$m_{1_1} = 200.0, \, m_{2_1} = 0.2, \, m_{1_2} = 2.0, \, m_{2_2} = 0.2 \;, \, L_{1_1} = 1.0, \, L_{2_1} = 1.0, \, L_{1_2} = 1.0, \, L_{2_2} = 1.0 \;, \, L_{1_1} = 1.0, \, L_{1_2} = 1.0,$ 







