

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/($m^2 \cdot sec \cdot str$)]
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