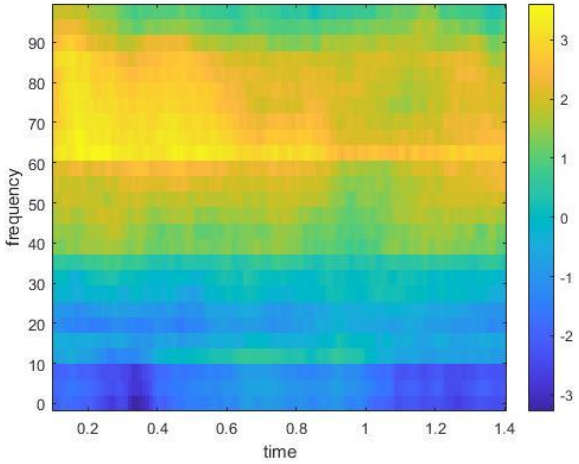
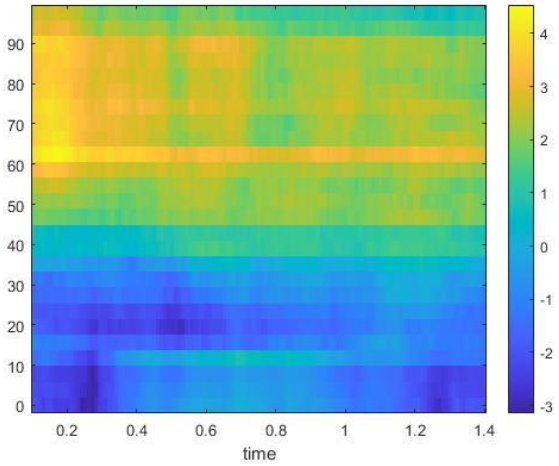
NEURAL CORRELATES OF ATTENTION IN MACAQUE VISUAL CORTEX

BHAVEY WADHWA, UNDER THE GUIDANCE OF
DR. SONIA BALONI RAY

Spiral Motion for 86 Neurons



OutRF Preferred



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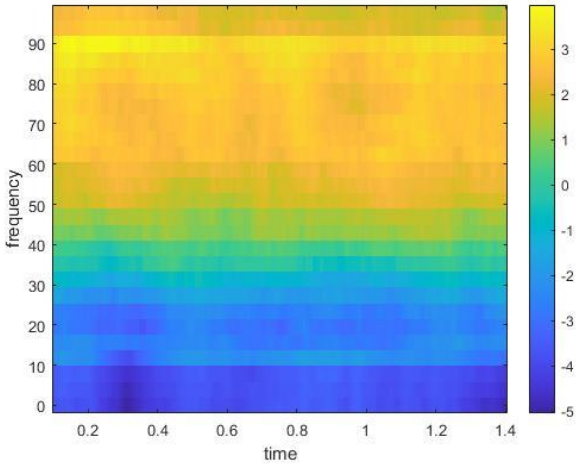

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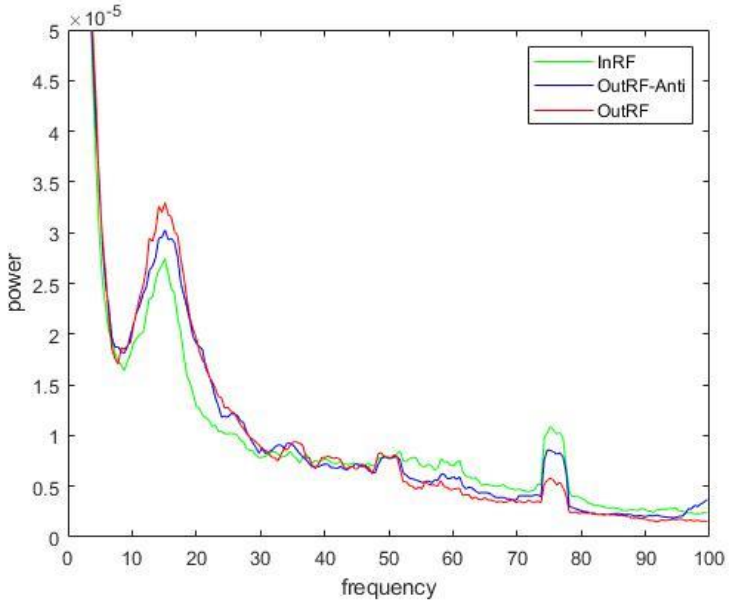
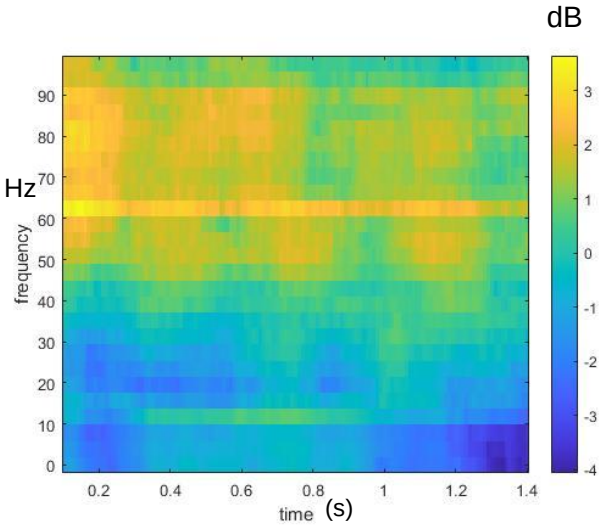


