



# Effect of prior knowledge on visual localization of tactile stimulation

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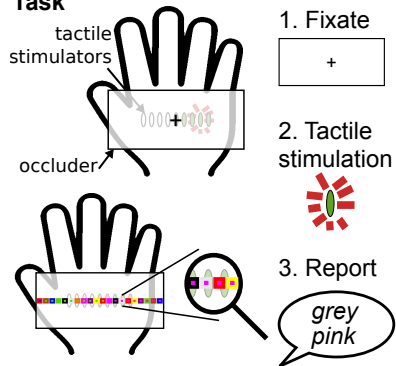
## Introduction

Do humans systematically integrate

- stimulus properties (uncertainty)
- prior knowledge ("Set Prior")
- gaze direction ("Center Prior")

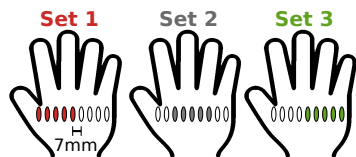
when localizing a tactile stimulus relative to a visual reference?

## Task



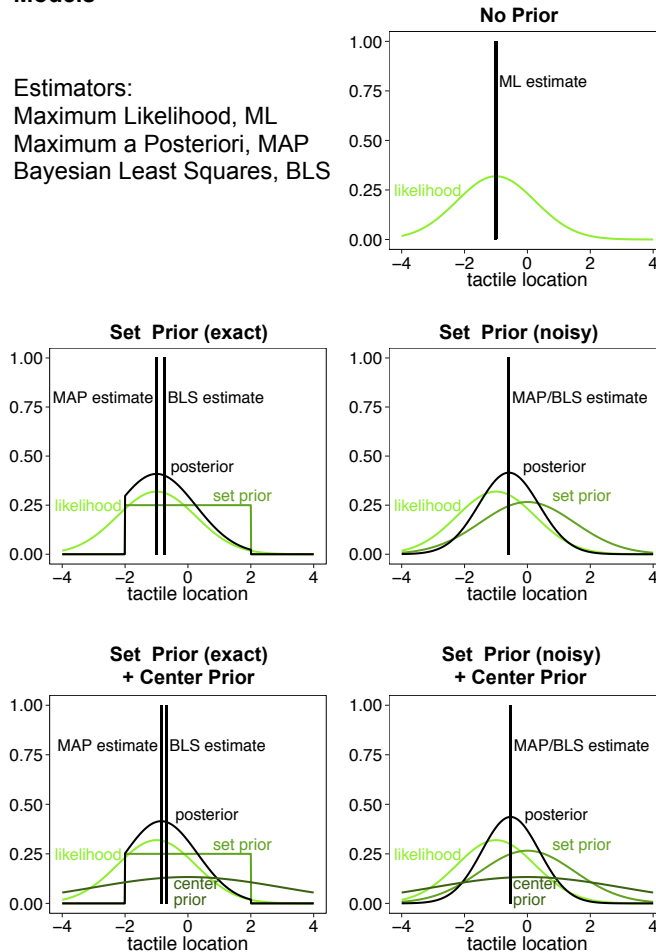
## Conditions

3 separately tested sets of location  
150 training trials per set  
weak or strong tactile stimuli

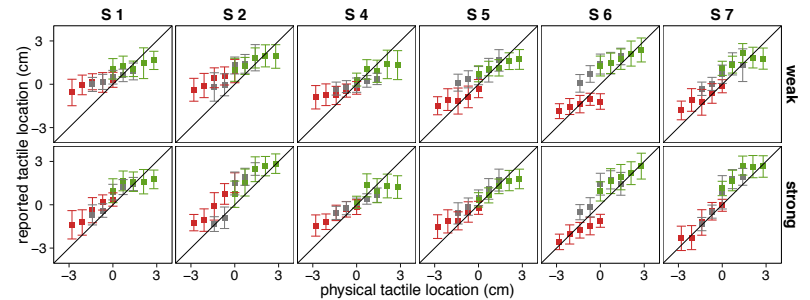


## Models

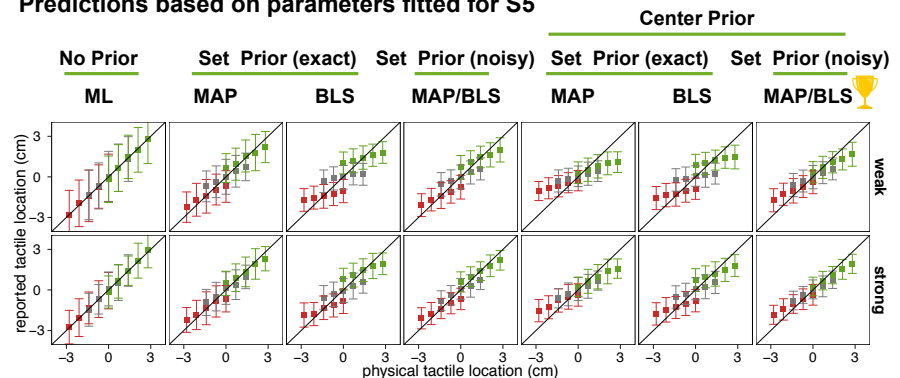
Estimators:  
Maximum Likelihood, ML  
Maximum a Posteriori, MAP  
Bayesian Least Squares, BLS



## Observed Data



## Predictions based on parameters fitted for S5



🏆 Model with the highest Akaike weight averaged across participants

## Conclusion

Humans integrate stimulus properties, prior knowledge and, to varying extent, gaze direction when localizing touch relative to a visual reference.

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