Fig. 2: Momentum distribution when $\omega/\varepsilon_0 = 10.0, \gamma L/\varepsilon_0 = 1000.0$ after $t = 10000T$ evolution. The ratio of amplitude over frequency of shaking is $\gamma/\omega = 100.0(1/L)$. In carrying out this calculation, matrices truncated to $n = -4, \cdots, 4$ and $m = 1, \cdots, 6$ such that 54×54 in total. Time taking: about $1200s$ per plotting. We see that in this regime, momentum distribution at large p obey power law decaying, with power of around -1.2. Numerical fitting gives $\alpha = -1.41, -0.79, -1.68, -1.12, -1.13, -1.28$ for the plotting six cases, respectively.

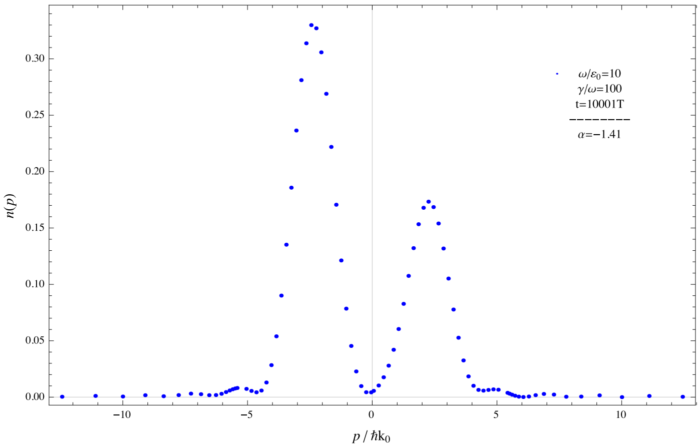

Fig. 3 (a) $t = 10001T, \alpha = -1.41$

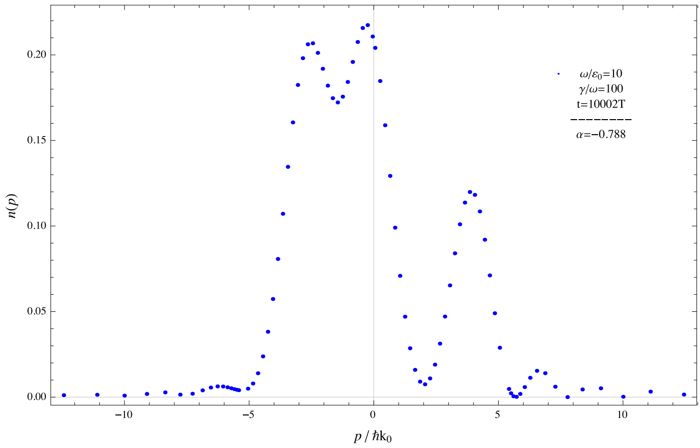

Fig. 3 (b) $t = 10002T, \alpha = -0.79$

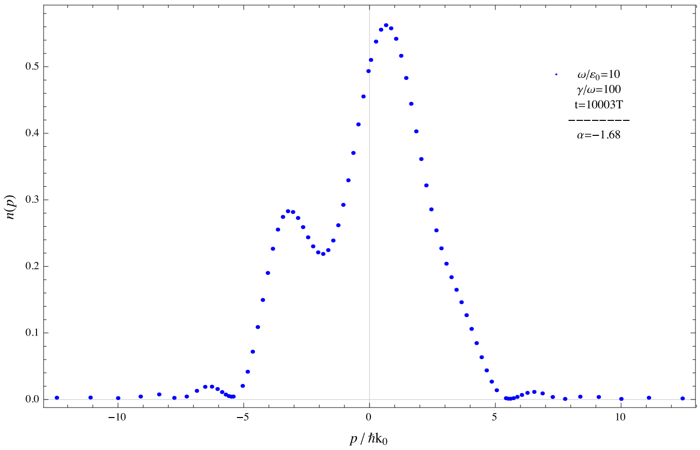

