

## Zeeman Pre-lab

### Zeeman Effect:

1. Read Melissinos pp 218-232.
2. Do Problem 1 and Problems 5 - 9 of the Lab description.
3. As described in the lab description, when light is observed perpendicular to the applied magnetic field  $H$ , both  $\sigma$  and  $\pi$  transitions are visible, in general. Based on your knowledge of electric dipole radiation, how does this change for observations parallel to  $H$ , which can be made with this apparatus?