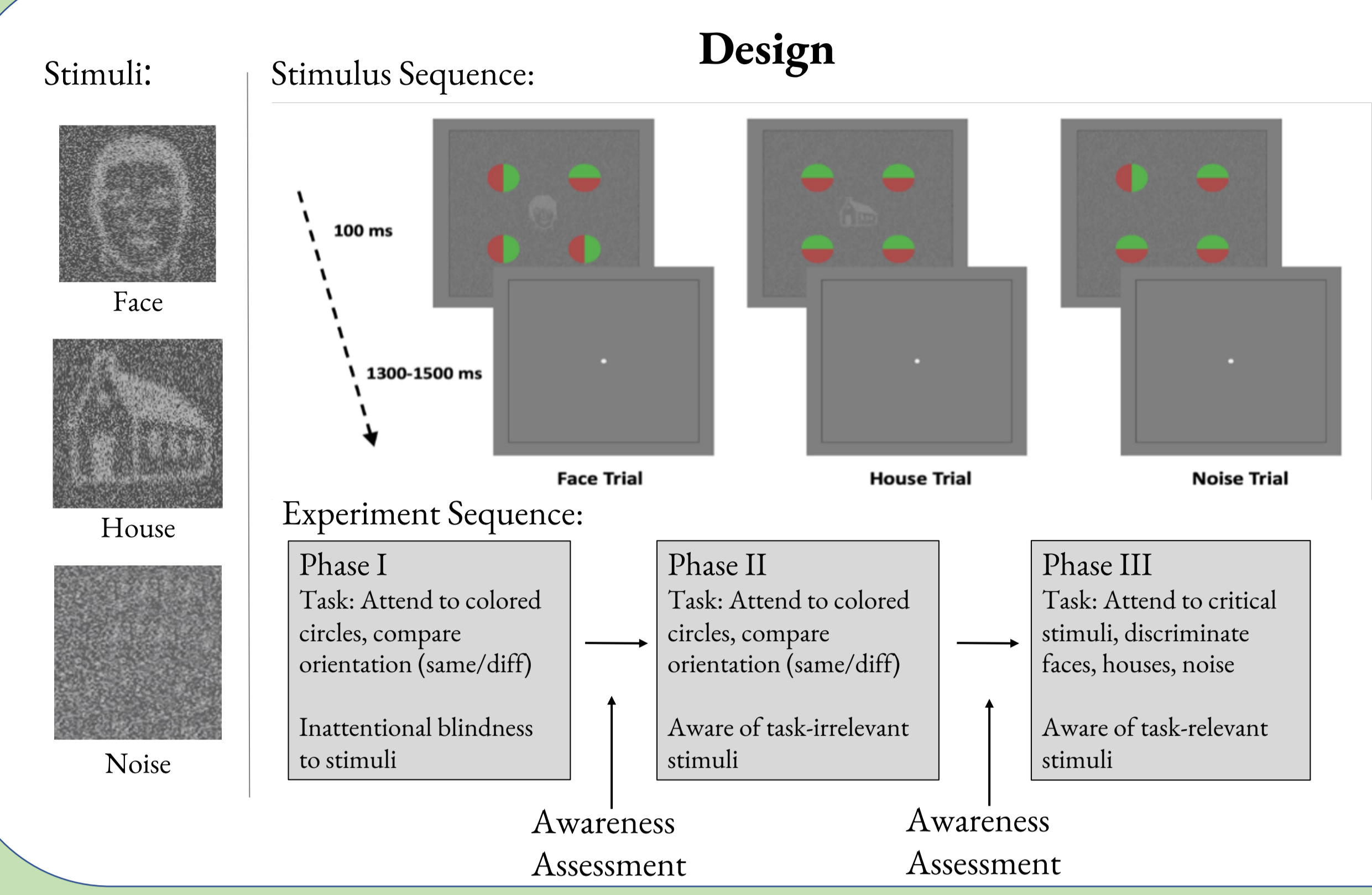


- We use Inattentional Blindness (IB) [1] in the context of a “no-report” paradigm [2] to investigate the neural correlates of consciousness (NCCs).
- 3-phase IB paradigms allow for isolation NCCs from task-specific activity [3].
- Timing and topography of candidate NCCs are currently debated [4].

