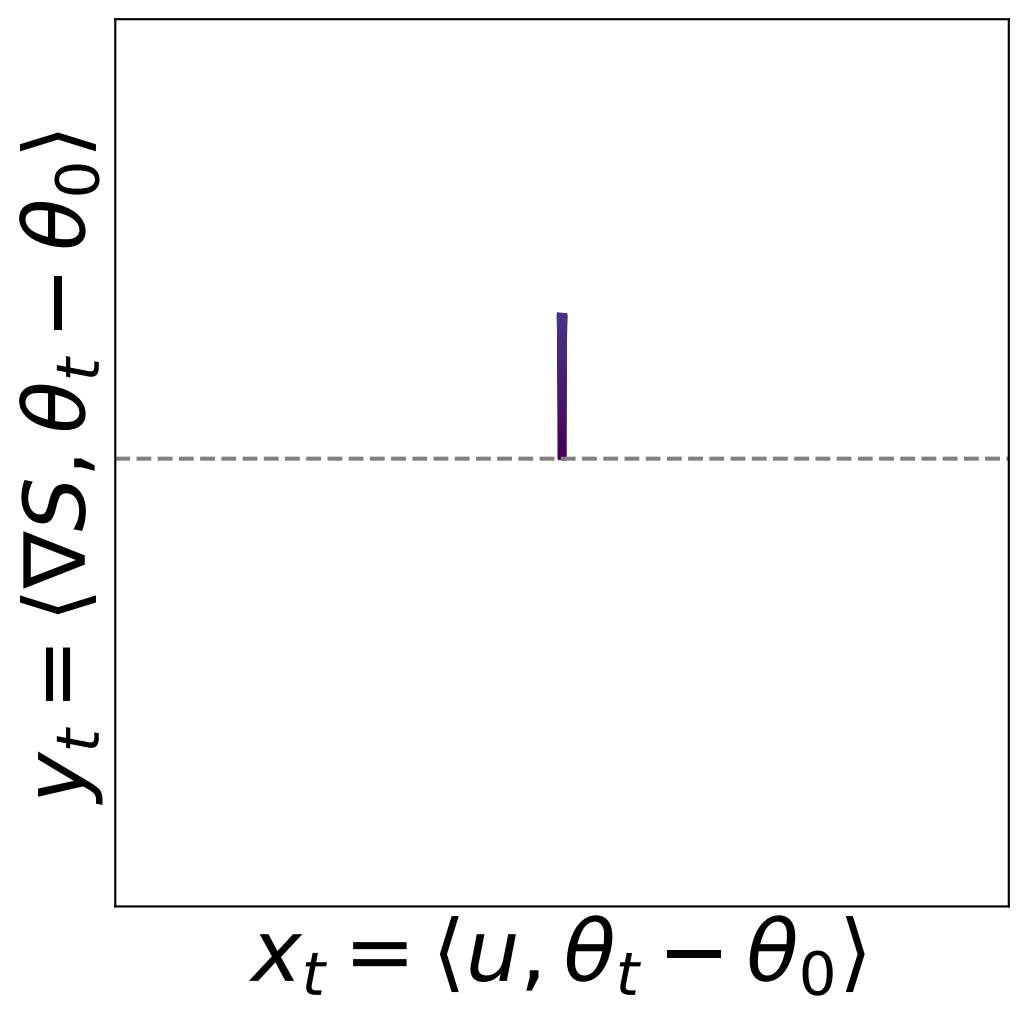
$y_t = \langle \nabla S, \theta_t - \theta_0 \rangle$
$x_t = \langle u, \theta_t - \theta_0 \rangle$