

Homework #5

For the kicked rotator ($\alpha_{n+1} = \alpha_n + \omega_n T$, $\omega_{n+1} = \omega_n + K \sin \alpha_{n+1}$), determine how fast the energy $E = \omega^2/2$ grows with time n . Consider the ensemble average and large kicking strength ($K \geq 4$; the answer is supposedly independent of K beyond this value). Take initial values that lead to chaotic motions, that is, find a way to exclude integrable solutions from the average. Set $T = 1$.