Power Frequency Spectrum

Further Analysis

Restricted to only 34 neurons as for these we had data for both spiral and linear motion stimuli

Spiral Motion



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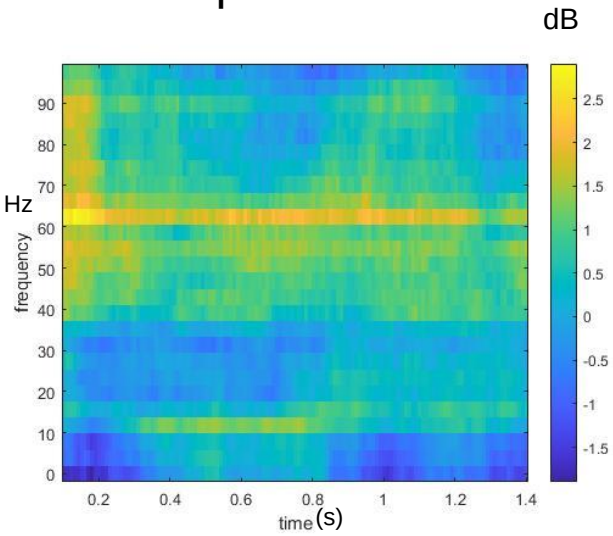

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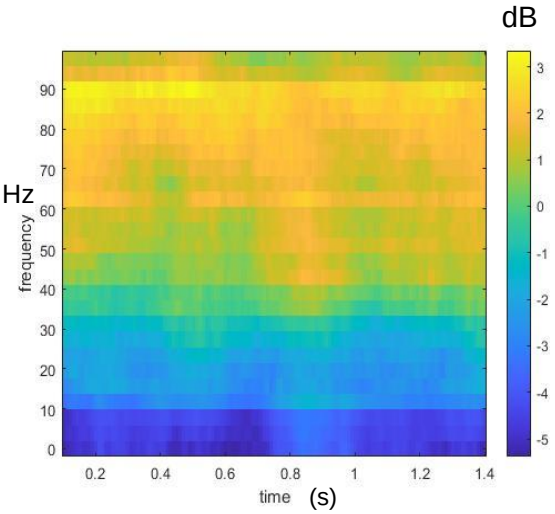