## Introduction

- We used four different analyses of scalp EEG data to help inform this debate:
  - Event-related potentials (ERPs)
  - Event-related spectral perturbations (ERSPs)
  - Signal stability analyses
  - Pattern classification with temporal generalization



## Methods

Data from two labs:  
 Reed (N=42)  
 Tel Aviv (N=30)  
 ~45% of participants inattentionally blind

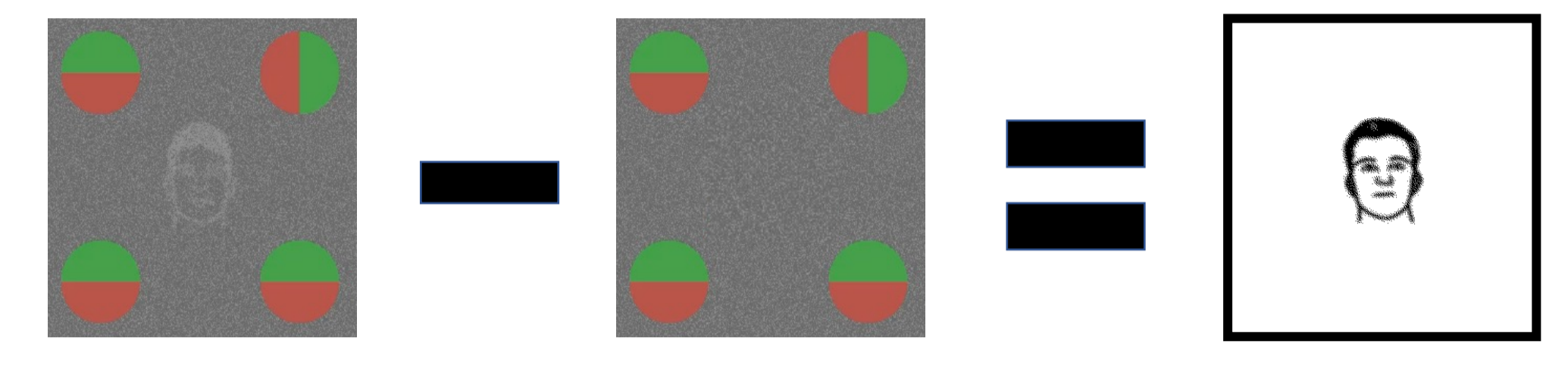
# of trials per phase:

- 66.6% stims, 33.3% blanks
- 288 trials of each type (faces, houses, blanks)
- Stims physically identical across phases

