Lam Comp Class HW2

mk$_p arra$

September 2020

1 Problem 2

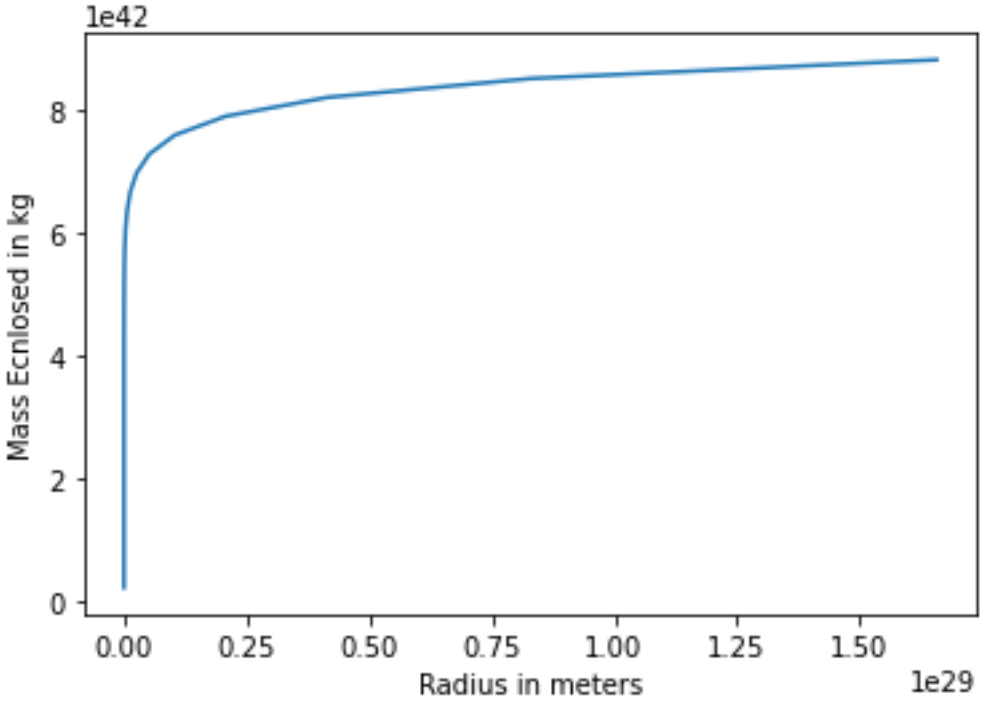

Figure 1: Here we can see the mass enclosed. We can tell that it has a upward trend right away saying the majority of the mass is located towards the center and starts to level off the more you go outwards in the galaxy. I think it seems fishy that this happens. Based on radial velocities of stars and mass with no dark matter we should get what we see in the homework graph, but we are not graphing that, we are just graphing the mass enclosed in the galaxy.

2 Problem 2 with dark matter

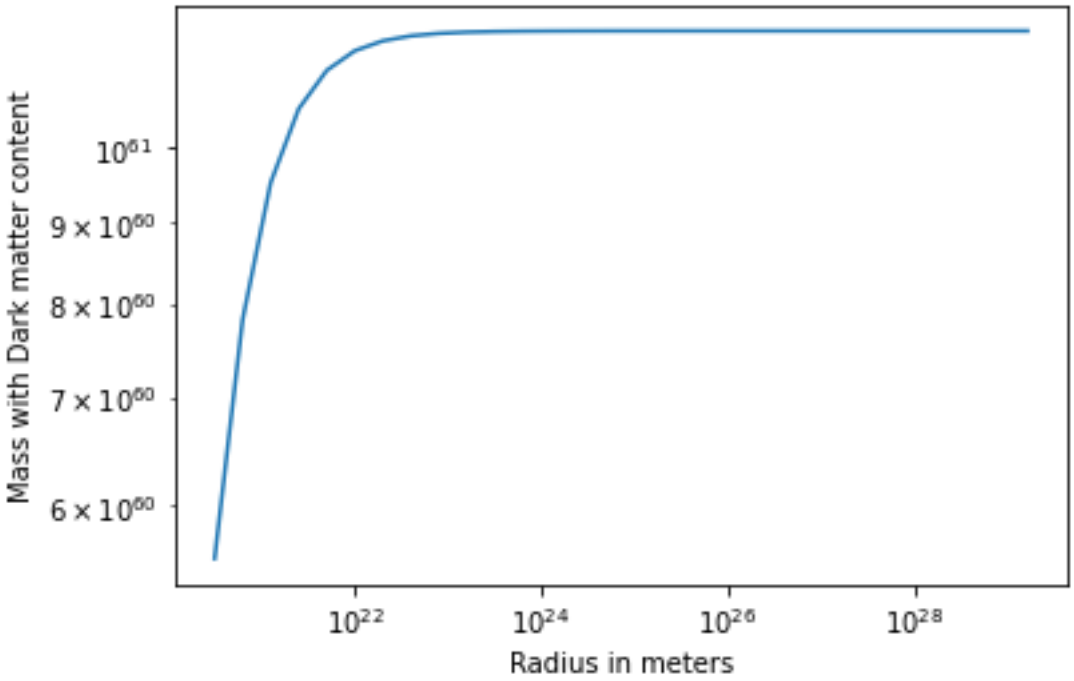

Figure 2: Here we see the mass distribution plotted with distance in radius. What we see is a graph leveling off with distance indicating that the mass is somewhat constant towards the end of the galaxy. This is not what we see in the graph shown in the HW. This graph is telling is that there is mass, much more mass than the mass enclosed in the galaxy. Indicating that the mass of dark matter out "weighs" the amount of baryonic mass there is the galaxy. Yay dark matter!