Lab-2 | Part-A (Bisection Method...contd.)

August 25, 2020

1. **Bisection Method.**

   Complete writing & testing the bisection method code (the previous assignment sheet). Upload your code & results on Quanta

2. **Maxima in a single slit diffraction pattern.**

   Here is a single slit diffraction pattern

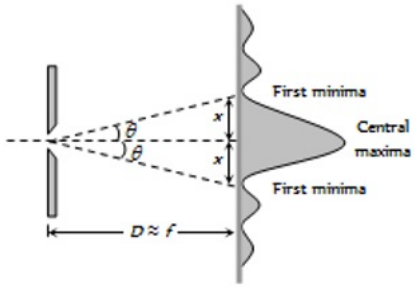

Figure 1:

Theoretically, the locations of diffraction secondary maxima are given by the condition roots of $tan(\alpha) = \alpha$ give the locations of diffraction maxima. Here $\alpha = \pi a sin\theta/\lambda$.

For an experiment using a slit of width $a = 0.01mm$, and wavelength $\lambda = 5000^0 A$ find the positions of the 1st two secondary maximas with an uncertainty of 10^{-3} degrees