

ENEE 496 Spring 2004

Problem Set 3. Due Tuesday March 30, 2004

(1) Davis Problem 4.1

(2) Davis Problem 4.2

(3) Davis Problem 4.3

(4) Davis Problem 4.4

(5) Davis Problem 4.6

(6) Plot the transmittance of a Fabry-Perot device with $R=0.985$ as a function of phase shift δ . Show three peaks. Fit one of the peaks to a Lorentzian function and thereby show that the FWHM of the transmittance peaks obeys $\Delta\delta = 2\pi/F$ or equivalently in frequency $\Delta\nu_{1/2} = \Delta\nu/F$, where $F = \pi\sqrt{R}/(1 - R)$.