Fig. 3 (c) $t = 10003T, \alpha = -1.68$

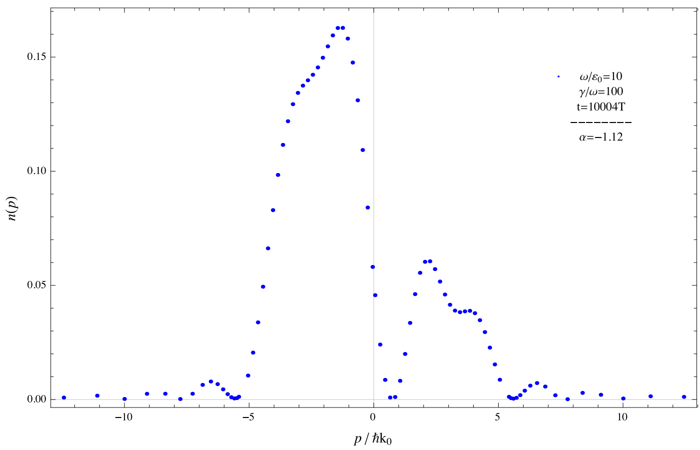

Fig. 3 (d) $t = 10004T, \alpha = -1.12$

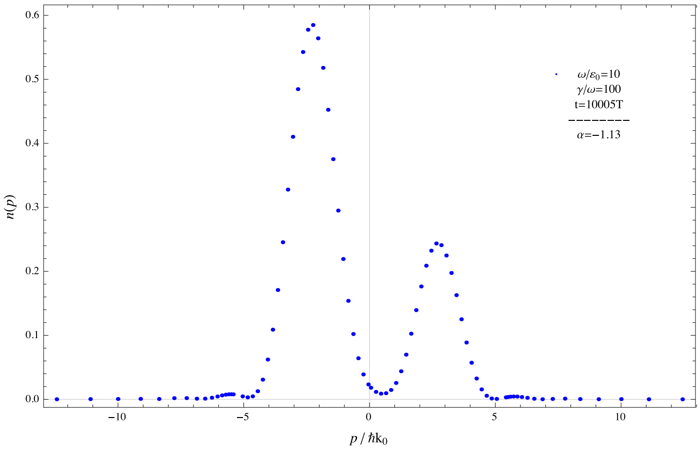

Fig. 3 (e) $t = 10005T, \alpha = -1.13$

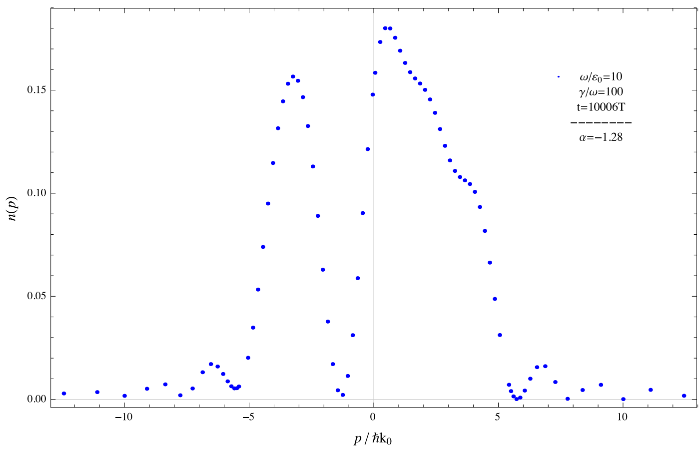

Fig. 3 (f) $t = 10006T, \alpha = -1.28$

Fig. 3: Momentum distribution when $\omega/\varepsilon_0 = 10.0, \gamma L/\varepsilon_0 = 1.0$ after $t = 10000T$ evolution. The ratio of amplitude over frequency of shaking is $\gamma/\omega = 0.1(L^{-1})$. In carrying out this calculation, matrices truncated to $n = -4, \cdots, 4$ and $m = 1, \cdots, 6$ such that 54×54 in total. Time taking: about 1200s per plotting. In this regime the power law decaying fashion is just like the ground state, with powers a little bit small than -4, around -3.9.