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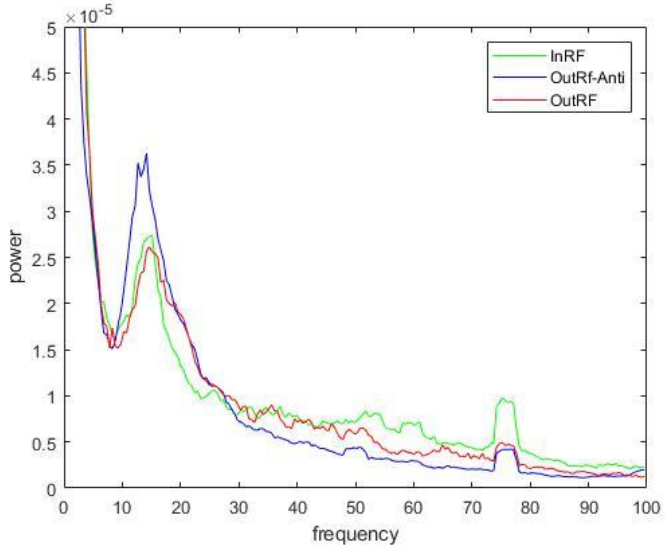
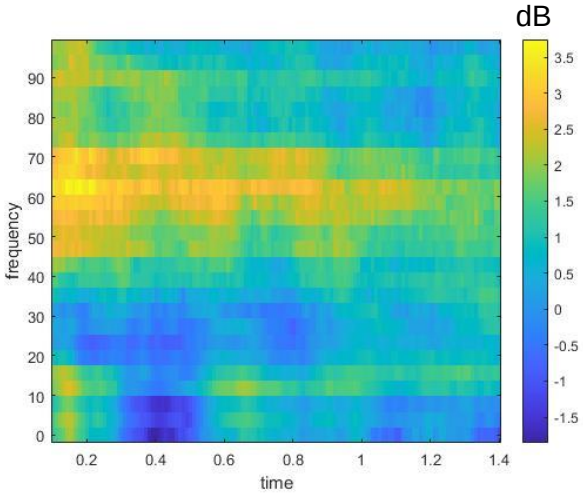


Power Spectrum

Linear Motion



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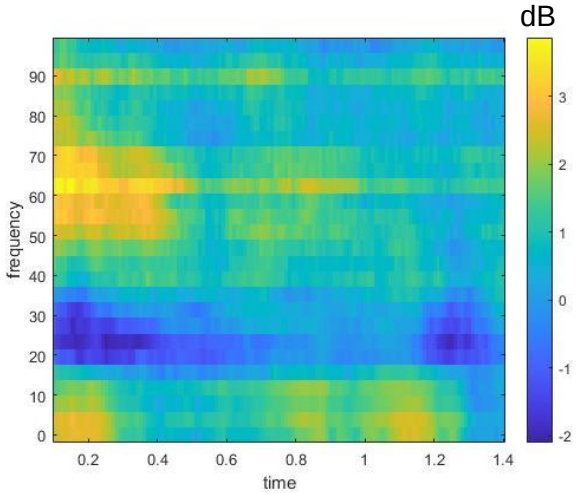
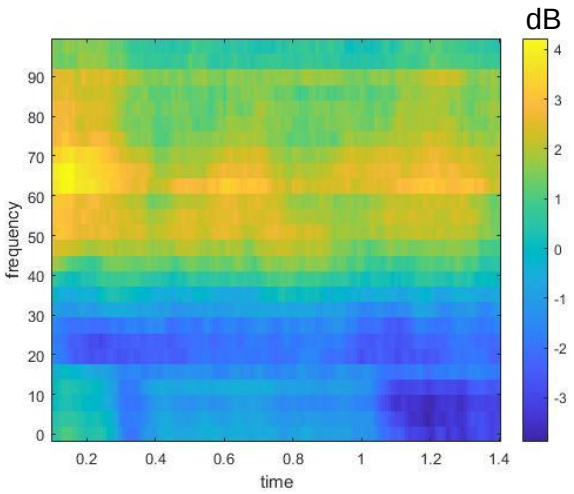
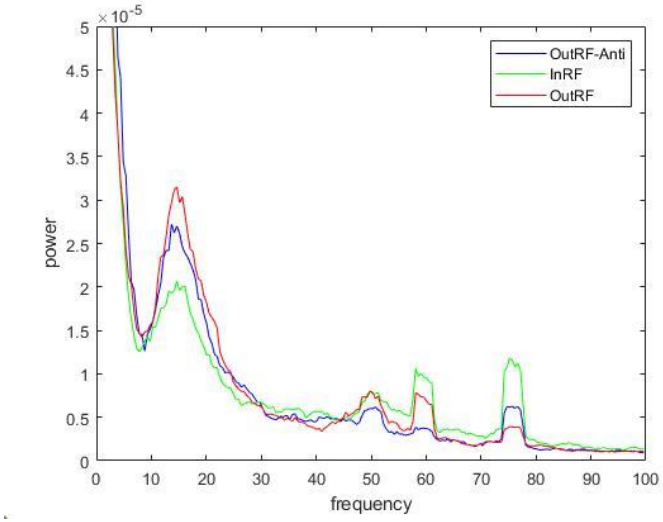