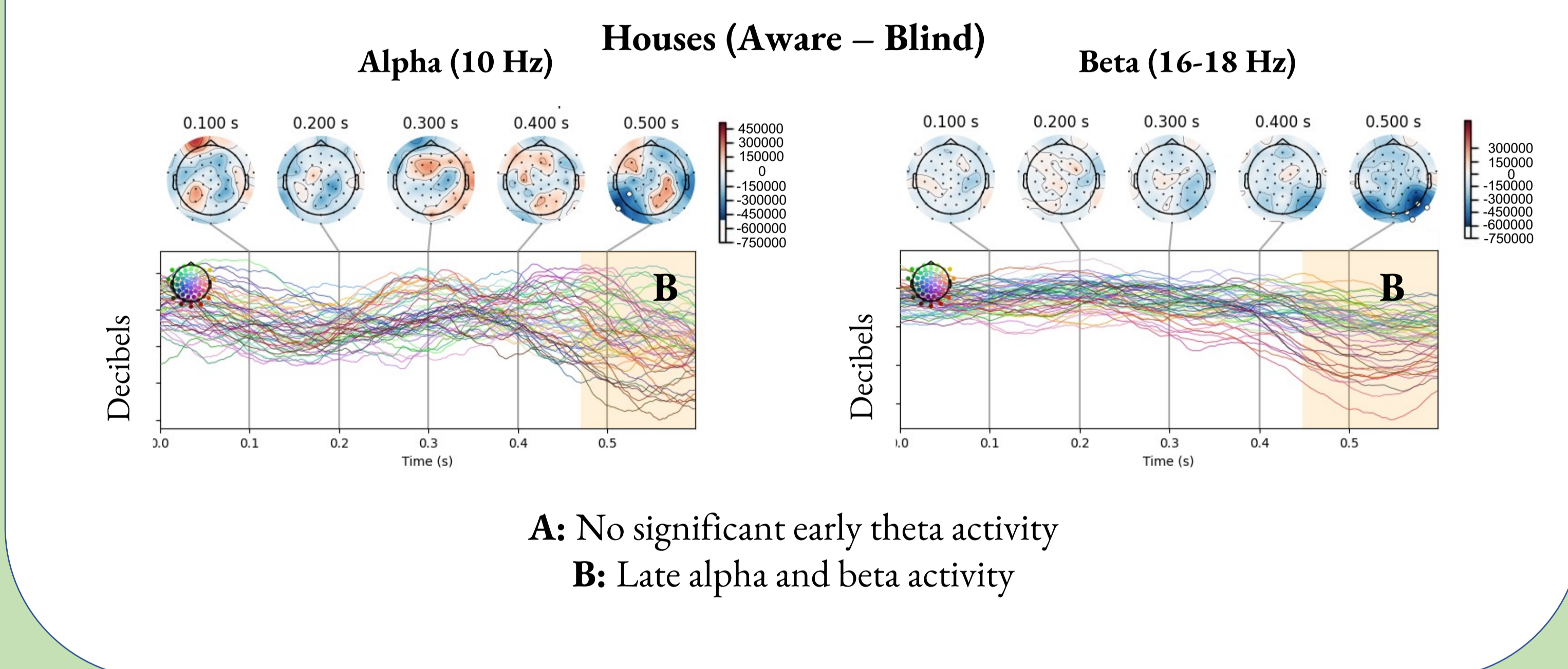
