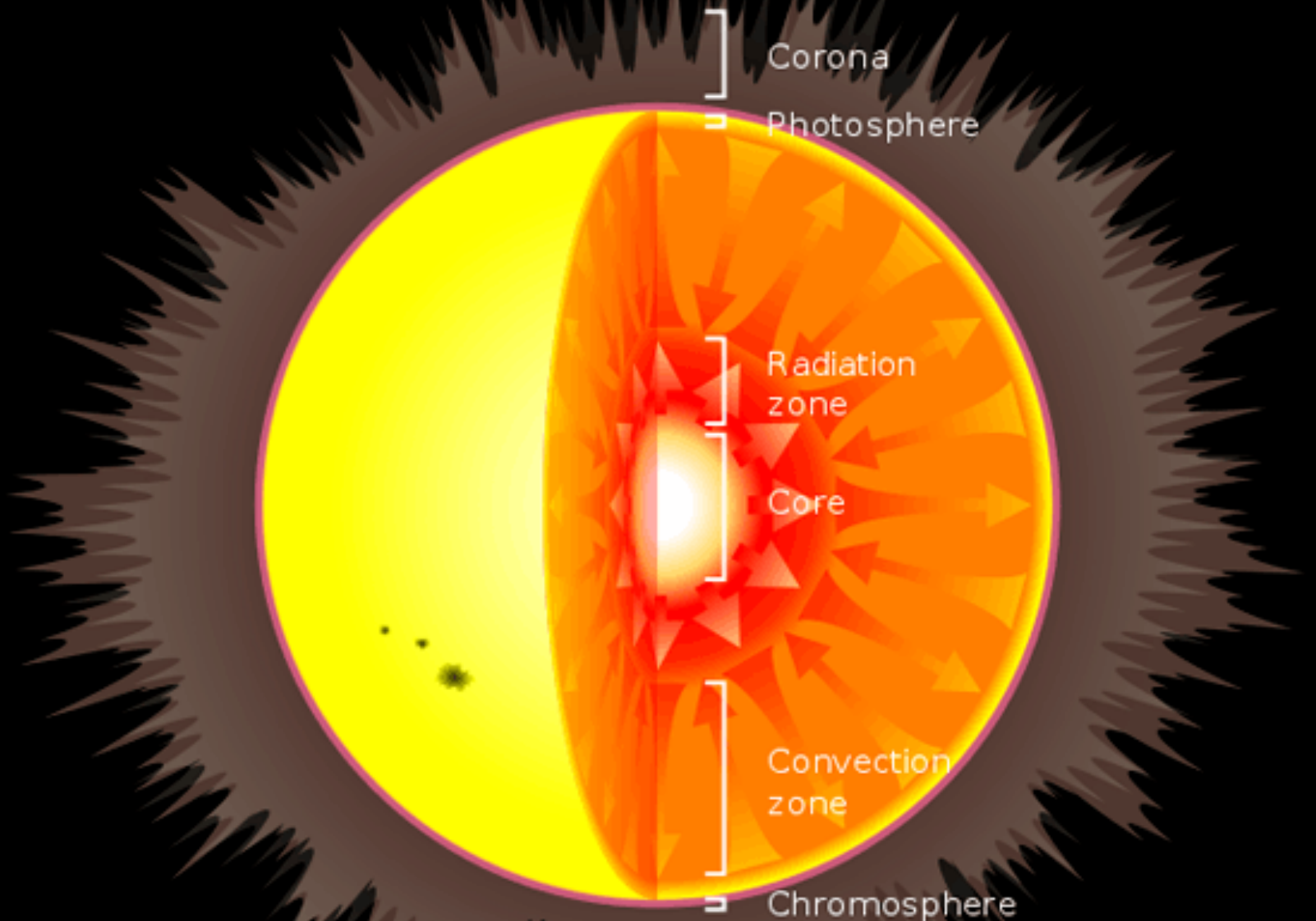
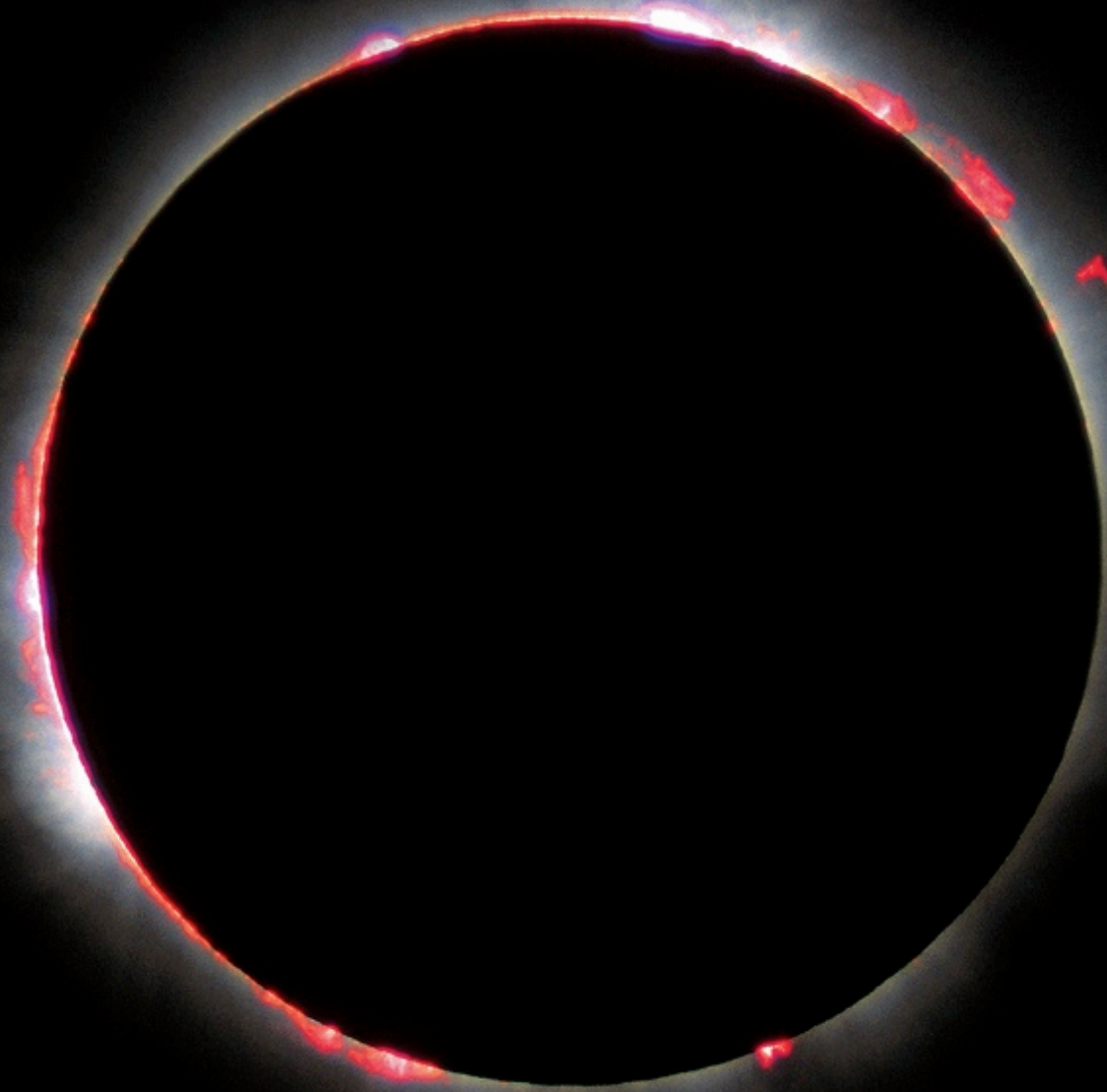


