μ_i δ_i

μ_i^A σ_i^A μ_i^B σ_i^B

θ_i^A θ_i^B

y_i^A y_i^B

n^A n^B

i stimuli (signal or noise)

$$\mu_h \sim \text{Uniform}(0.5, 1)$$

$$\mu_{fa} \sim \text{Uniform}(0, 0.5)$$

$$\sim \text{Uniform}(0, 0.5)$$

$$\mu_h^A \leftarrow \mu_h + \frac{\delta}{2}$$

$$\mu_h^B \leftarrow \mu_h - \frac{\delta}{2}$$

$$\mu_{fa}^A \leftarrow \mu_{fa} - \frac{\delta}{2}$$

$$\mu_{fa}^B \leftarrow \mu_{fa} + \frac{\delta}{2}$$

$$\sigma_i^A, \sigma_i^B \sim \text{Uniform}(0, 1)$$

$$\mu_i^A \sim \text{Gaussian}(\mu_i^A, \sigma_i^A)$$

$$\mu_i^B \sim \text{Gaussian}(\mu_i^B, \sigma_i^B)$$

$$y_i^A \sim \text{Binomial}(\theta_i^A, n^A)$$

$$y_i^B \sim \text{Binomial}(\theta_i^B, n^B)$$