

$\kappa_1, \dots, \kappa_m$ i.i.d. $N(0, 1)$

$$\underline{\kappa} = (\kappa_1, \dots, \kappa_m)$$

$$\underline{\kappa} | \mathcal{Q} \sim \prod_{i=1}^m N(0, 1) \quad (N^{\otimes m}(0, 1))$$

$$\mathcal{Q} \sim U_{[-3, 3]} \leftarrow$$

$$\pi(\mathcal{Q} | \underline{\kappa}) \propto p(\mathcal{Q} | \underline{\kappa}) \pi(\mathcal{Q})$$

$$\pi(\mathcal{Q} | \underline{\kappa}) \propto \prod_{i=1}^m \exp\left(-\frac{1}{2}(\kappa_i - \mathcal{Q})^2\right) \frac{1}{\sigma} \mathbb{1}_{[-3, 3]}(\mathcal{Q})$$

$$\pi(\mathcal{Q} | \underline{\kappa}) \propto \exp\left(-\frac{1}{2} \sum_{i=1}^m (\kappa_i - \mathcal{Q})^2\right) \mathbb{1}_{[-3, 3]}(\mathcal{Q})$$

$$\int \mathbb{1}_{[-3, 3]}(\mathcal{Q}) \pi(\mathcal{Q} | \underline{\kappa}) d\mathcal{Q}$$

$$\mathbb{E}^{\pi}(\theta | \underline{\kappa}) = \frac{1}{N} \sum_{i=1}^N \theta^{(i)}$$

~~$$\int_{-3}^3 \theta e^{-\frac{1}{2} \sum_{i=1}^N (\kappa_i - \theta)^2} d\theta$$~~

~~$$\int_{-3}^3 e^{-\frac{1}{2} \sum_{i=1}^N (\kappa_i - \theta)^2} d\theta$$~~

$\theta^{(1)}$, ... , $\theta^{(N)}$
 nur von $\pi(\theta | \underline{\kappa})$