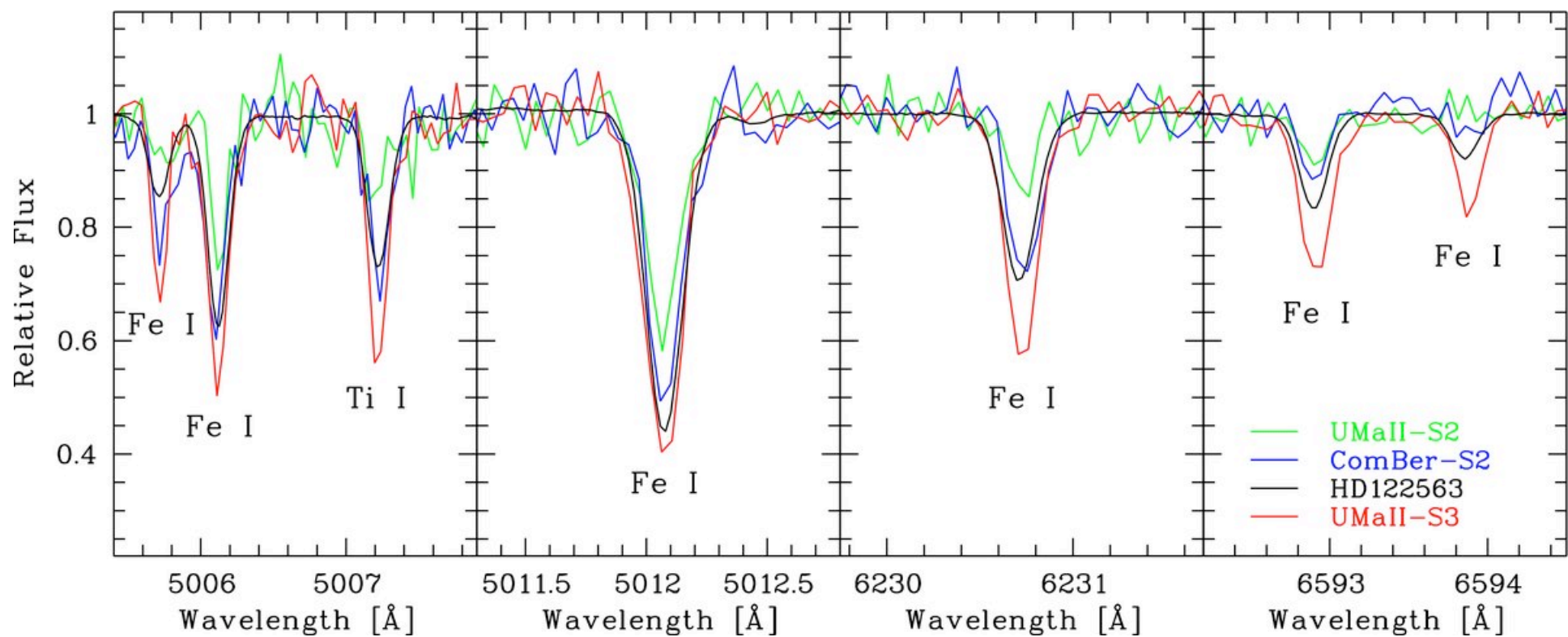
Structure and Evolution of Stars

Lecture 5

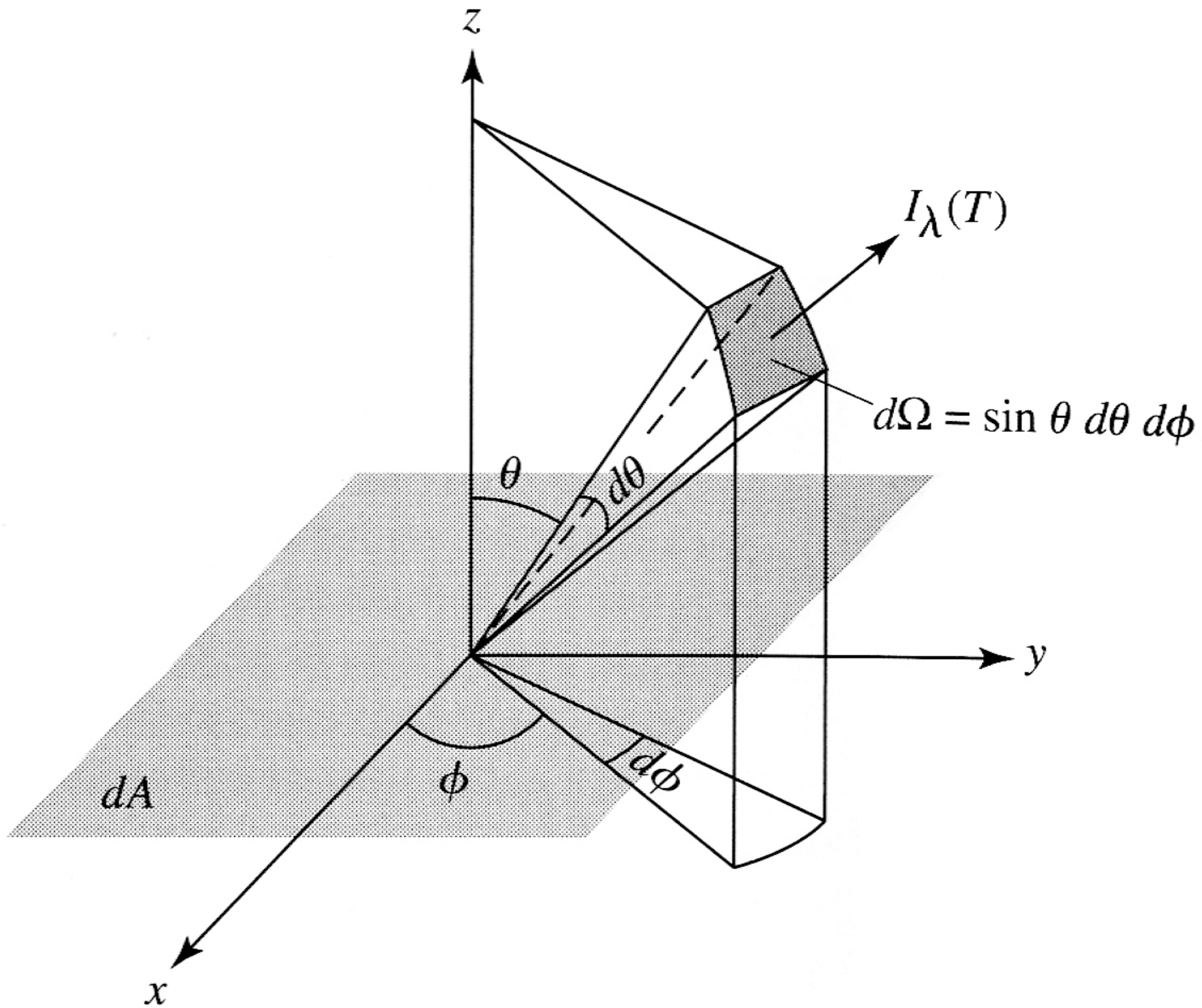


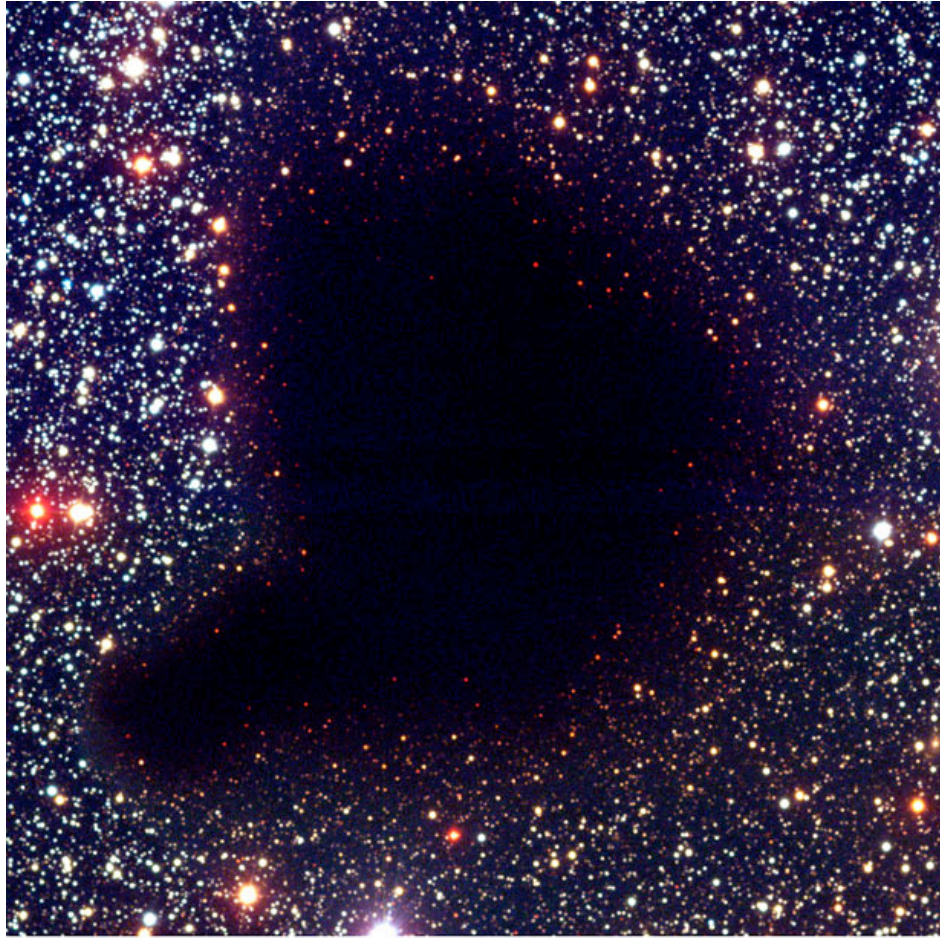




