

Ph291E Lab 6 – Physics with Python I: Plotting

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1 Purpose

In this lab, Python will be used to compute and plot the solutions to wave equations. In particular, interference patterns from Young's double slit experiment will be visualized along with the single slit and N-slit cases.

2 Results

Double Slit

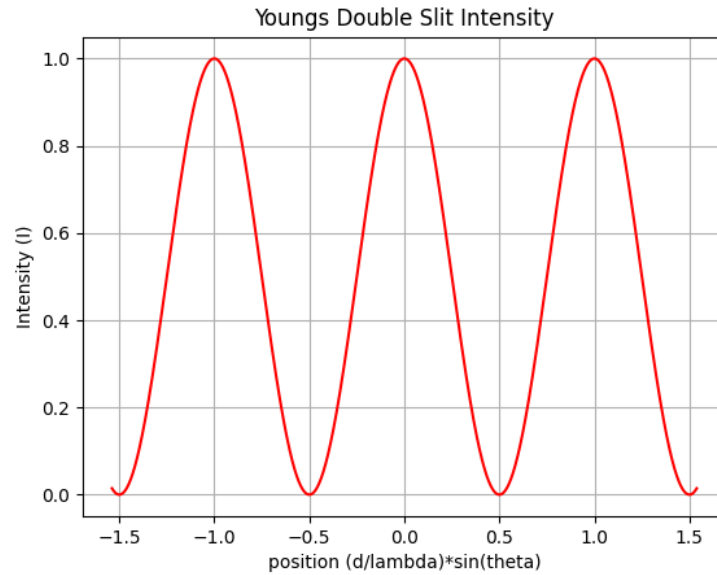


Figure 1: Young's Double Slit Intensity Pattern ($d = 1\mu\text{m}$, $\lambda = 650\text{ nm}$) using the following linspace command: `theta = np.linspace(-np.pi/2.0, np.pi/2.0, int(np.pi/0.001))`

N-Slit

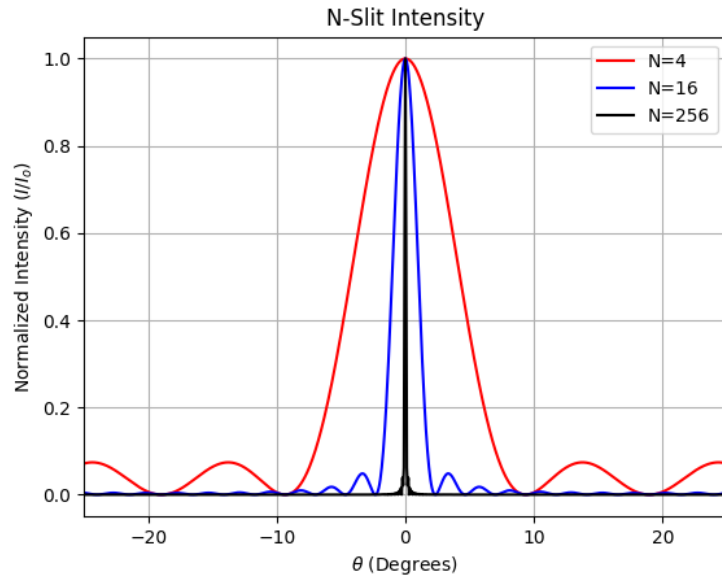


Figure 2: N-Slit Intensity Pattern with varying slits ($d = 1\text{ }\mu\text{m}$, $\lambda = 650\text{ nm}$)

3 Conclusion

4 Answers to Questions