

Physics 721 Homework 12

Assigned: Wed. 4/13/05

Due: Mon. 4/18/05

1. Jackson 8.2
2. Show that it is possible for electromagnetic waves to be propagated in a hollow metal pipe of rectangular cross section with length dimensions a and b with perfectly conducting walls. What are the phase and group velocities? Show that there is a cutoff frequency below which no waves are propagated.