

Flynn

P402 Homework 12

Spring 2010

Reading: Hecht Chapter 13

Notes on Quantum Effects in Optics

Exercises: Hecht ## 13.21 (the laser acts like a coherent in-phase disc), 13.29, 13.31, 13.41, 13.43;

and

Four slits at 0.1 mm spacing are illuminated normally with light. (a) Draw phasor diagrams for the first and second minima and the main and first subsidiary peaks of the diffraction pattern. (b) If the slits are 0.05 mm wide, how many peaks, total, occur between first \pm zeros of the single slit envelope?