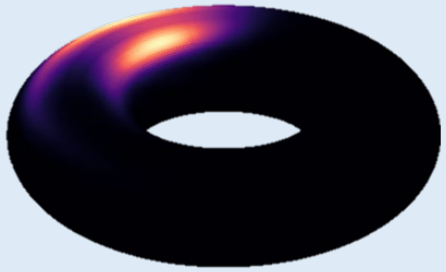
Initial Uncertainty



$\rho(x;0)$

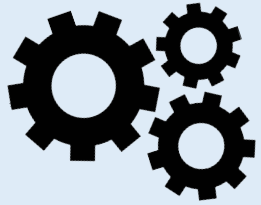
Hyperbolic Cross

$T_m^d \subset L^2$

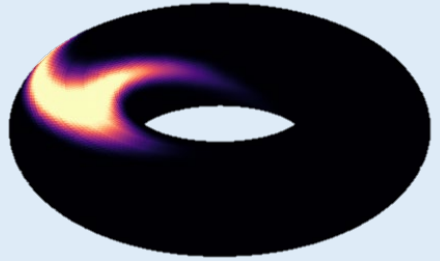
Spectral Discretization

$$\psi_m = \sum_{k \in T_m^d} z_k(t) e^{ikx}$$

ODE Solver



Propagated Uncertainty



$\rho(x;t)$

Uncertainty Quantification

$\|\rho - \rho_m\|_1 \leq \epsilon$