$m_{1_1} = 2.0, m_{2_1} = 20.0, m_{1_2} = 2.0, m_{2_2} = 20.0, L_{1_1} = 1.0, L_{2_1} = 1.0, L_{1_2} = 1.0, L_{2_2} = 1.0$ $\theta_{1_1} = \pi, \, \omega_{1_1} = 0.35, \, \theta_{2_1} = 0.0, \, \omega_{2_1} = 0.0, \, \theta_{1_2} = \pi/10, \, \omega_{1_2} = 0.15, \, \theta_{2_2} = 0.0, \, \omega_{2_2} = 0.0$ $K = 0.3, \, \sigma_T = 0.001$

