

HW#4

EC5103

2021.03.29

In an interference experiment of the Young type, the distance between slits is 0.5 mm, and the wavelength of the light is 600 nm.

- (a) If it is desired to have a fringe spacing of 1 mm at the screen, what is the proper screen distance?
- (b) If a thin plate of glass ($n=1.5$) of thickness 100 microns is placed over one of the slits, what is the lateral fringe displacement at the screen?
- (c) What path difference corresponds to a shift in the fringe pattern from a peak maximum to the same peak half-maximum?