OutRF-Anti Preferred



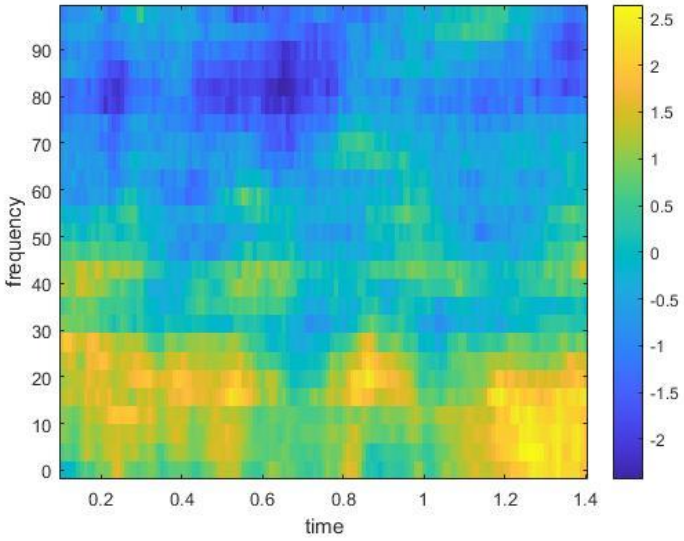
InRF-Preferred



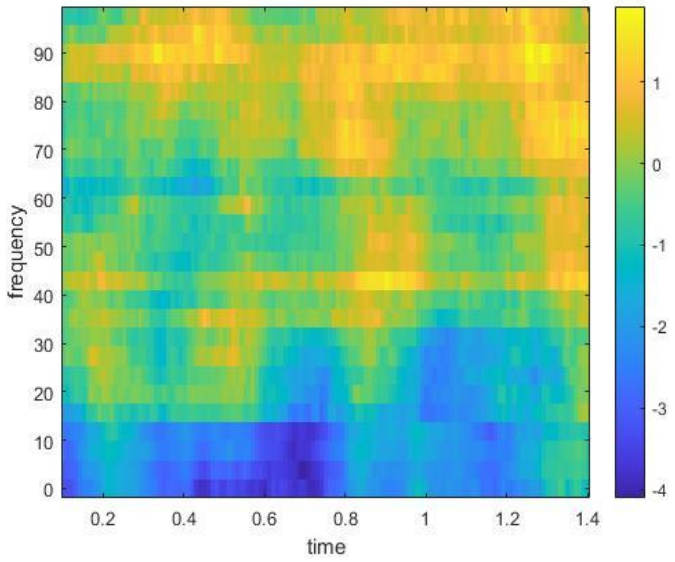
Power Spectrum

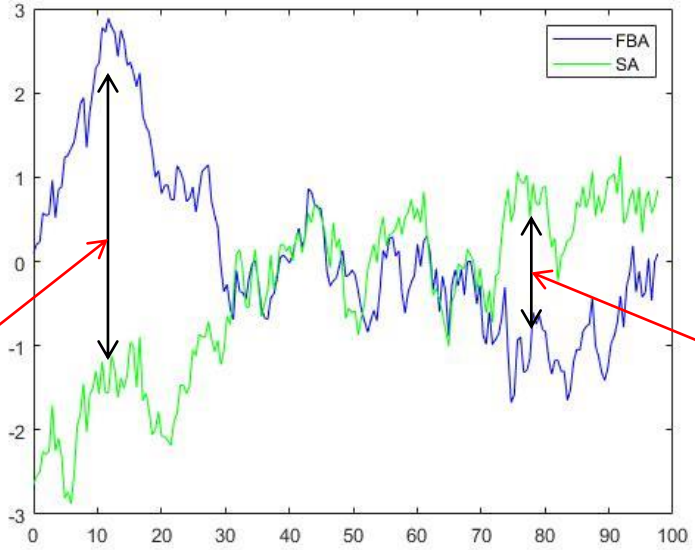
Spatial and Feature Based Attention: SMS