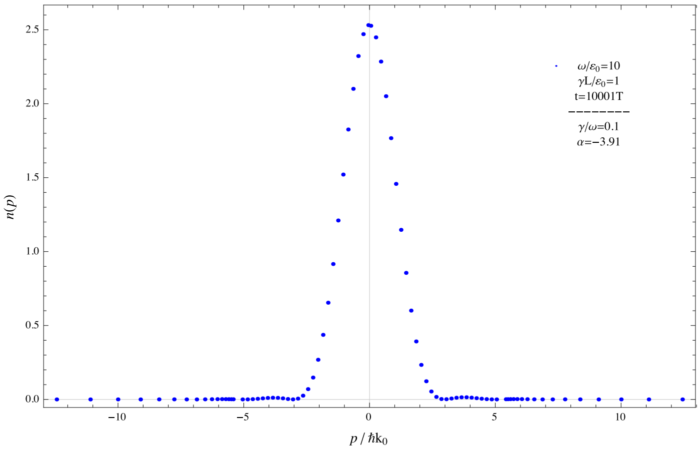

Fig. 4 (a) $t = 10001T, \alpha = -3.91$

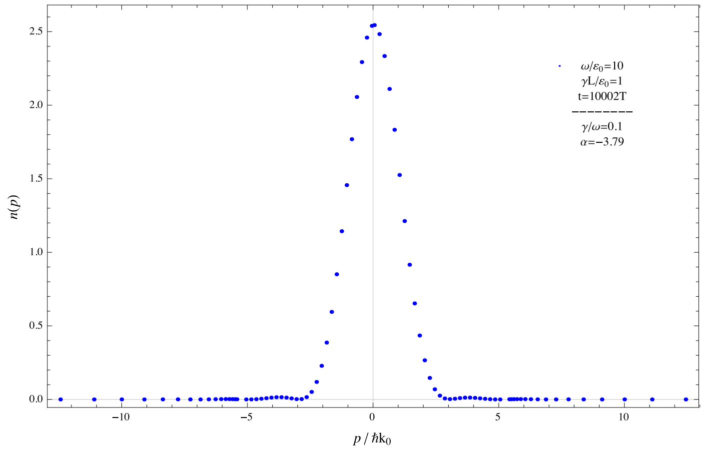

Fig. 4 (b) $t = 10002T, \alpha = -3.79$

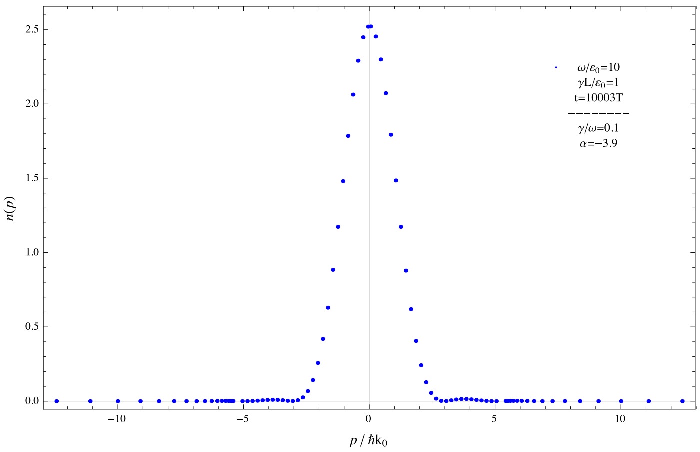

Fig. 4 (c) $t = 10003T, \alpha = -3.90$

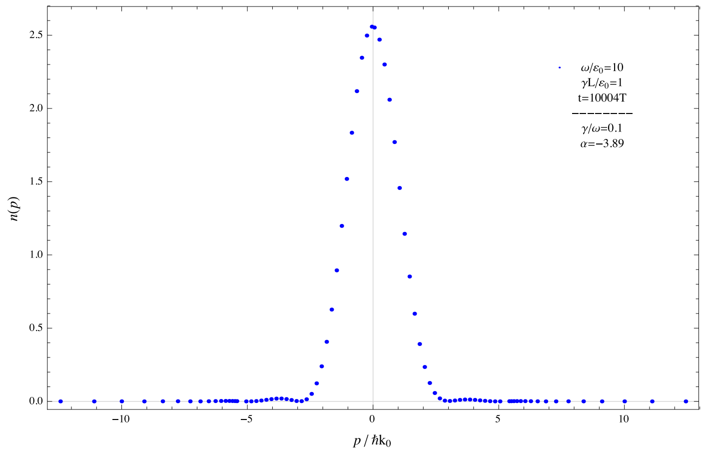

Fig. 4 (d) $t = 10004T, \alpha = -3.89$

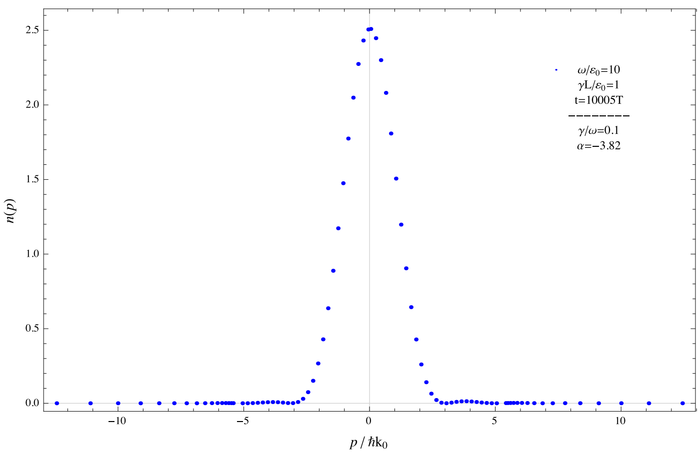

Fig. 4 (e) $t = 10005T, \alpha = -3.82$

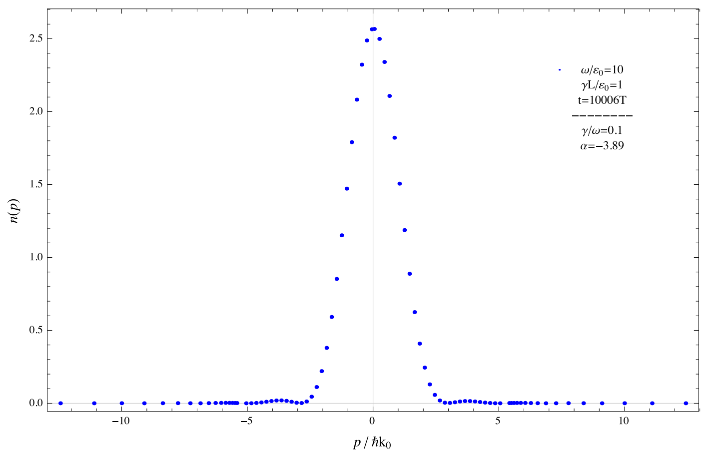

Fig. 4 (f) $t = 10006T, \alpha = -3.89$

Fig. 4: Momentum distribution when $\omega/\varepsilon_0 = 0.1, \gamma L/\varepsilon_0 = 1.0$ after $t = 10000T$ evolution. The ratio of amplitude over frequency of shaking is $\gamma/\omega = 10(L^{-1})$. In carrying out this calculation, matrices truncated to $n = -4, \cdots, 4$ and $m = 1, \cdots, 10$ such that 90×90 in total. Time taking: about $8000s$ per plotting. We see that in this regime the power law decaying fashion is again deviates from that of what we start– -4 power, becoming a fashion with the absolute value of power less than 1. Around -0.88 in the six cases plotted here.

