

Deterministic EKI

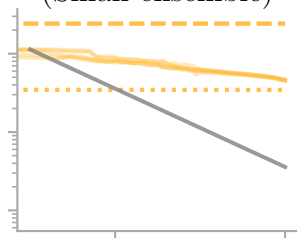
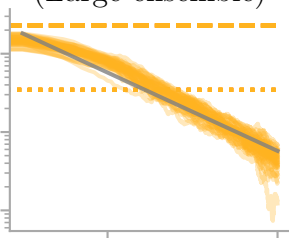
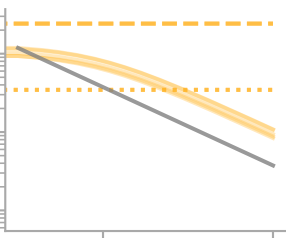
Stochastic EKI

Measurement space

misfit

(Large ensemble)

(Small ensemble)



$$\| \mathcal{P}_r \theta_i^{(j)} \|$$

$$\| \mathcal{Q}_r \theta_i^{(j)} \|$$

$$\| \mathcal{N}_r \theta_i^{(j)} \|$$

$$\| \mathbb{P}_r \omega_i^{(j)} \|$$

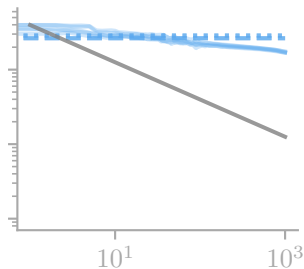
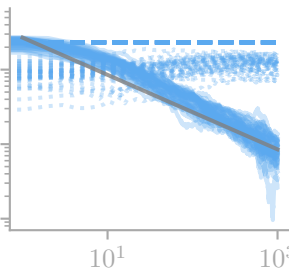
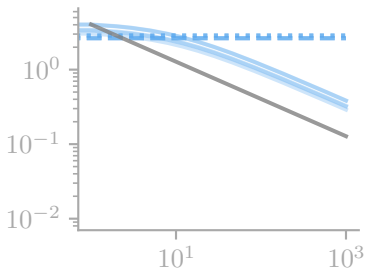
$$\| \mathbb{Q}_r \omega_i^{(j)} \|$$

$$\| \mathbb{N}_r \omega_i^{(j)} \|$$

$1/\sqrt{i}$ rate

State space

error



Iteration number i