

University of California, Berkeley
EE 236
Fall 2004

Homework set 6
Due Friday, October 15

Reminder: Midterm scheduled for Monday, October 18 at 6:00 PM

- 1) Inside a perfectly conductive cube with edge length 1 cm, find the RMS value for the peak electric field (it is a function of position) due to a single E&M mode with a classical resonance frequency ω , with N photons in it. For convenience, you can assume that the mode is approximately a standing wave from a plane wave bouncing back and forth between two of the walls.
- 2) Yariv problem 6.1
- 3) Yariv problem 6.3
- 4) Yariv problem 6.6
- 5) Yariv problem 6.8

Reading: Review chapters 1-3, 5, 6 for Midterm