

Astronomy 4100, Homework # 03, 16 January 2015 (due 21 January 2015).

1. A 60 W incandescent bulb primarily emits photons with $\lambda = 1000nm$. The dark adapted eye has a pupil of about 0.5 cm in diameter and can begin to detect point sources with about five photons arriving in 100 ms. How far away is a 60 W bulb visible in the dark?
2. The sun primarily emits photons near the center of the visible light spectrum. What is the surface temperature of the sun?