

**Physics 221A**  
**Fall 2017**  
**Homework 2**  
**Due Friday, September 8, 2017**

**Reading Assignment:** Notes 1, Secs. 19–26; Notes 2, entire; Notes 3, Secs. 1-11. Supplementary reading: Commins Sec. 3.2 contains material on photon polarization that is similar to the presentation of the Stern-Gerlach experiment in Notes 2. The photon experiments are much easier to carry out experimentally, but the  $x$ ,  $y$  and  $z$  directions are not in real space, but rather on the Poincaré sphere.

Please do Problems 1.5, 2.2, 2.3 and 3.1.