

Our question concerns the phase space plot. We planned to use classical equations of motions to determine if initial conditions of an atom fit the conditions necessary to stay in a MOT. We were going to have initial position and velocity of an atom indicated on a plot and then either fill in a bin corresponding to a specific position and velocity or leave it blank depending on if those initial conditions keep the atom in the trap, however this would hopefully be 2-dimensional,  $x$ ,  $y$ ,  $v_x$ , and  $v_y$  as axes, which isn't possible to plot as far as we know.

Danny - did you have a different idea in mind?