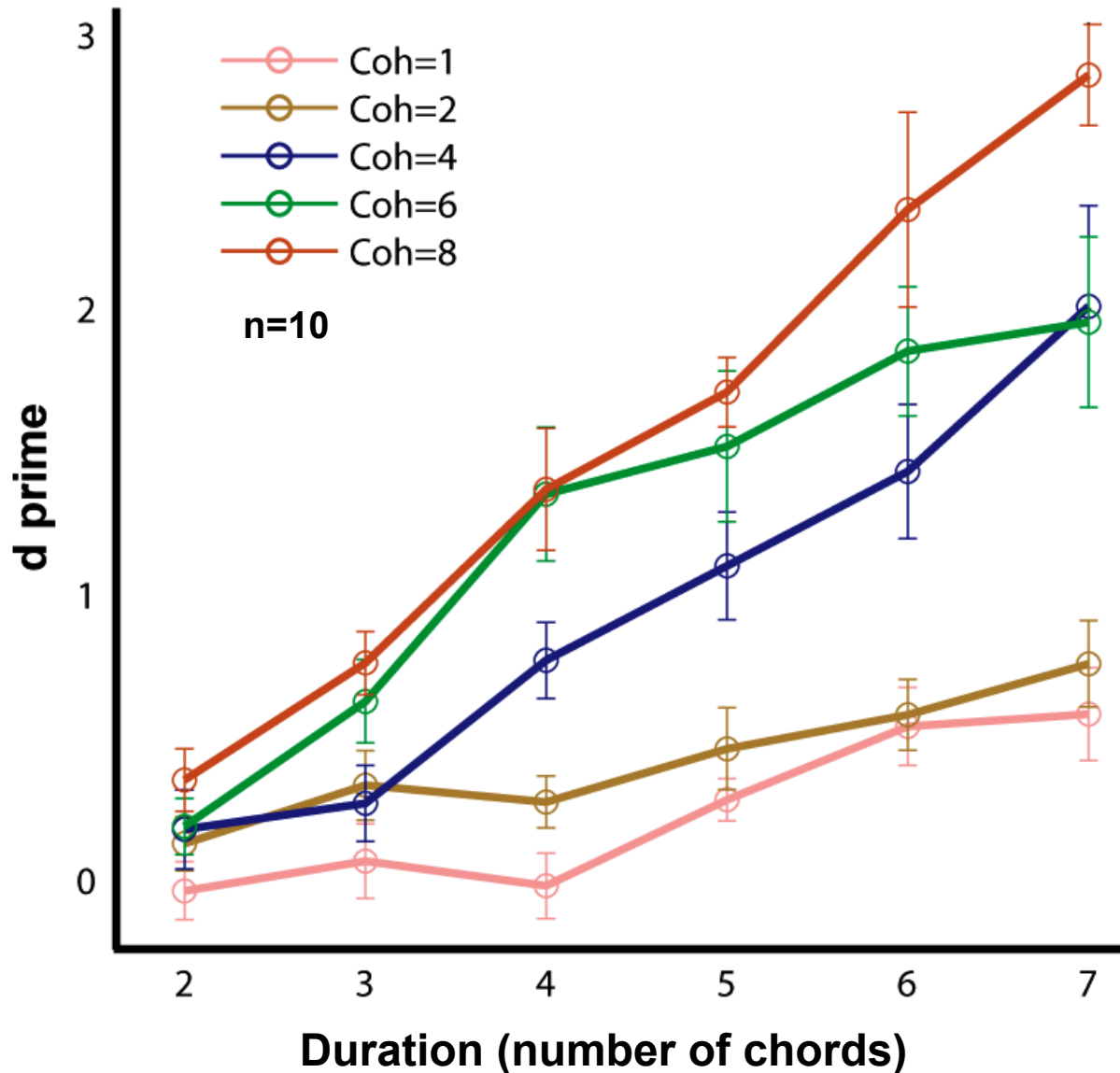*Image from 'Breakfast at Tiffany's'*

Stimulus
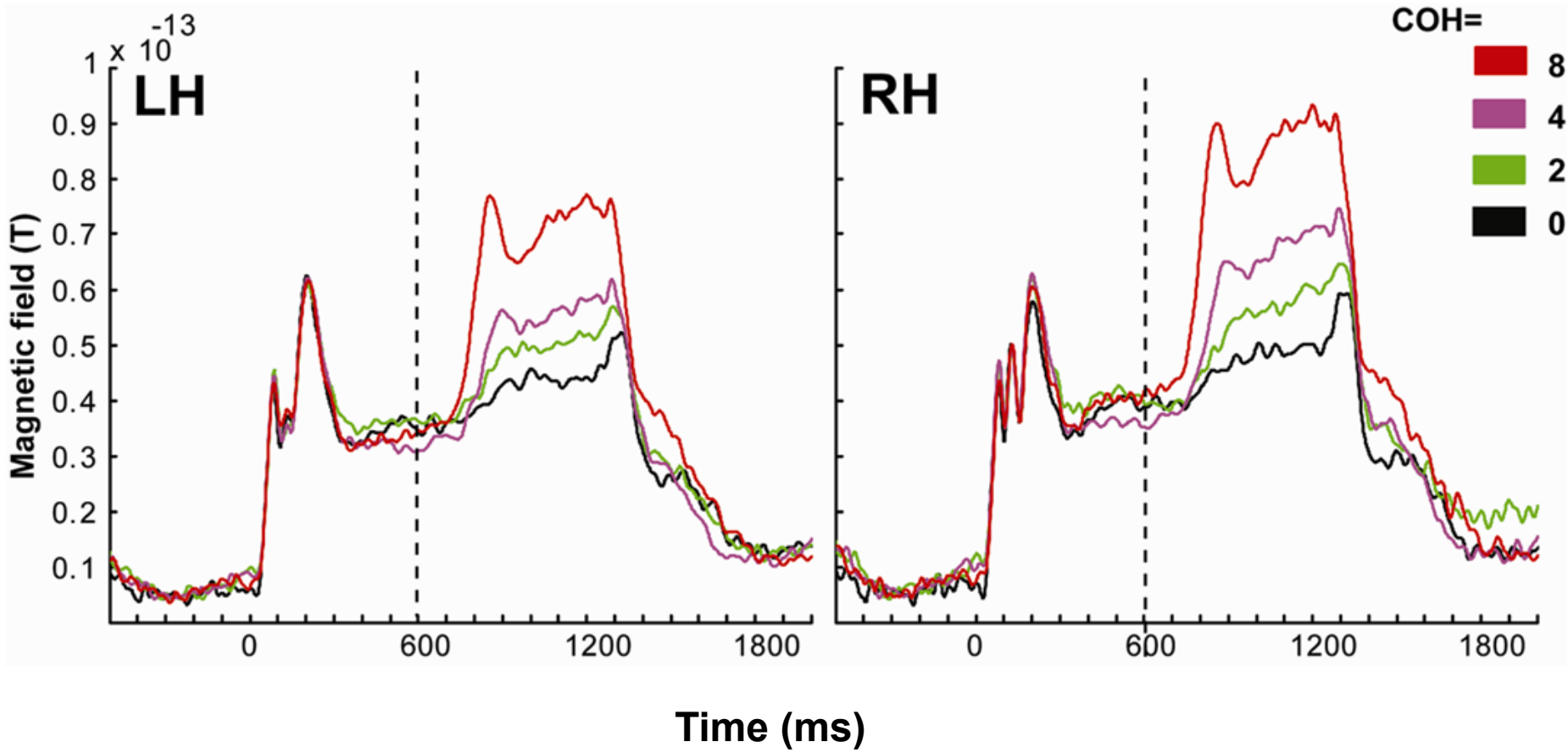
Figure with 'coherence' = 4 and 'duration' = 7
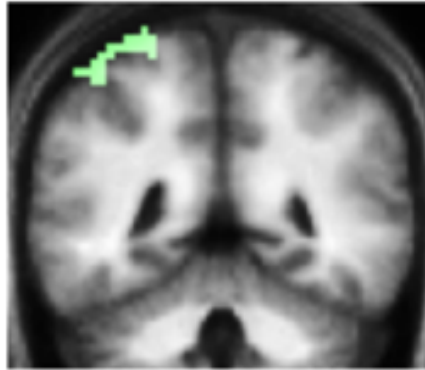
Figure-detection performance

Legend:
- Coh=1
- Coh=2
- Coh=4
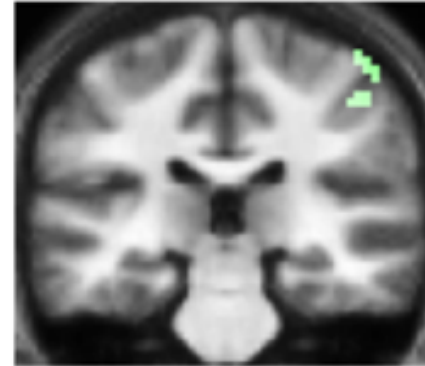- Coh=6
- Coh=8

n=10

y-axis: d prime

x-axis: Duration (number of chords)

Magnetic brain activity using MEG

Teki et al., 2012
Society for Neuroscience

Functional brain activity using MRI

Left IPS

