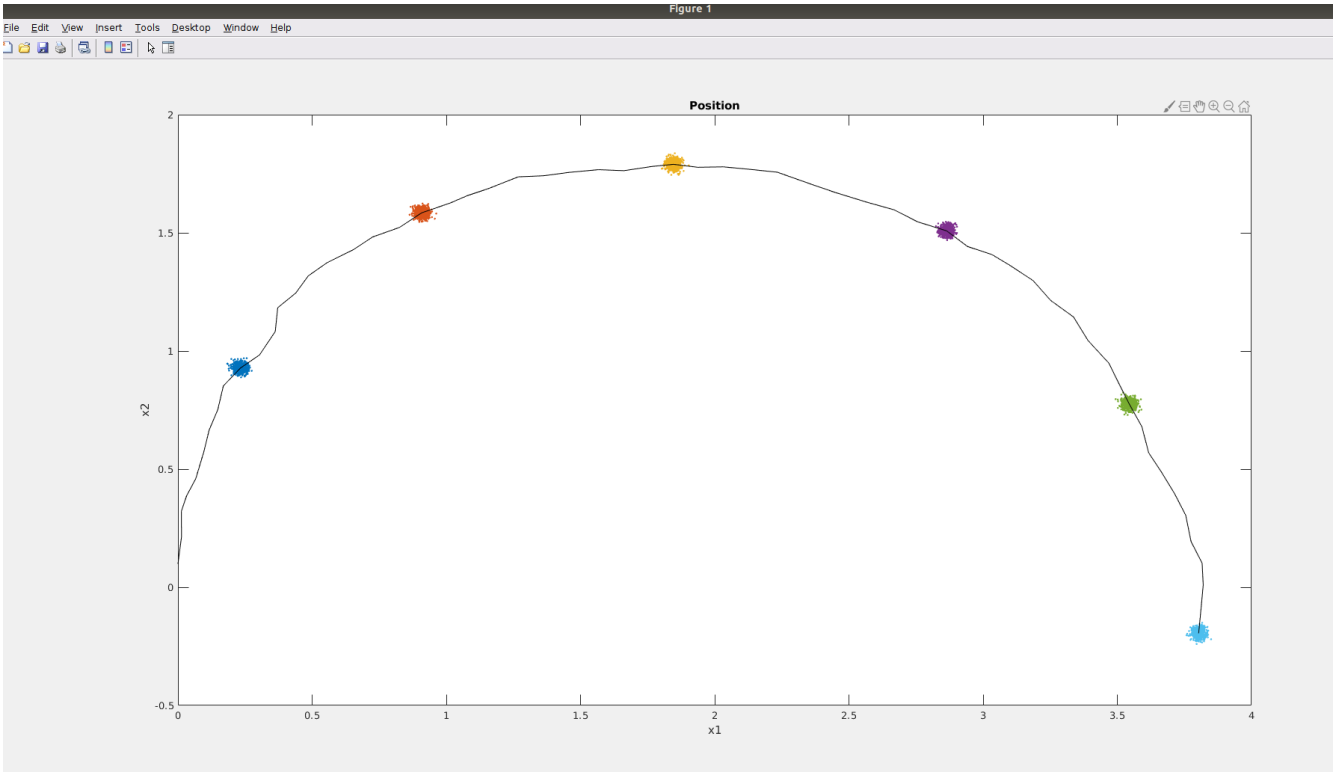
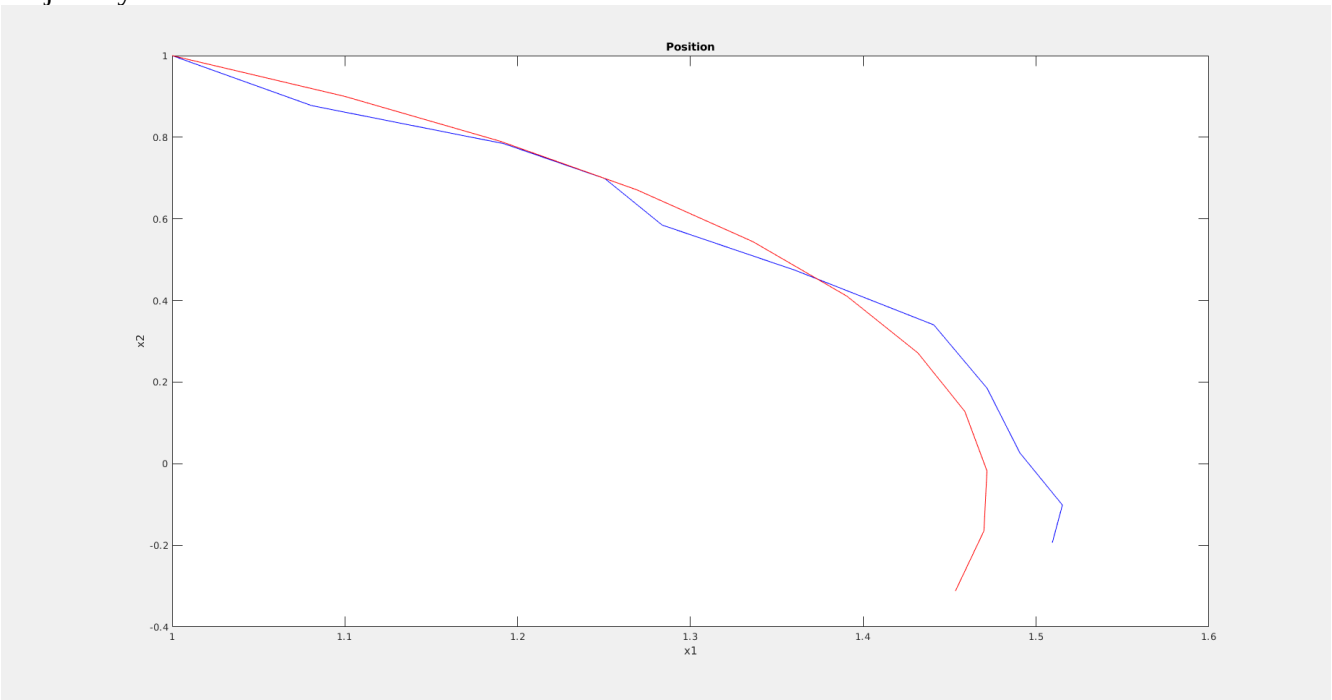
Mark Dyehouse
Active Learning
HW3

