

In Monte Carlo Exploring Starts Algorithm, It initialized a policy first, and a Q depends on each states and actions, and run the loop forever for each episode to estimating π approximate equal to π^* . The subloop in this process, Loop for each step of episode, $t = T - 1, T - 2, \dots, 0$, what if we give this loop a limit? We do not let it loop until termination, instead, what if we make it limit steps? Like $t = T - 1, T - 2, \dots$, a small constant, or $t = T - 1, T - 2, \dots, T - 10$? Will the pair S_t, A_t appears in $S_0, A_0, S_1, A_1 \dots, S_{t-1}, A_{t-1}$ like old ways? What's going to happen to $S_0, A_0 \dots$ until S_c, A_c ? And, after run out this algorithm, can we have the same result which is π approximate equal to π^* ? And what does the graph should like?

In each episode, I do not think the estimate value can still approximate to 1.0; Along with the loop running, the fluctuate will be as similar as origin figure. However, the termination will be early so that it will never reach 1.0 and we can not have π approximate equal π^* .