

PHYSICS 7222, Quantum Optics, Spring 2011

Syllabus

1. Atomic structure.
2. Atoms in external fields.
3. Interaction of atoms with light.
4. Interaction of light with atoms in external fields.
5. Atomic collisions.
6. Cold atoms.
7. Molecules.
8. Quantum theory of photodetection.
9. Input-output formalism.
10. Interaction of radiation with matter.
11. Resonance fluorescence.
12. Bell inequalities.
13. Collective atomic systems and superradiance