PHYS 114 HWK 2 **Due: 2/13/24**

1. Make a block-diagram of a photometer system (e.g., using PowerPoint or equivalent software). Label all components.

2. Make and plot the expected forward model of a photometer system for different integration times, ranging from 0.01-sec to 100-sec, using:

- Wavelength of 589-nm, for an atmospheric transmission of 90%
- Telescope of 8”
- 90% transmission interference filter at 589-nm
- 95% transmission optics
- PMT, with efficiency at 10% and a dark noise of 1 count/sec
- n=1000 emitters, or 1000 [photons/(m^2·sec·str)]