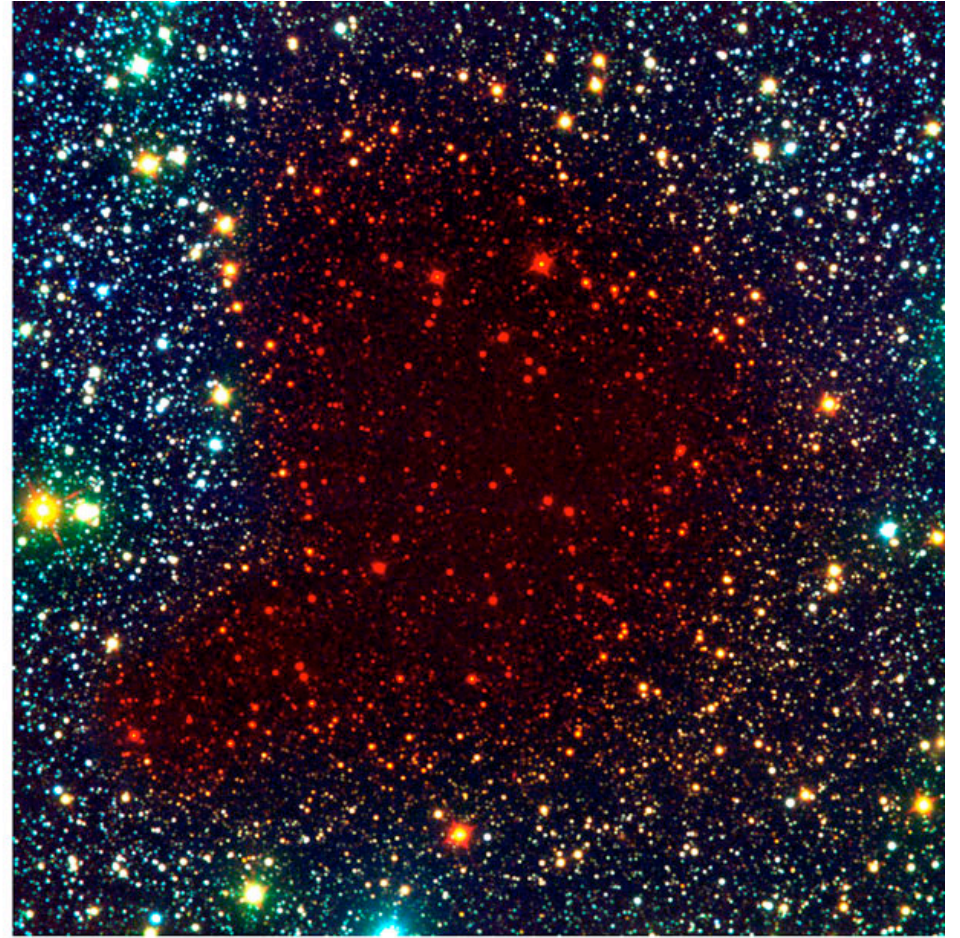


Frebel et al. 2010

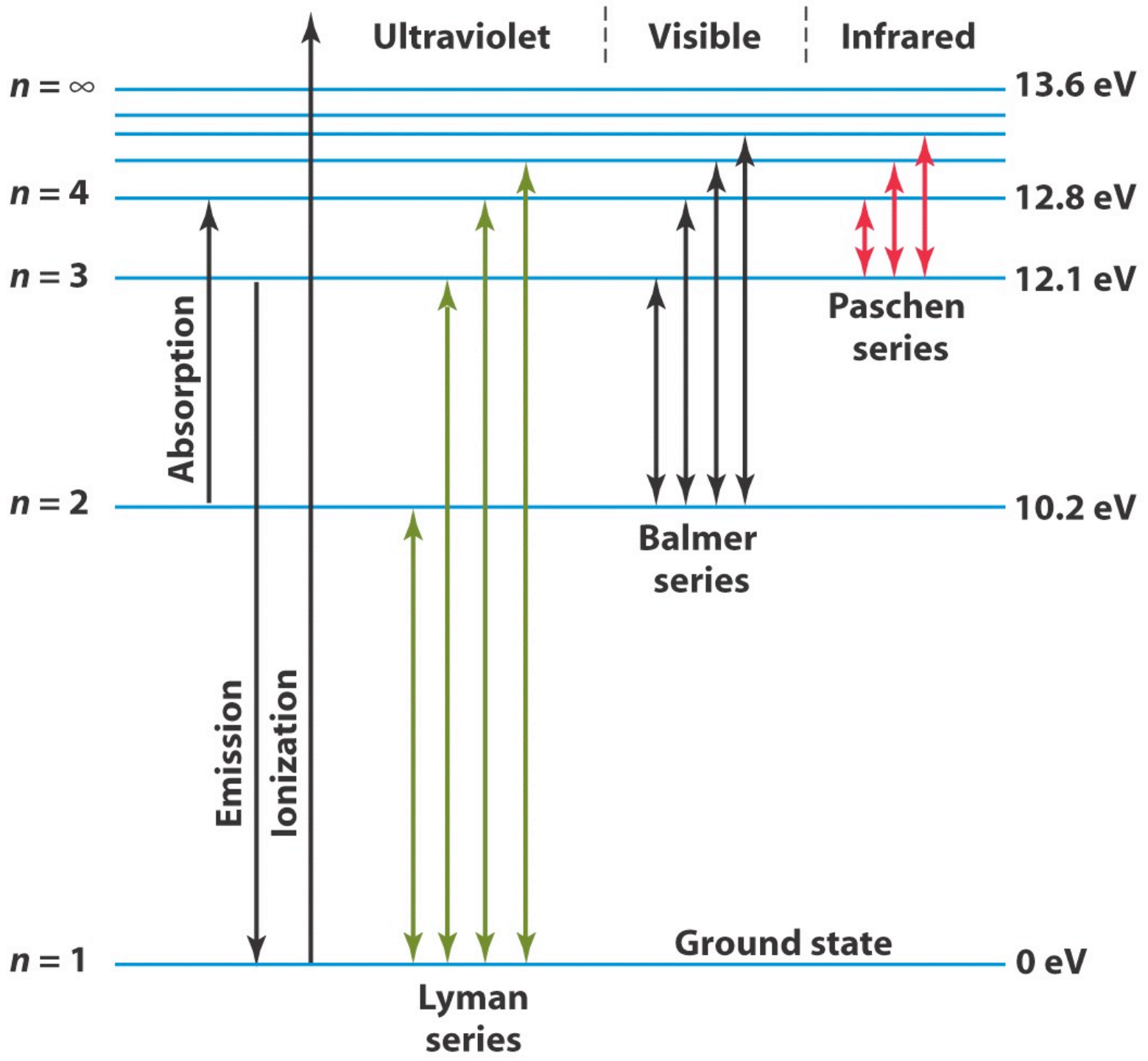


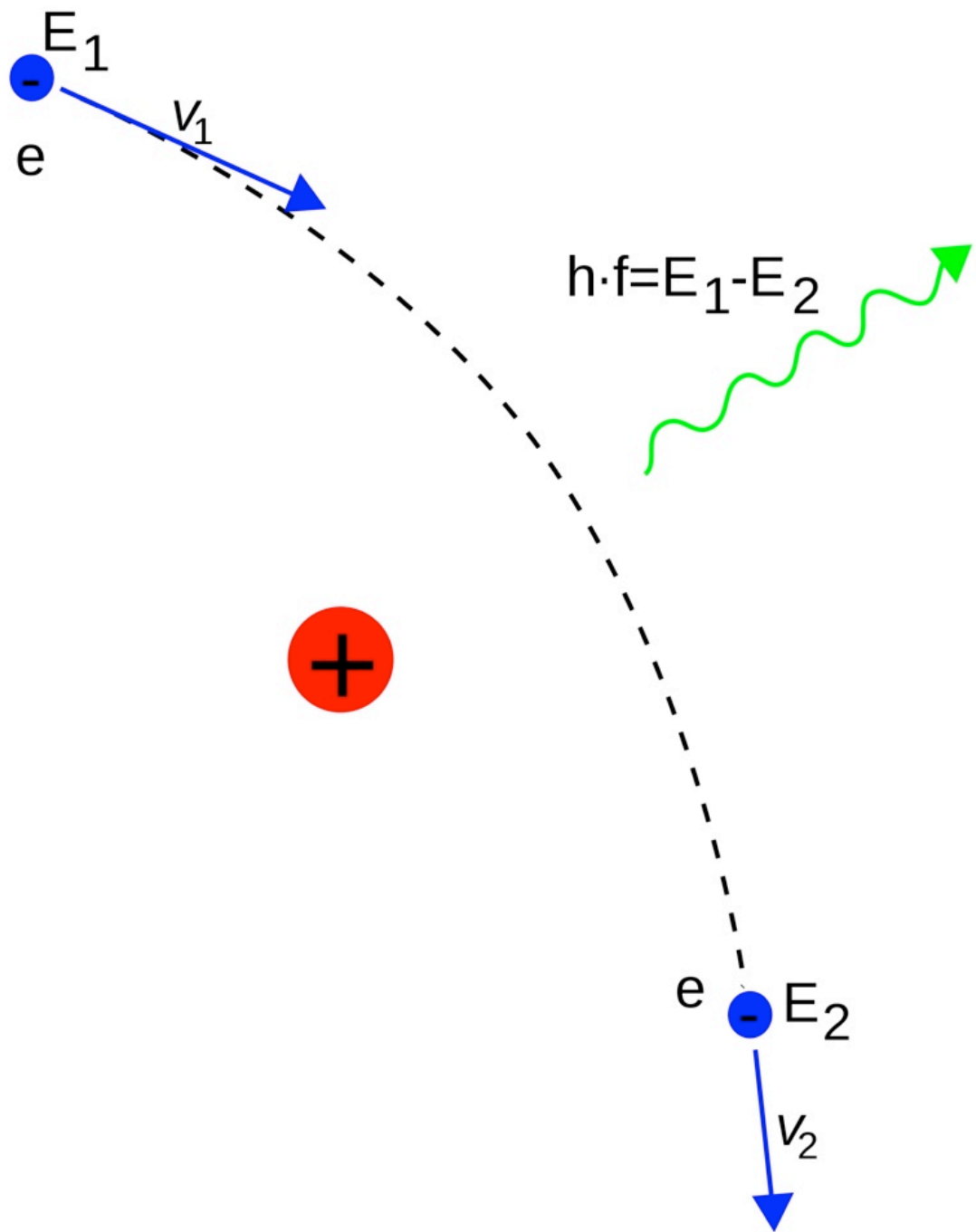