FBA



SA





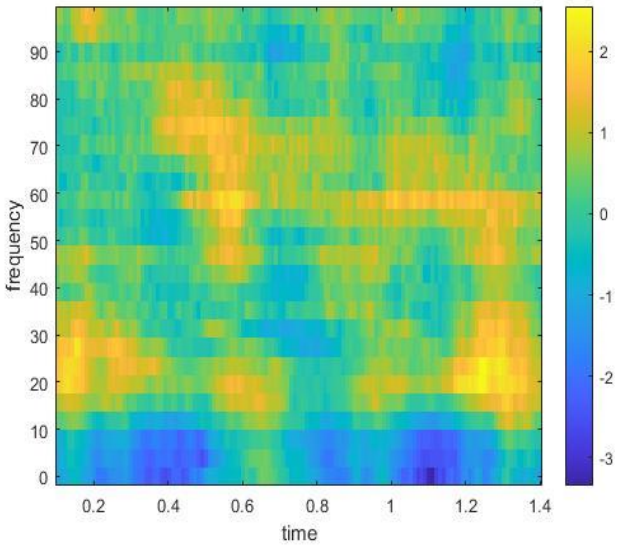
Beta Activity: FBA > SA

Gamma Activity: FBA < SA

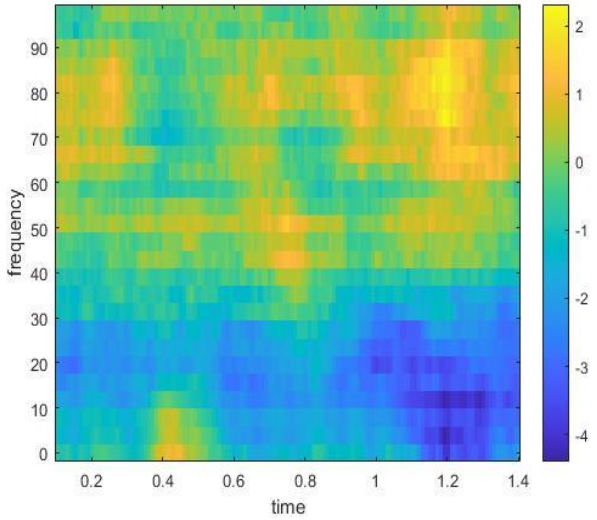
Power-Frequency Spectrum

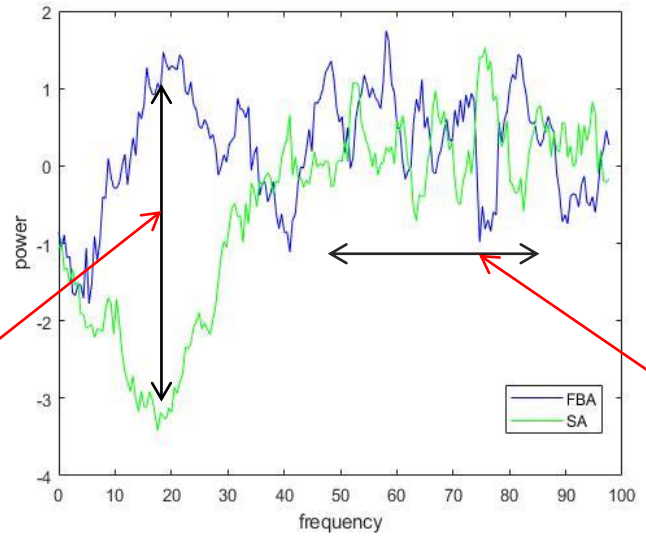
Spatial and Feature Based Attention: LMS

FBA



SA



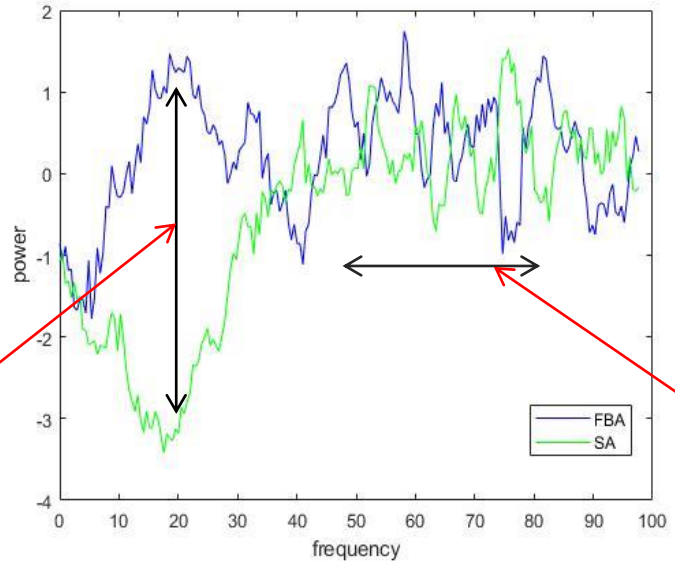


Beta Activity: FBA > SA

No difference in gamma band.
Though, SA shows a rise.

