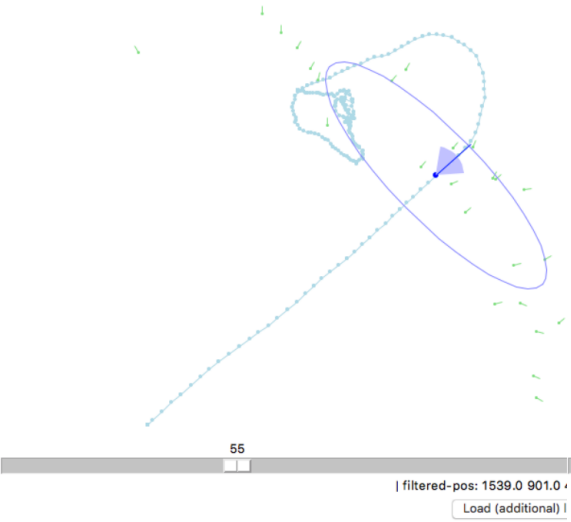
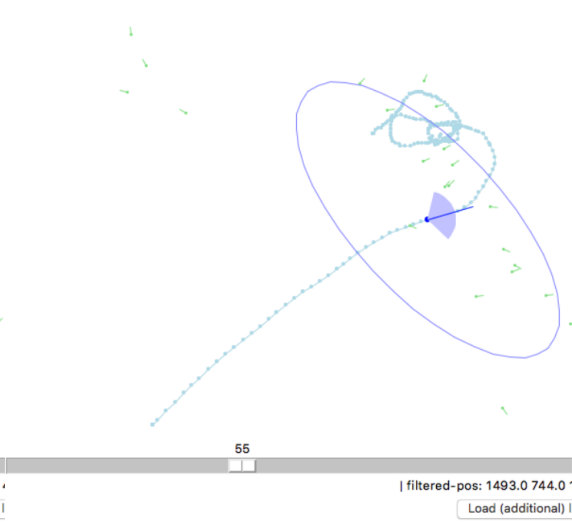
Prediction step only
(4 different tests)





Different trajectories due to the error in the robot's motion

$$\sigma_{l_t}^2 = (p_1\, l_t)^2 + \left(p_2\,(l_t - r_t)\right)^2$$
$$\sigma_{r_t}^2 = (p_1\, r_t)^2 + \left(p_2\,(l_t - r_t)\right)^2$$

$$\text{left\_command} \sim \mathcal{N}\left(l_t,\, \sigma_{l_t}^2\right)$$
$$\text{right\_command} \sim \mathcal{N}\left(r_t,\, \sigma_{r_t}^2\right)$$