

Exercise 4 (a):

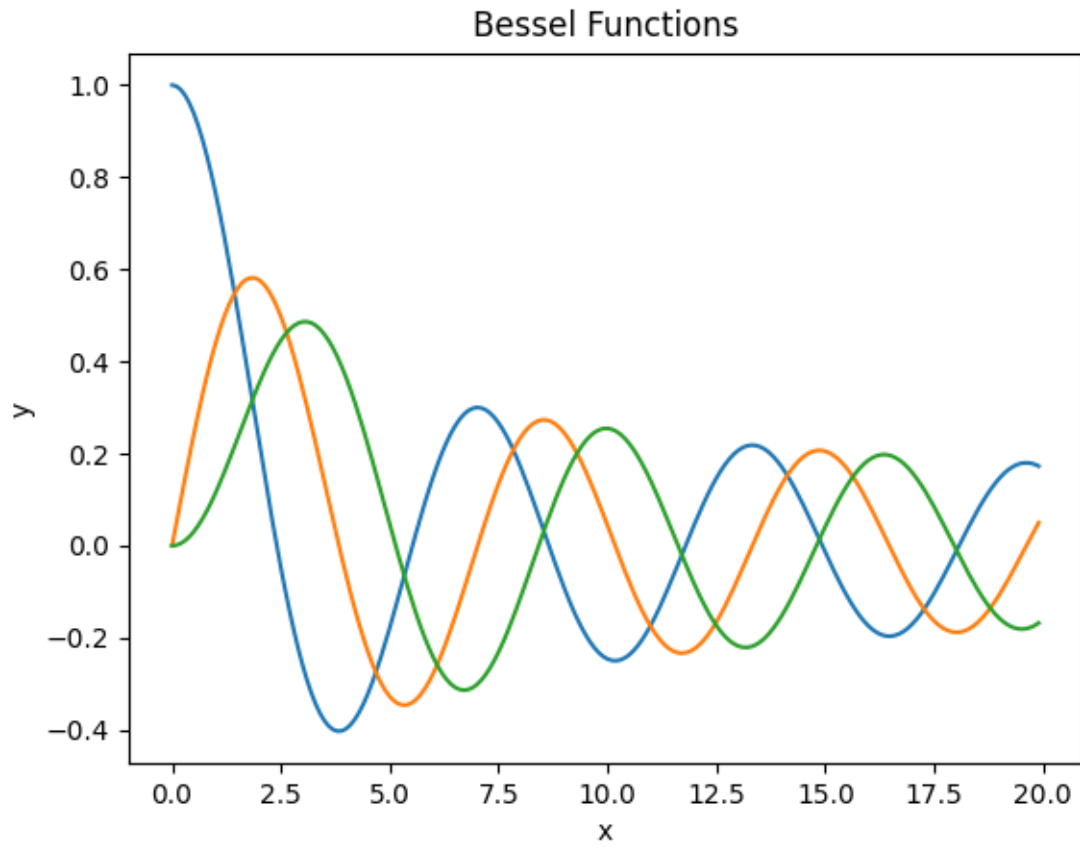


Figure 1: Plot of different Bessel functions

Exercise 4 (b):