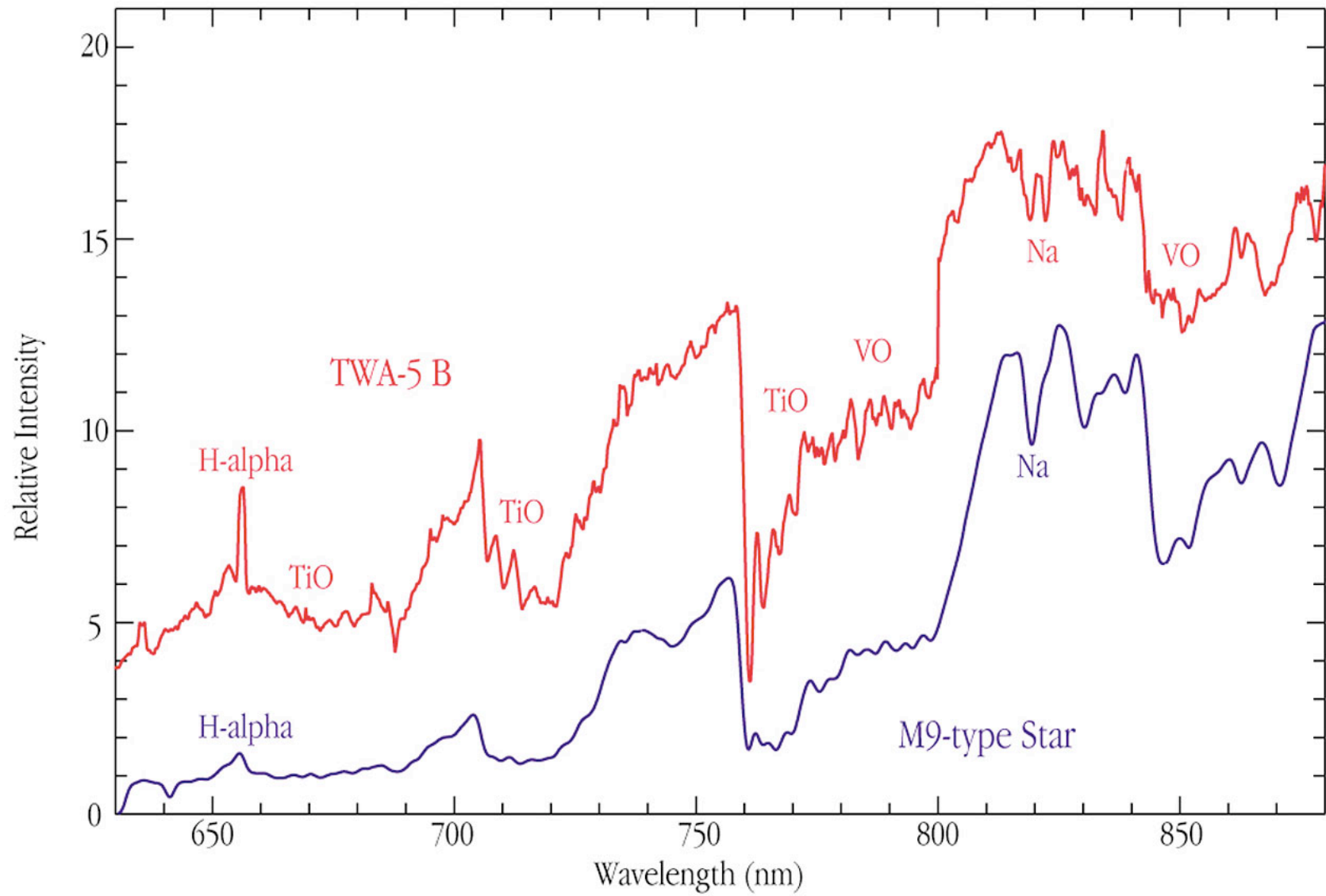
B, V, I



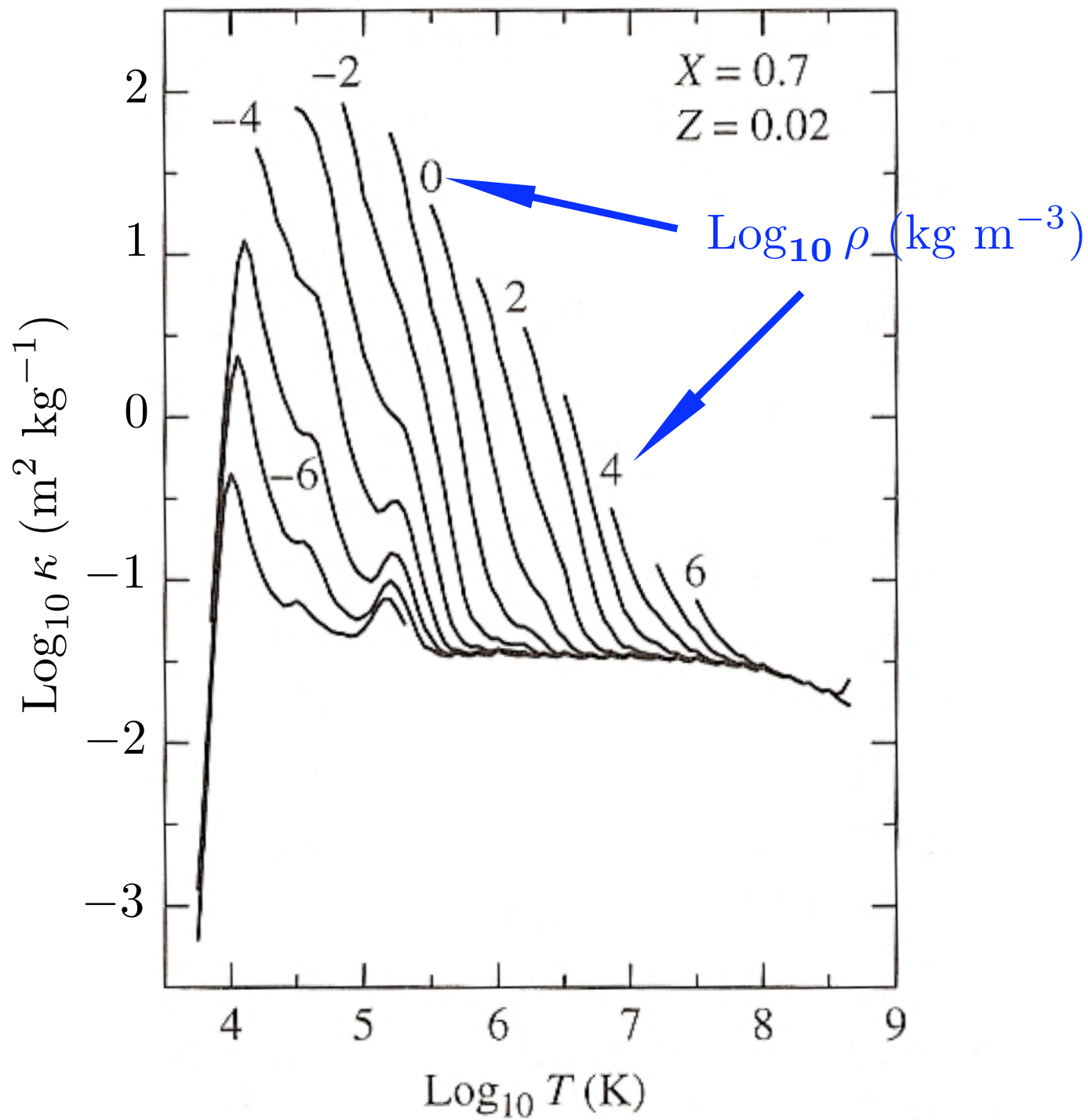
B, I, K

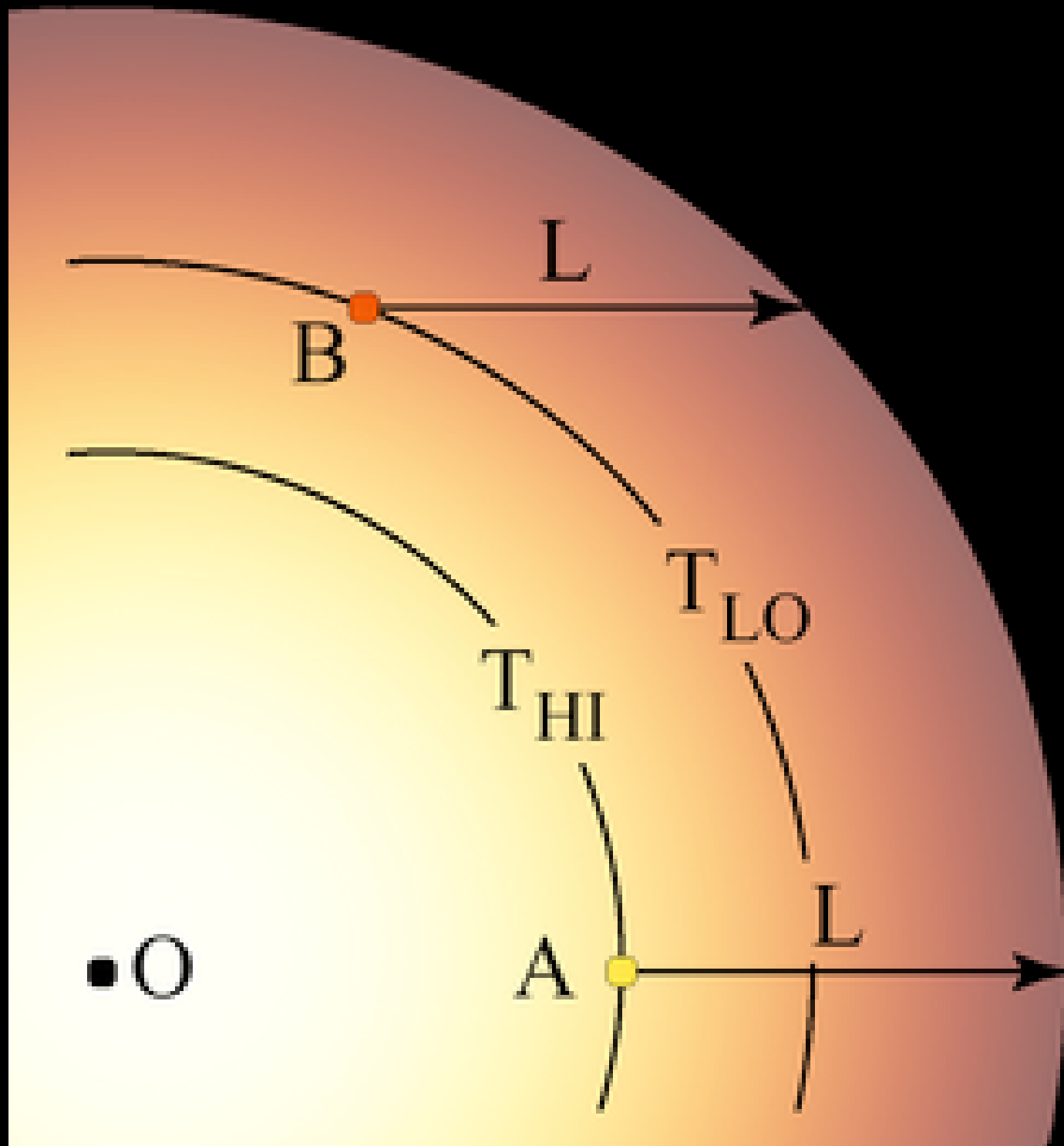


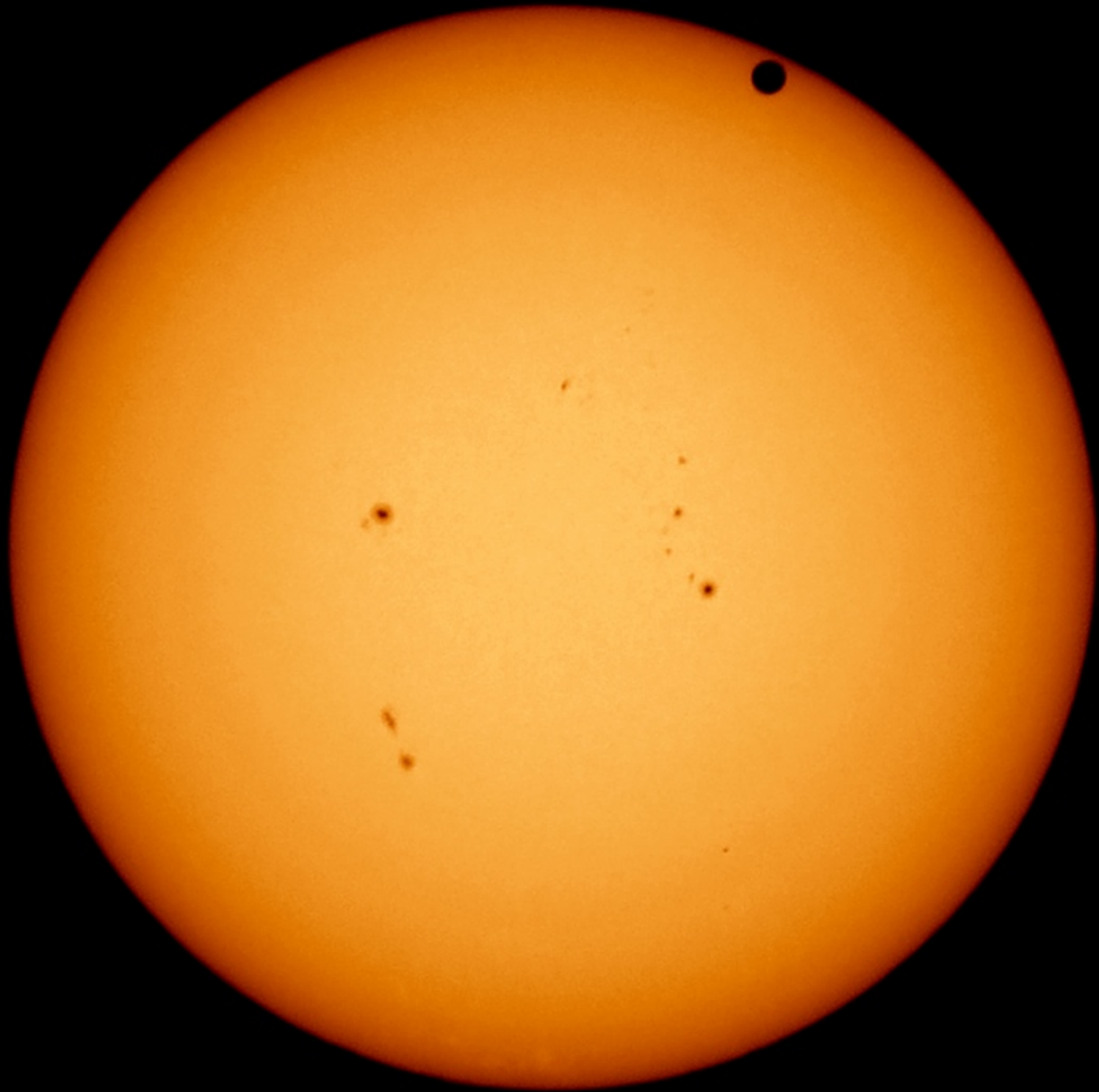