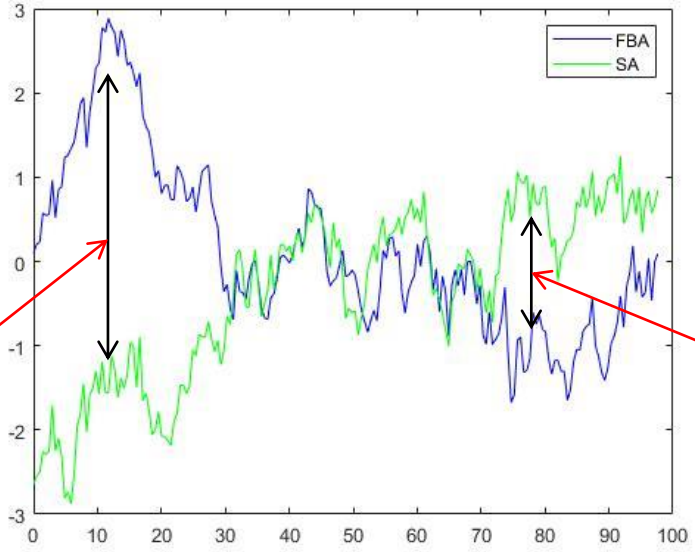
Power-Frequency Spectrum

LMS v/s SMS
Power-Frequency Spectrum



Beta Activity: FBA > SA

No difference in gamma band.
Though, SA shows a rise.

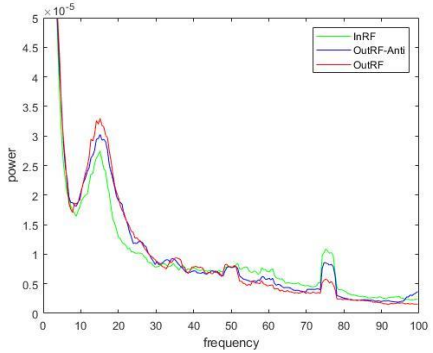


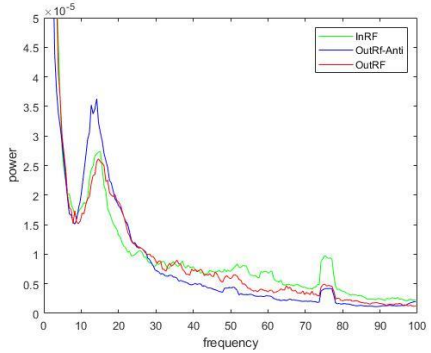
Beta Activity: FBA > SA

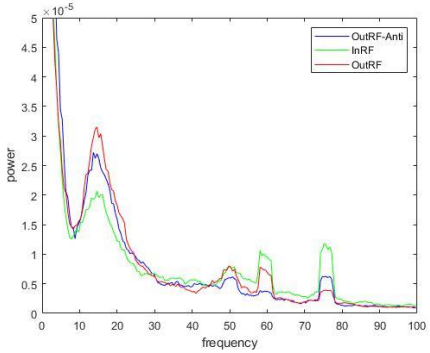
Gamma Activity: FBA < SA

Conclusions

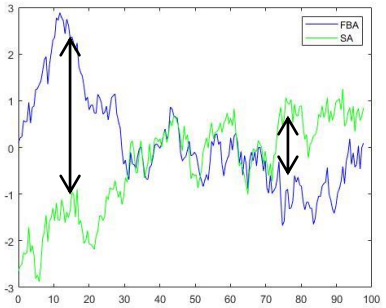
- High Power in Beta and Gamma Band



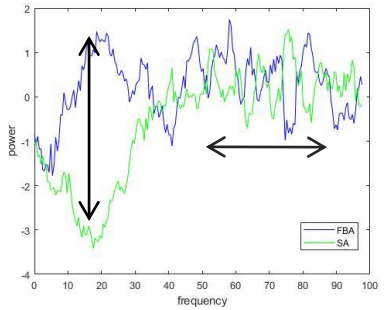




- Spiral motion stimuli:
  Spatial & feature-based attention associated with preferential modulation in gamma and beta band respectively.



- Linear Motion Stimuli
  Spatial & feature-based attention associated with preferential modulation in gamma and beta band respectively.



Roadblocks

1. Denoising the data
2. Less number of trials