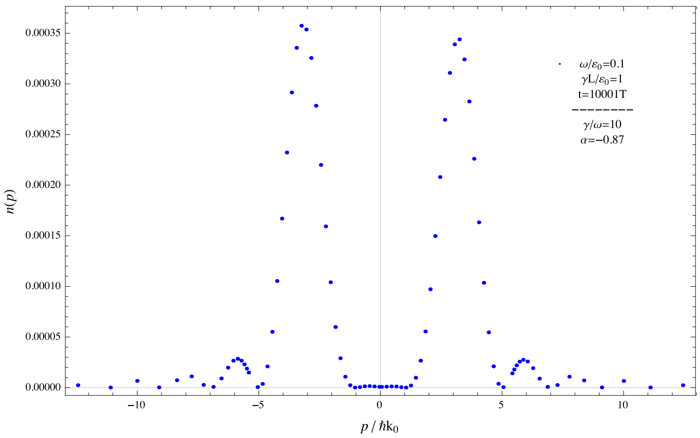

Fig. 5 (a) $t = 10001T, \alpha = -0.87$

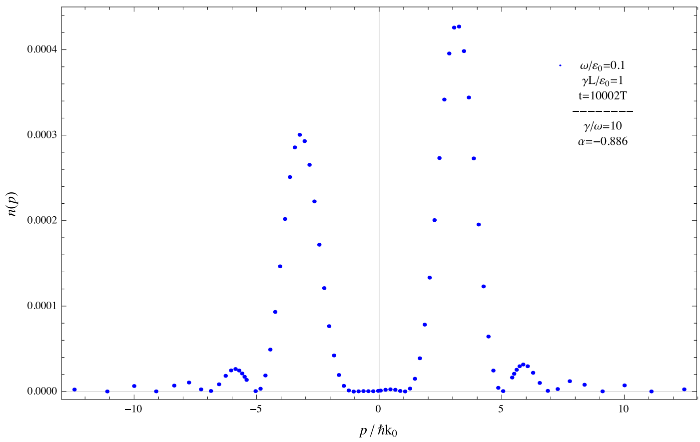

Fig. 5 (b) $t = 10002T, \alpha = -0.89$

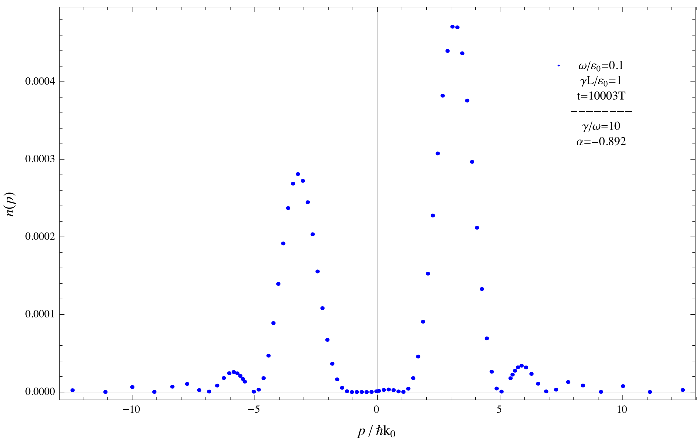

Fig. 5 (c) $t = 10003T, \alpha = -0.89$

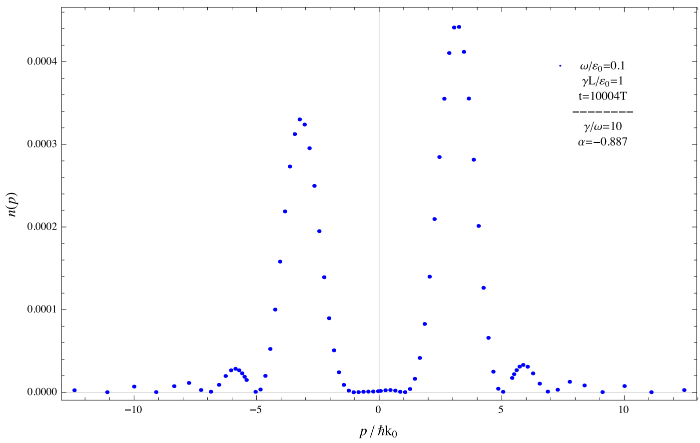

Fig. 5 (d) $t = 10004T, \alpha = -0.89$

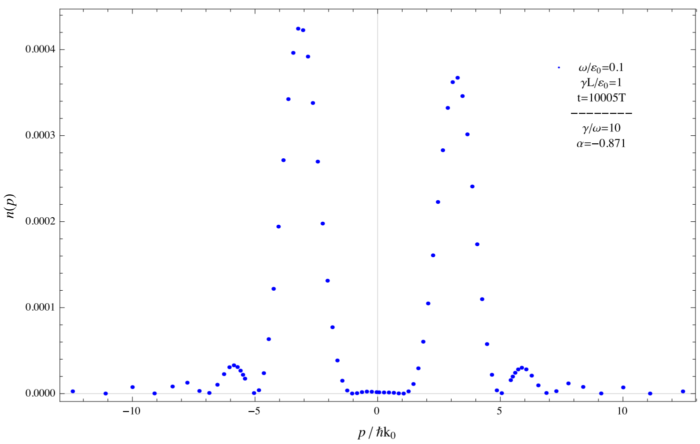

Fig. 5 (e) $t = 10005T, \alpha = -0.87$

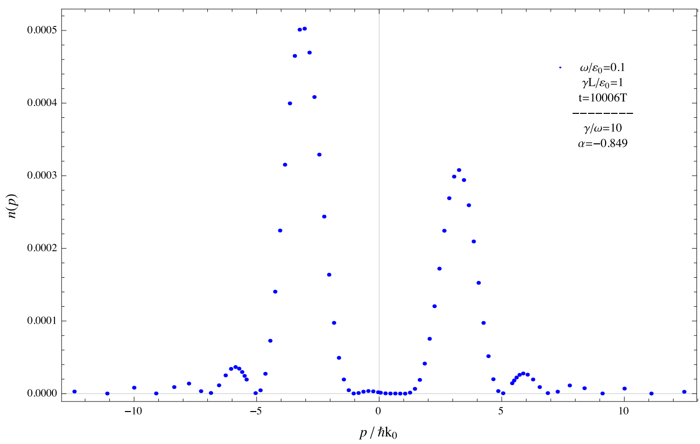

Fig. 5 (f) $t = 10006T, \alpha = -0.85$