

A body which absorbs radiation of all wavelengths is called a blackbody.

- The radiation emitted from a blackbody has a continuous spectrum.
- Wien proposed a relationship between λ_{\max} and T for the blackbody distribution

$$\lambda_{\max} = \frac{2.898 \times 10^{-3}}{T} \quad \text{Wien's displacement law.}$$

- Wien proposed the spectral energy density for a blackbody:

$$\rightarrow u(f, T) = A f^3 e^{-\frac{\beta f}{T}}$$

Wien's exponential law

A & β : fitting parameters

The law failed to fit the experimental data at long wavelengths!

(see Fig. 2.5 in the text book)