Initial state space and controls for generating training data. The following variables are the required state space and control variables along with their ranges for random uniform sampling.

Var.	Distribution	Units	Variable type	Description
x_0	0	cm	State Space	Initial horizontal position
$\dot{x}_0$	$Unif(-1500, 1500)$	cm/s	State space	Initial horizontal velocity
y_0	0	cm	State space	Initial vertical position
$\dot{y}_0$	$Unif(-1500, 1500)$	cm/s	State space	Initial vertical velocity
θ_0	$Unif(0, 2\pi)$	rad	State space	Initial head-thorax angle
$\dot{\theta}_0$	$Unif(-25, 25)$	rad/s	State space	Initial head-thorax angular velocity
ϕ_0	$Unif(0, 2\pi)$	rad	State Space	Initial abdomen angle
$\dot{\phi}_0$	$Unif(-25, 25)$	rad/s	State space	Initial abdomen angular velocity
F	$Unif(0, 44300)$	g·cm/s^2	Control	Force magnitude
α	$Unif(0, 2\pi)$	rad	Control	Force angle
τ	$Unif(-100000, 100000)$	g·cm/s^2· cm	Control	Torque