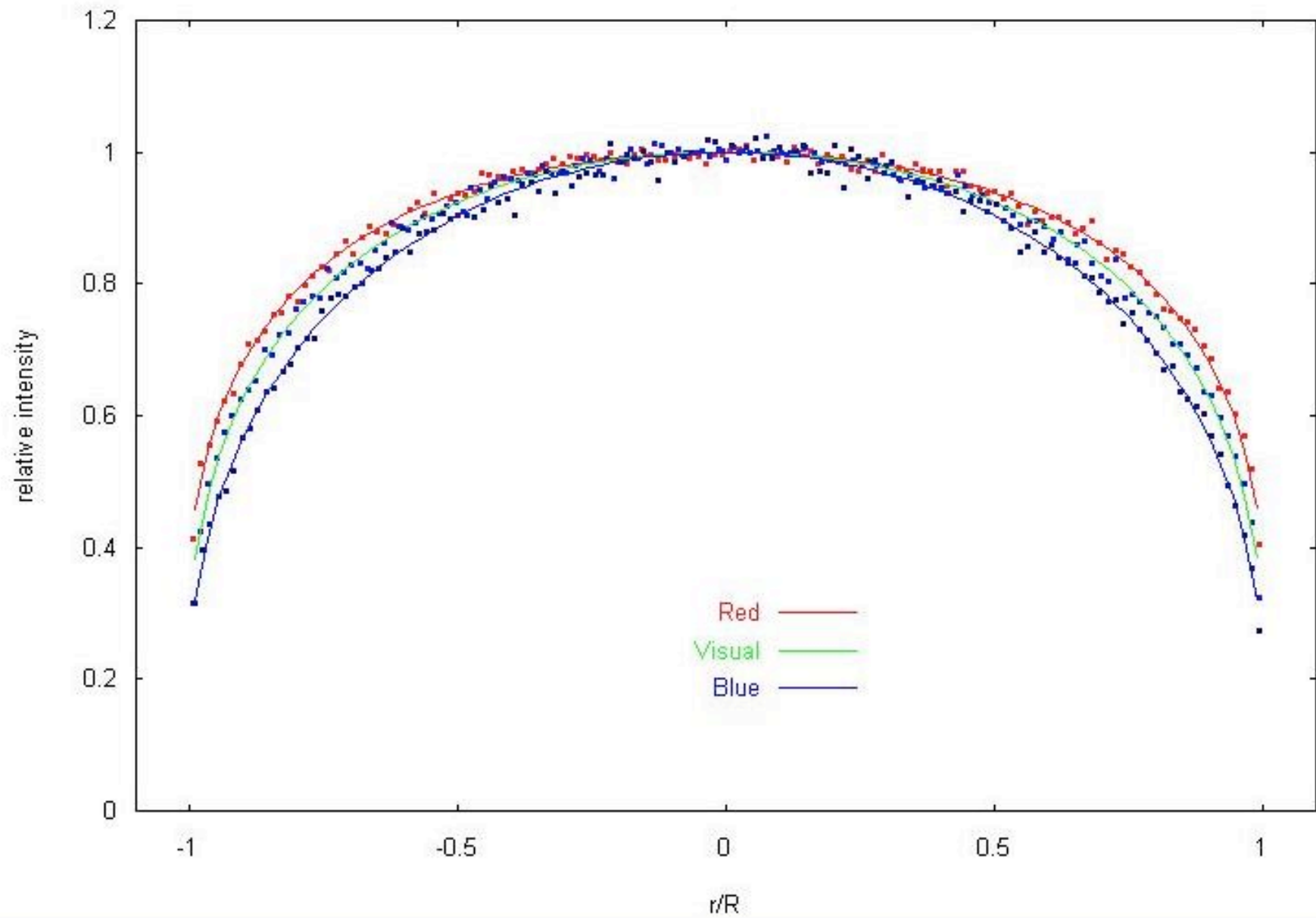






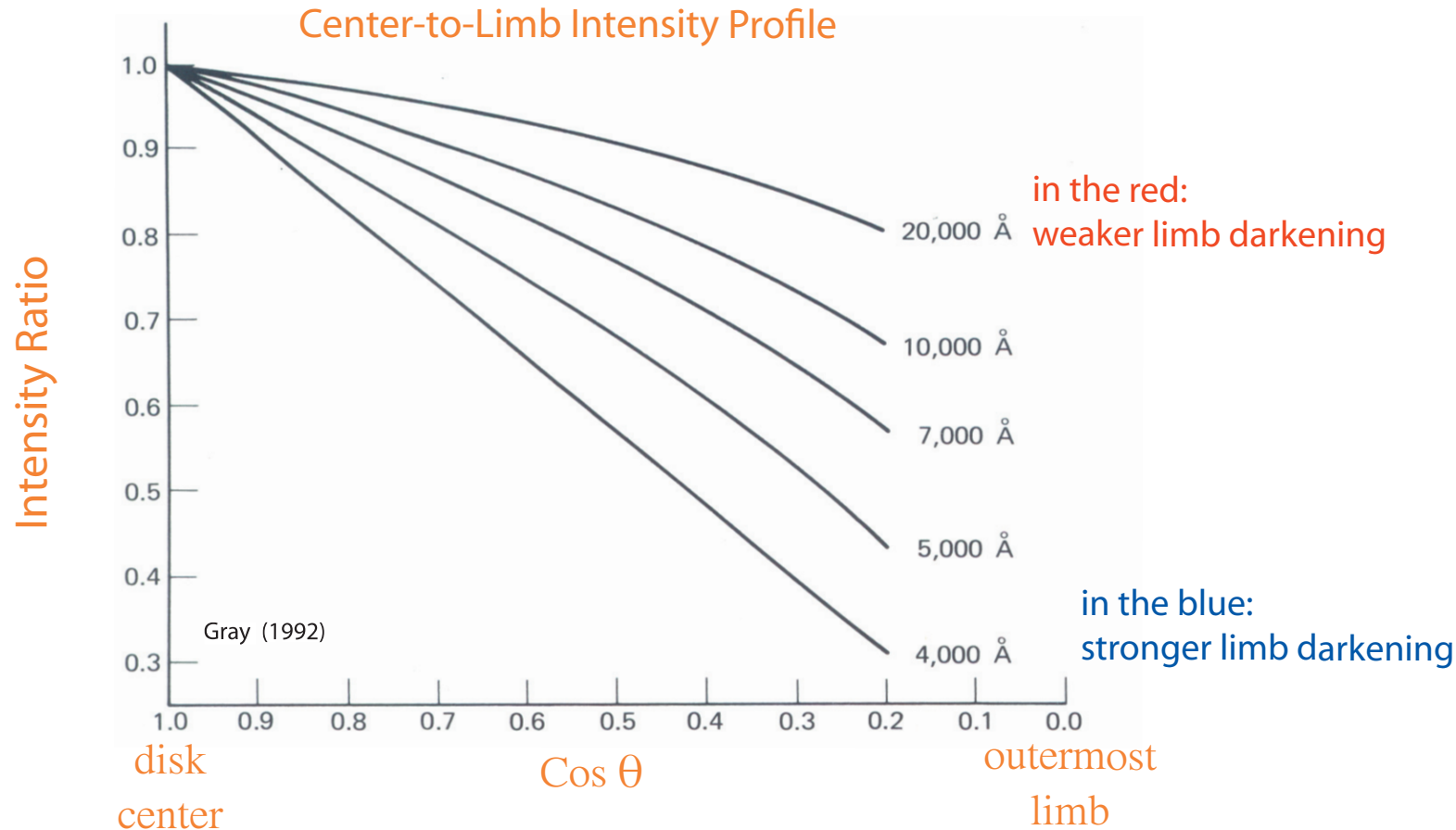






Limb Darkening Basics II

Continuum wavelength dependence