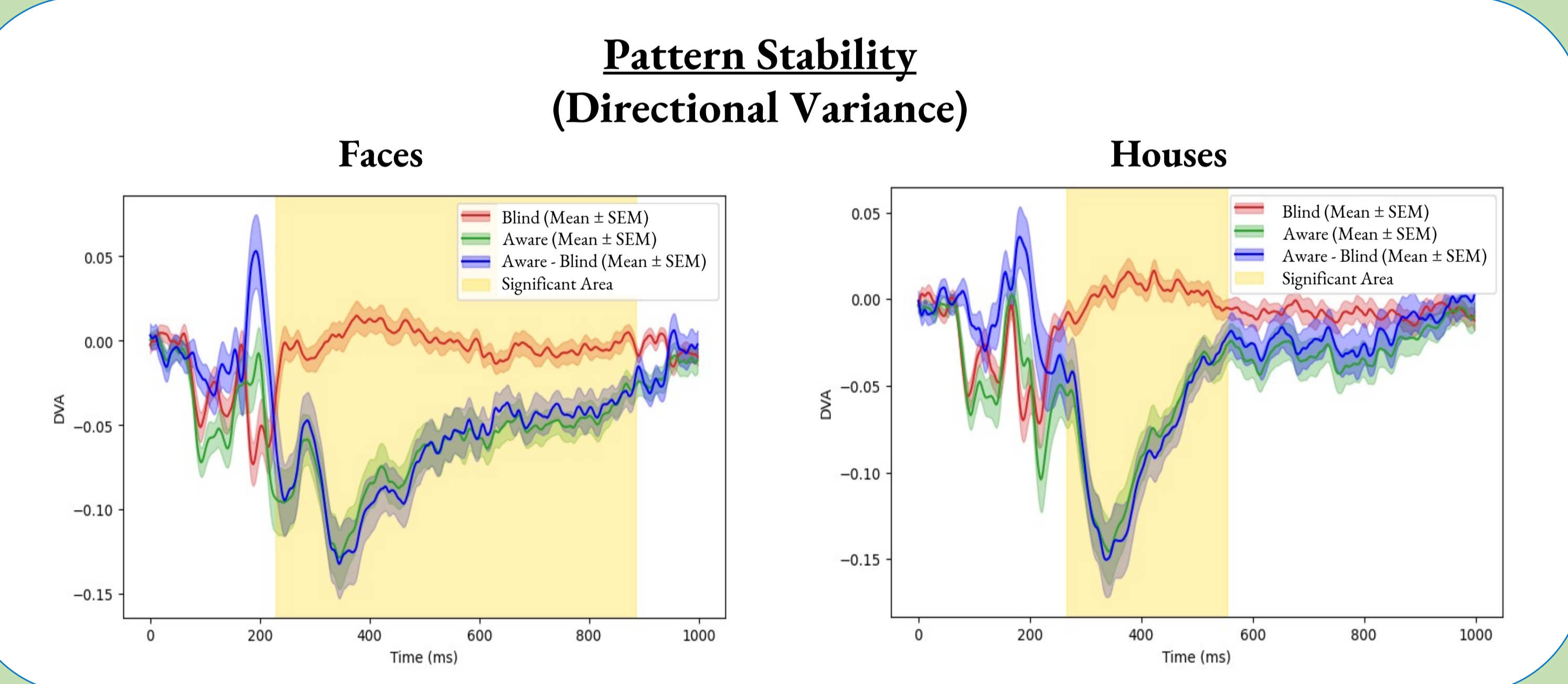
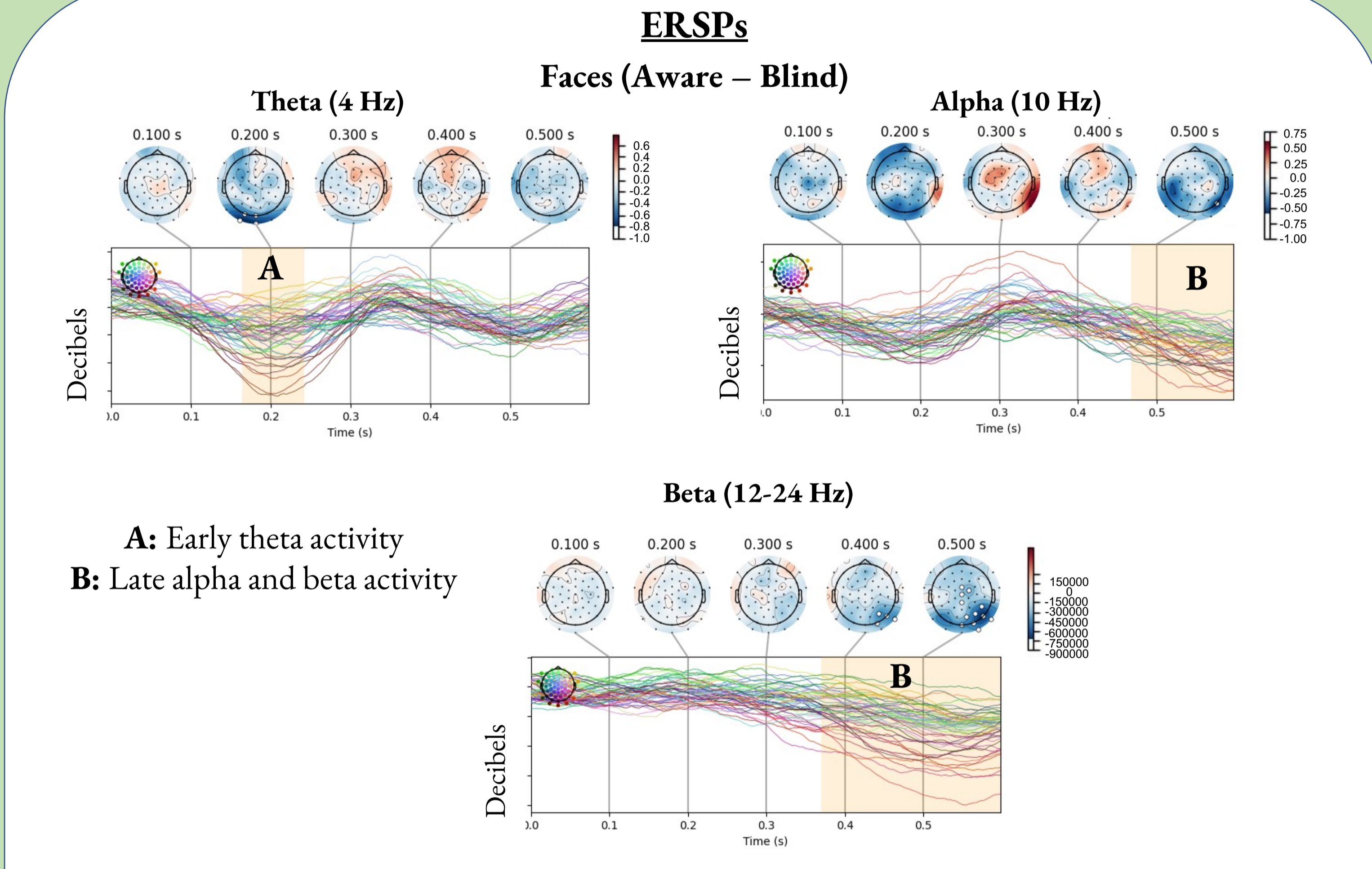
