

Opti 380A – Intermediate Optics Lab I – Fall 2009

Post-Lab Questions for Lab 11: LASER

Post-lab questions are due at the beginning of lecture on the Monday following your lab.

1.) If a laser is constructed with parallel-plate mirrors ($r_1 = r_2 = \infty$), does the resonance frequency depend on the transverse mode indices m and n ?

2.) Let $r_1 = L = 50\text{cm}$, $n_{\text{cav}} = 1$ and $r_2 = \infty$. Calculate the following difference frequencies:

$$\nu_{10q} - \nu_{00q}$$

$$\nu_{30q} - \nu_{00q}$$

$$\nu_{11q} - \nu_{00q}$$

3.) Describe similarities of the Fabry-Perot resonator to Fringes of Equal Inclination.