Right IPS

Left IPS
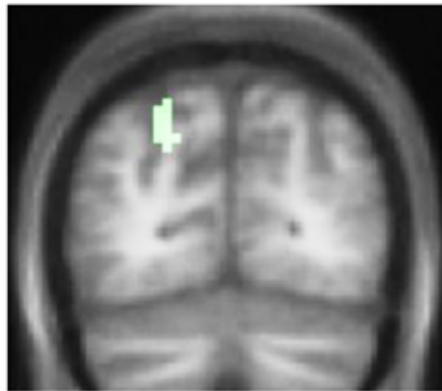
Right IPS
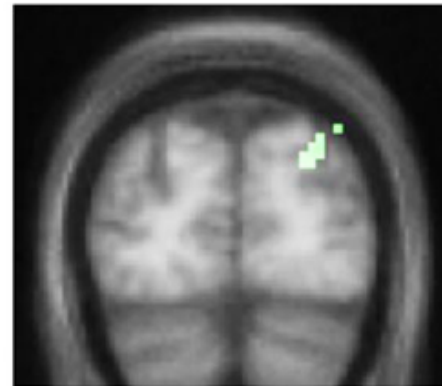
IPS: Intraparietal Sulcus

Applications

Clinical

- Auditory Processing Disorder (NHNN, UK)

- Military blast victims (NIH, USA)

- Dementia

- Hearing impaired and aging population

Crowdsourcing

- Task being developed for The Great Brain

  Experiment app for Apple and Android phones:

  http://www.thegreatbrainexperiment.com/

Acknowledgments

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