

PHYSICS 4261, Atomic Physics, Spring 2012

Syllabus

1. Early atomic physics.
2. Hydrogen atom.
3. Helium.
4. The alkalis.
5. LS-coupling.
6. Hyperfine structure and isotope shift.
7. Interaction of atoms with light.
8. Laser spectroscopy.
9. Laser cooling and trapping.
10. Bose-Einstein condensates.
11. Atom interferometry.
12. Ion traps.