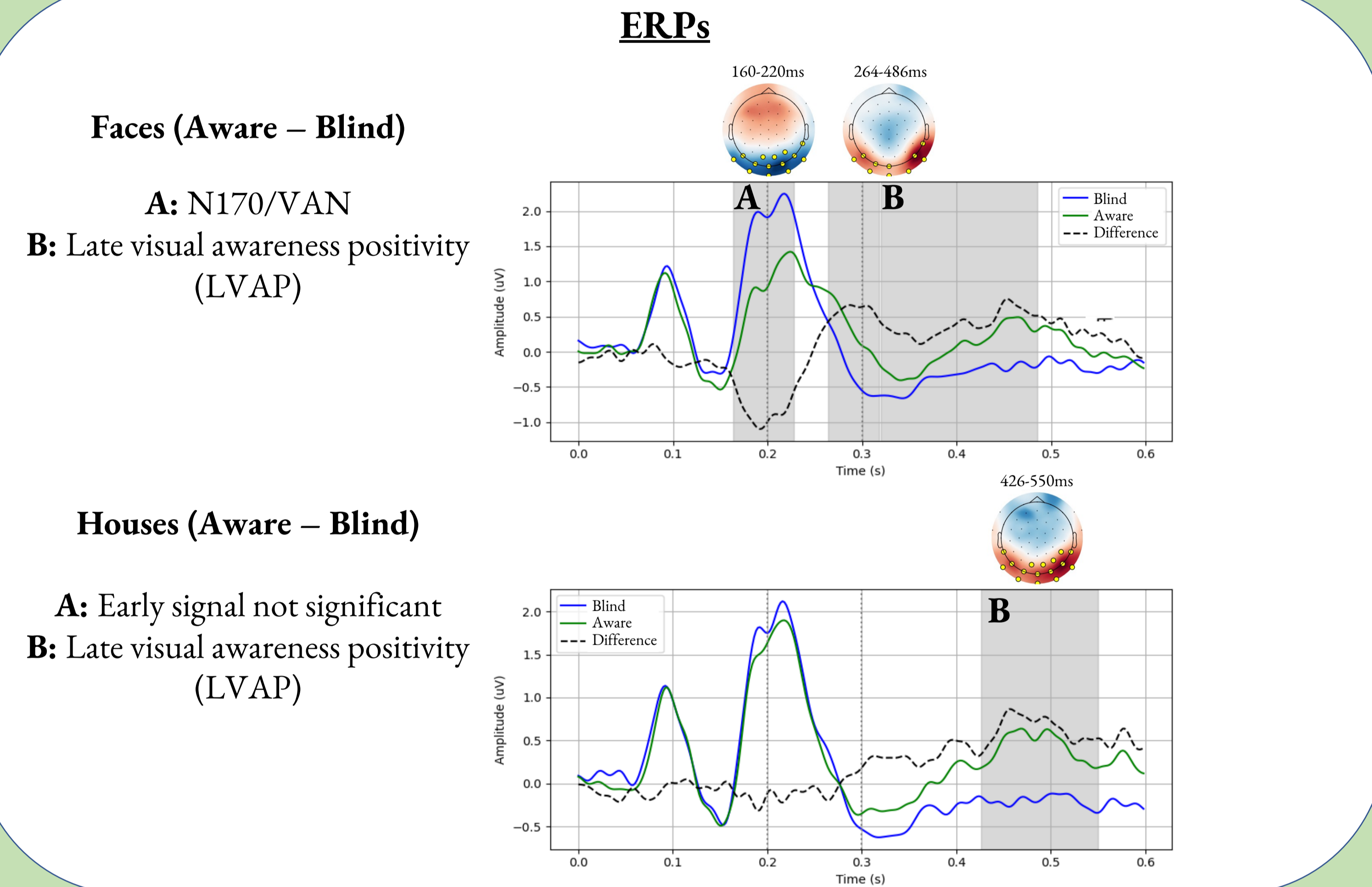
## Analysis