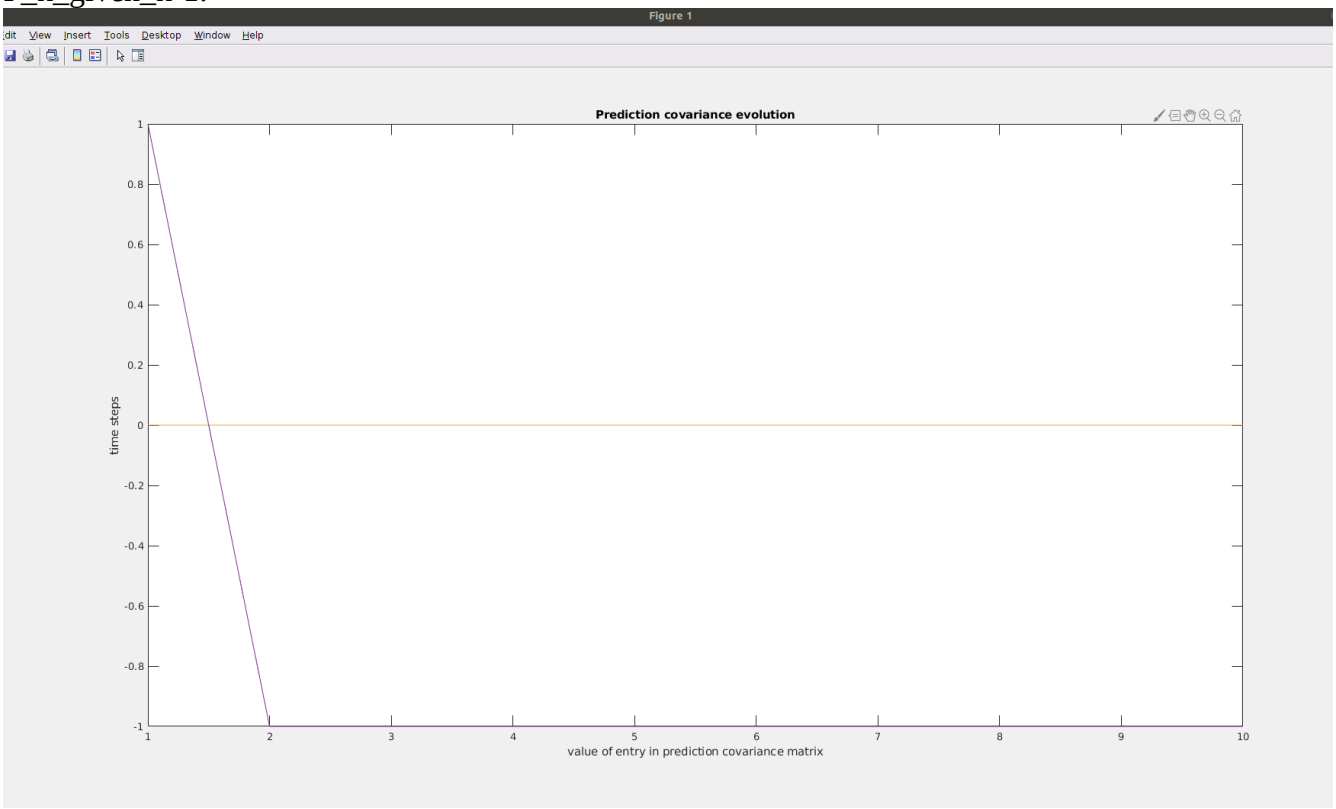
1)
Particle Filter



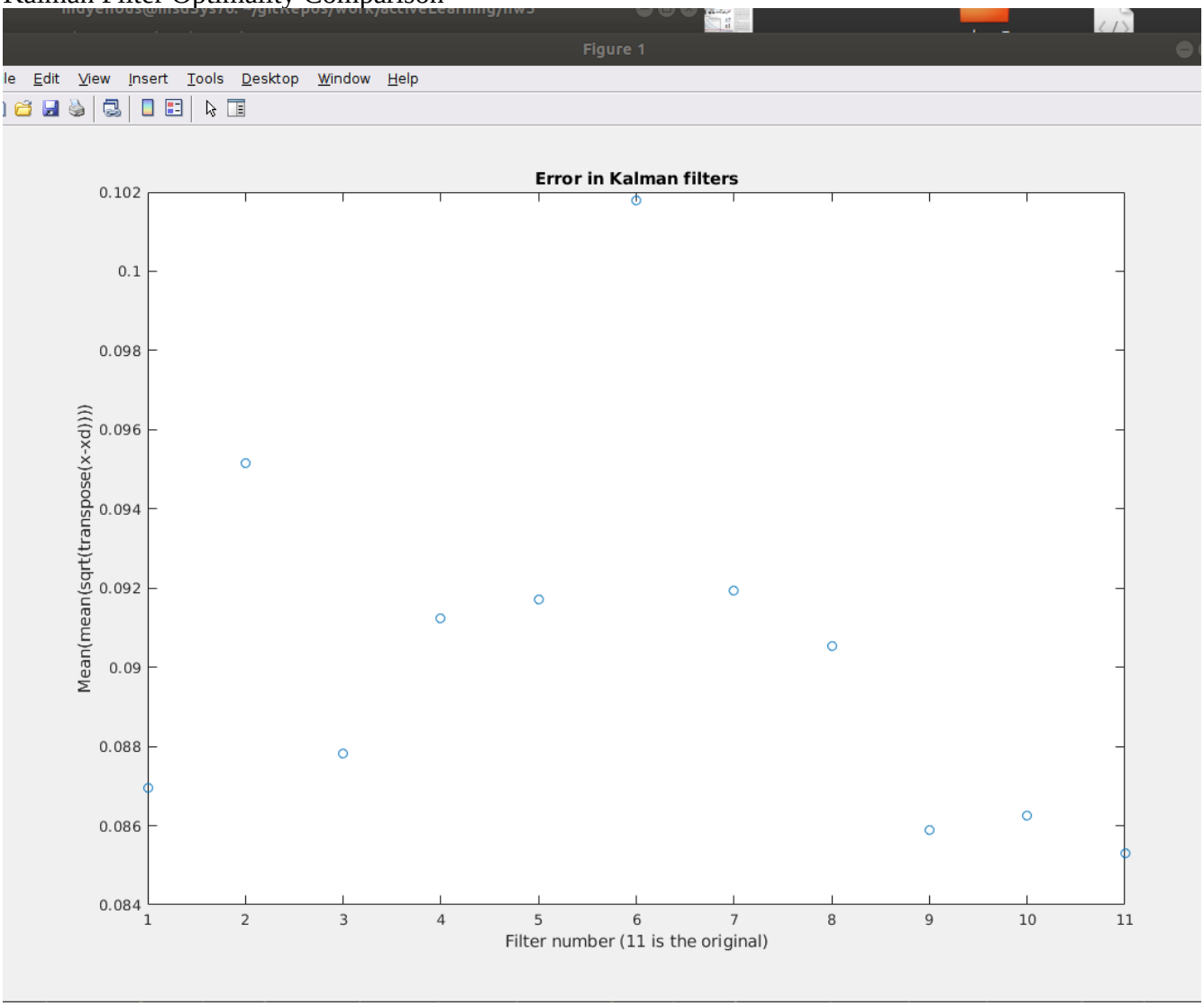
2) Kalman Filter
Trajectory:



P_k_given_k-1:



3)
Kalman Filter Optimality Comparison



The original, unperturbed Kalman filter is at x=11 on the x-axis. It has the lowest resultant error represented by taking the averaged mean squared error for the filters over 100 trials compared with 10 perturbed (by a small amount) sets of K_k matrices.