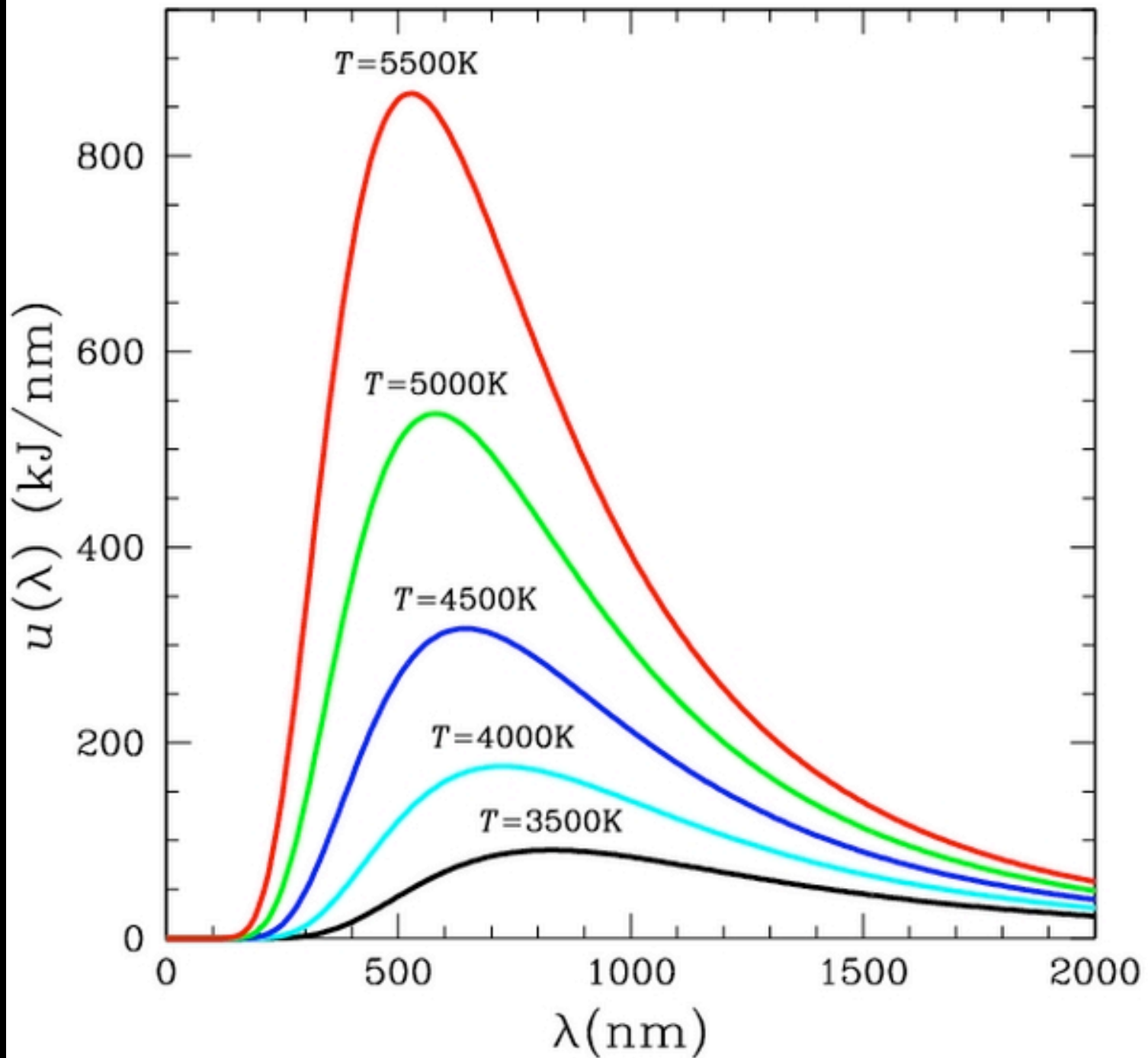
$B_{\lambda} \approx \frac{2ckT}{\lambda^4}$ when $hc \ll k\lambda T$

Rayleigh-Jeans approx.
of the Planck function

$$\frac{dB_{\lambda}}{dT} \approx \frac{2ck}{\lambda^4}$$

The change in intensity with temperature increases with decreasing wavelength







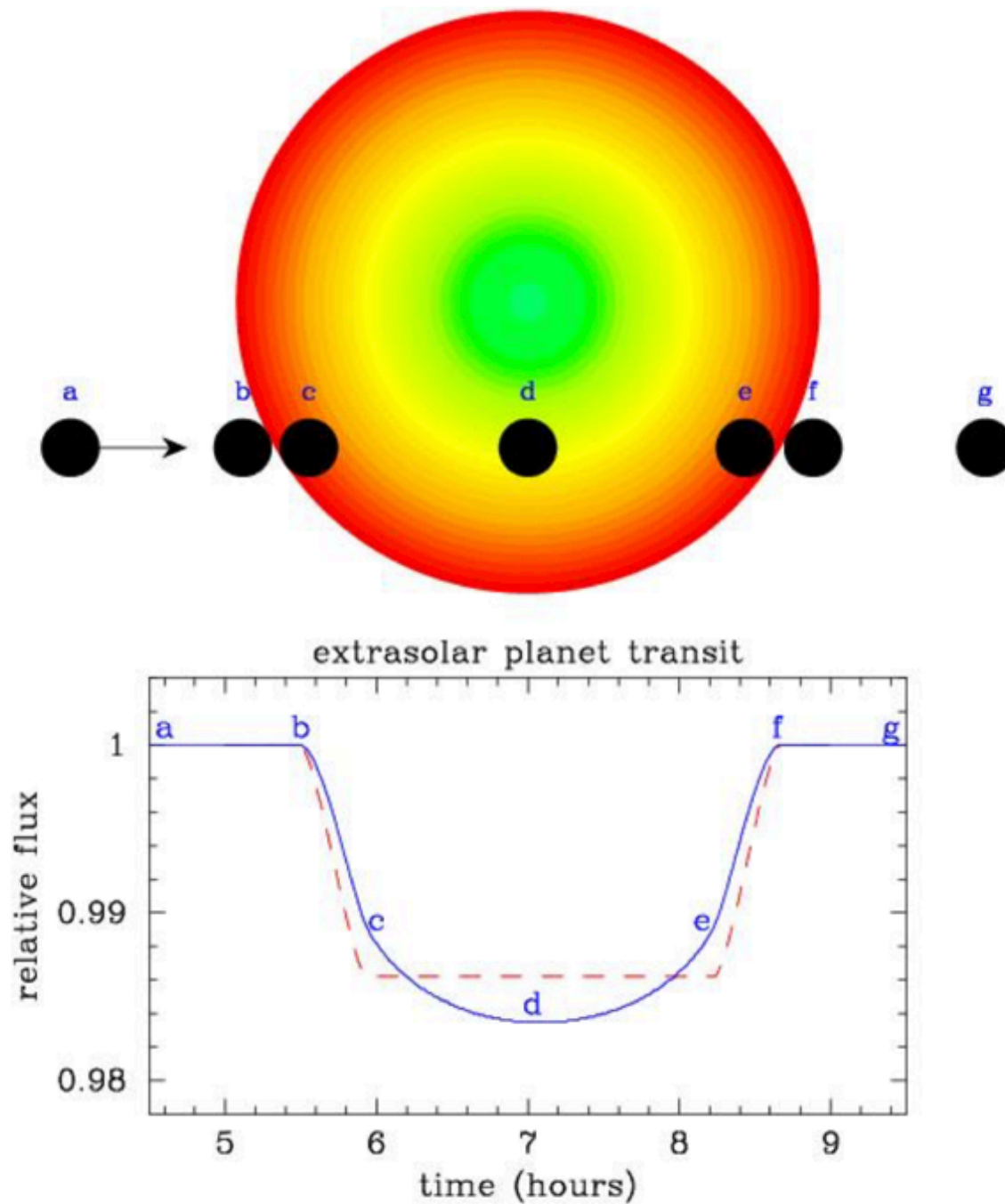


Fig. 1.3.— Illustration of a planetary transit and the resultant light curve for both a stellar disk of uniform brightness (dashed line) and one that includes limb-darkening (solid line).