

Planck law

$$u(\lambda, T) = \frac{8\pi hc}{\lambda^5 \left(e^{\frac{hc}{\lambda k_B T}} - 1 \right)}$$

or

$$u(f, T) = \frac{8\pi h f^3}{c^3 \left(e^{\frac{hf}{k_B T}} - 1 \right)}$$

Computer assignments:

Plot $u(\lambda, T)$ vs. λ @

$$T = 1000 \text{ K}$$

$$1500 \text{ K}$$

$$2000 \text{ K}$$

$$2500 \text{ K}$$

verify Wien's displacement law
graphically!