**Goal:** identify differences in brain activity between noticing (aware) and not noticing (blind) face and house stimuli

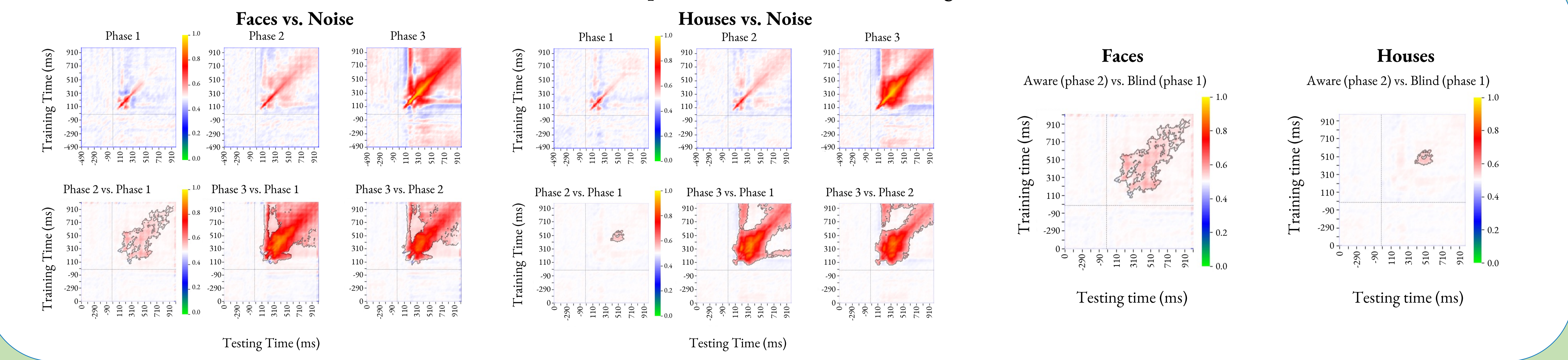
**Strategy:** subtract noise trials from face and house trials within each phase:



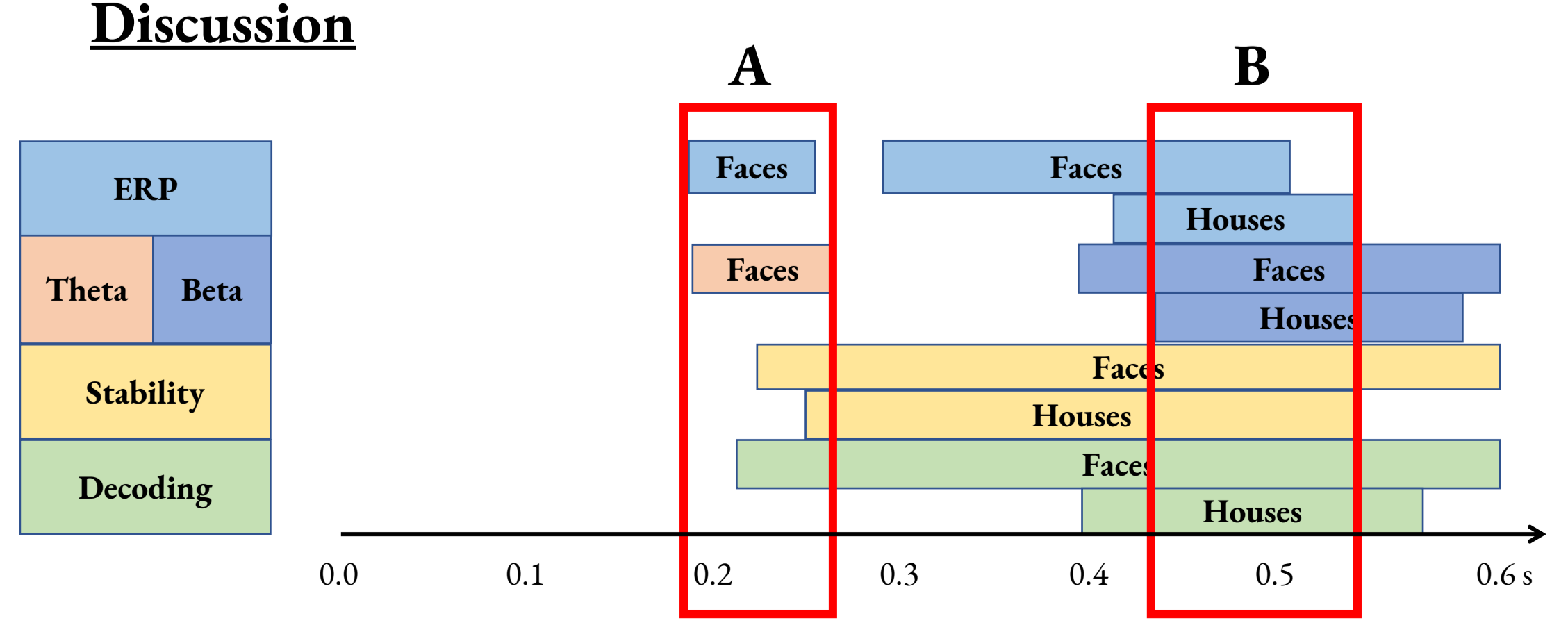
**Main Contrast:** Phase 2 (aware, task irrelevant) vs. Phase 1 (blind, task irrelevant)



## Temporal Generalization of Decoding



- ## Discussion
- Possible early signal (A) of awareness, which may be stimulus specific (N170) or just stronger for faces (VAN)
  - Late signal (B) was present for both stimuli, and may be more generally related to awareness:
    - LVAP, Beta desynchronization, Stability, Decoding
    - Results replicated in 30 participants in an independent lab (Tel Aviv University)



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