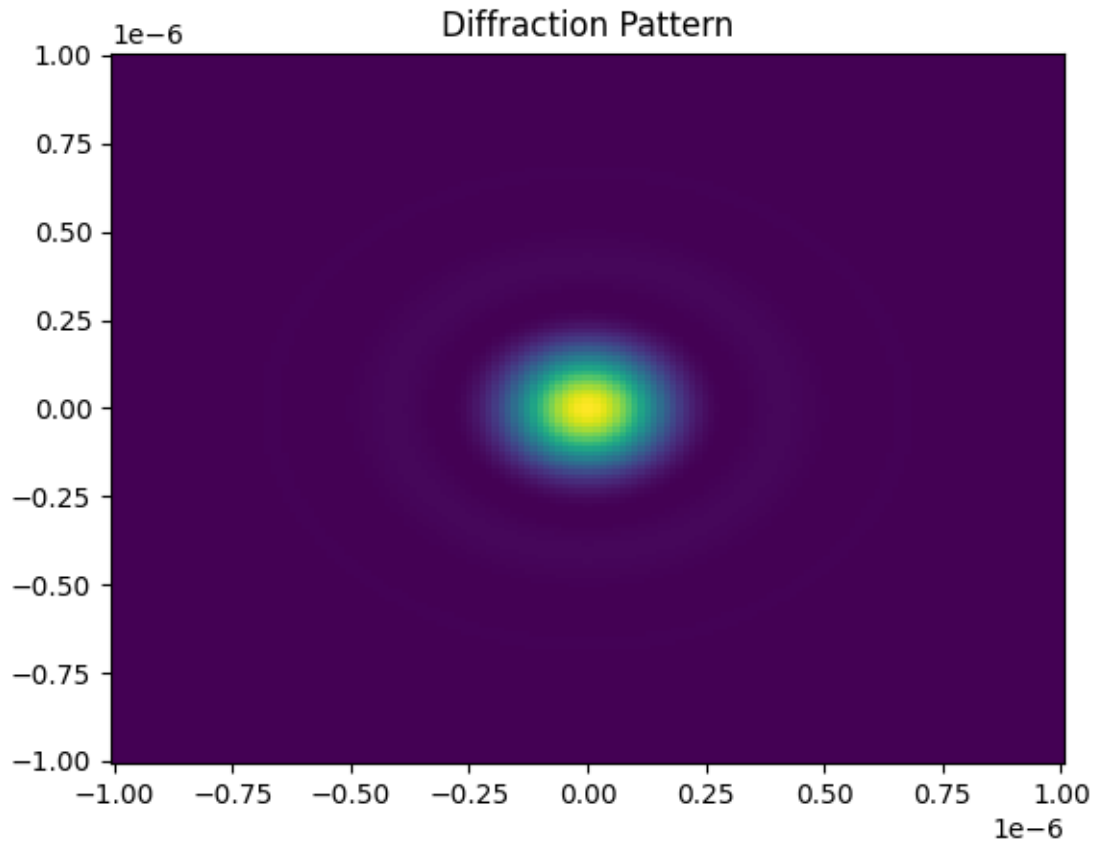


Figure 2: Density plot of the intensity of the circular diffraction pattern of a point light source

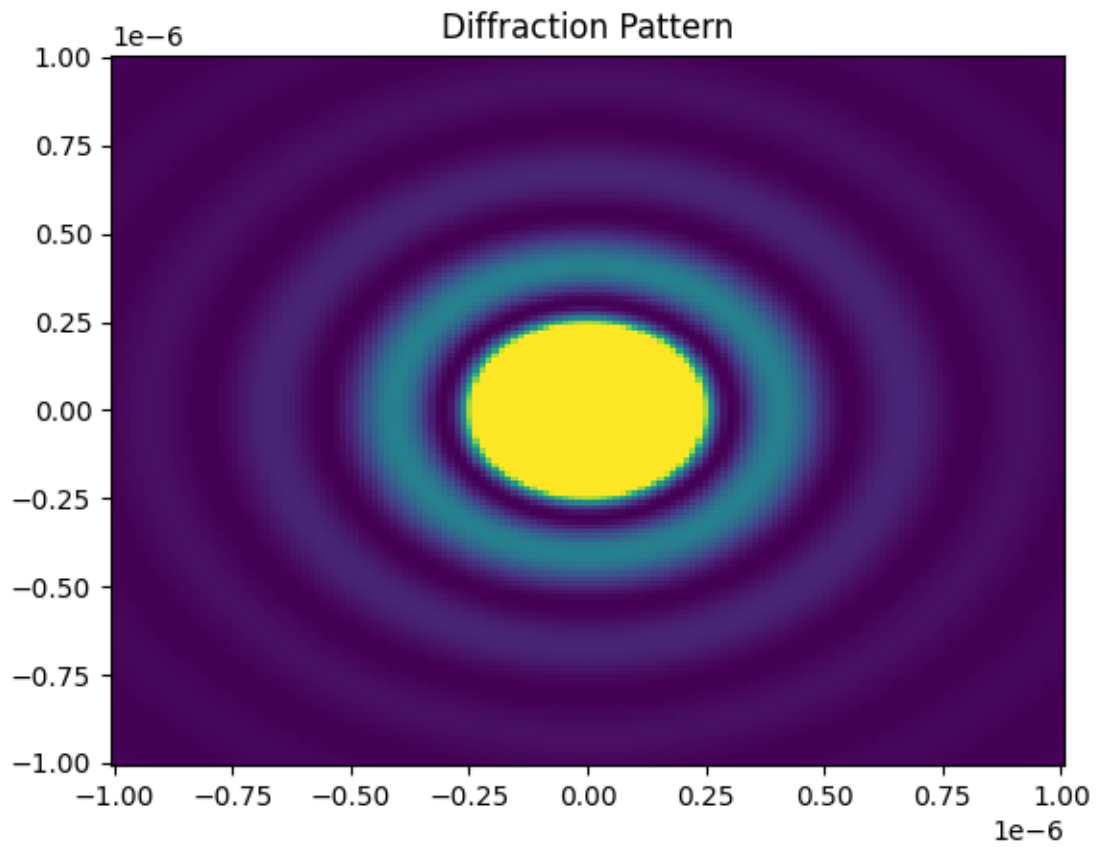


Figure 3: Density plot of the intensity of the circular diffraction pattern of a point light source, but using the $v_{\max} = 0.01$ argument