

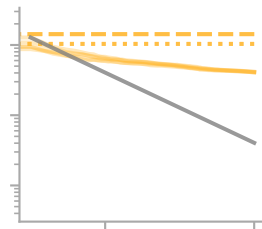
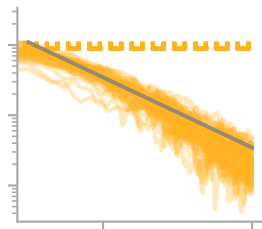
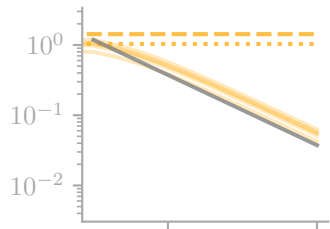
# Deterministic EKI

# Stochastic EKI

## (Large ensemble)

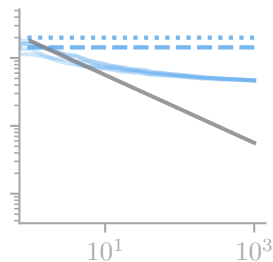
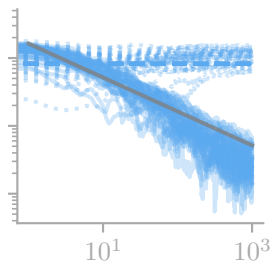
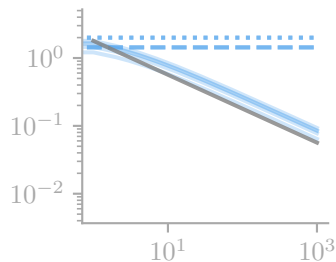
## (Small ensemble)

Measurement space  
misfit



$\| \mathcal{P}_r \theta_i^{(j)} \|$   
 $\| \mathcal{Q}_r \theta_i^{(j)} \|$   
 $\| \mathcal{N}_r \theta_i^{(j)} \|$   
 $1/\sqrt{i}$  rate

State space  
error



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

Iteration number  $i$