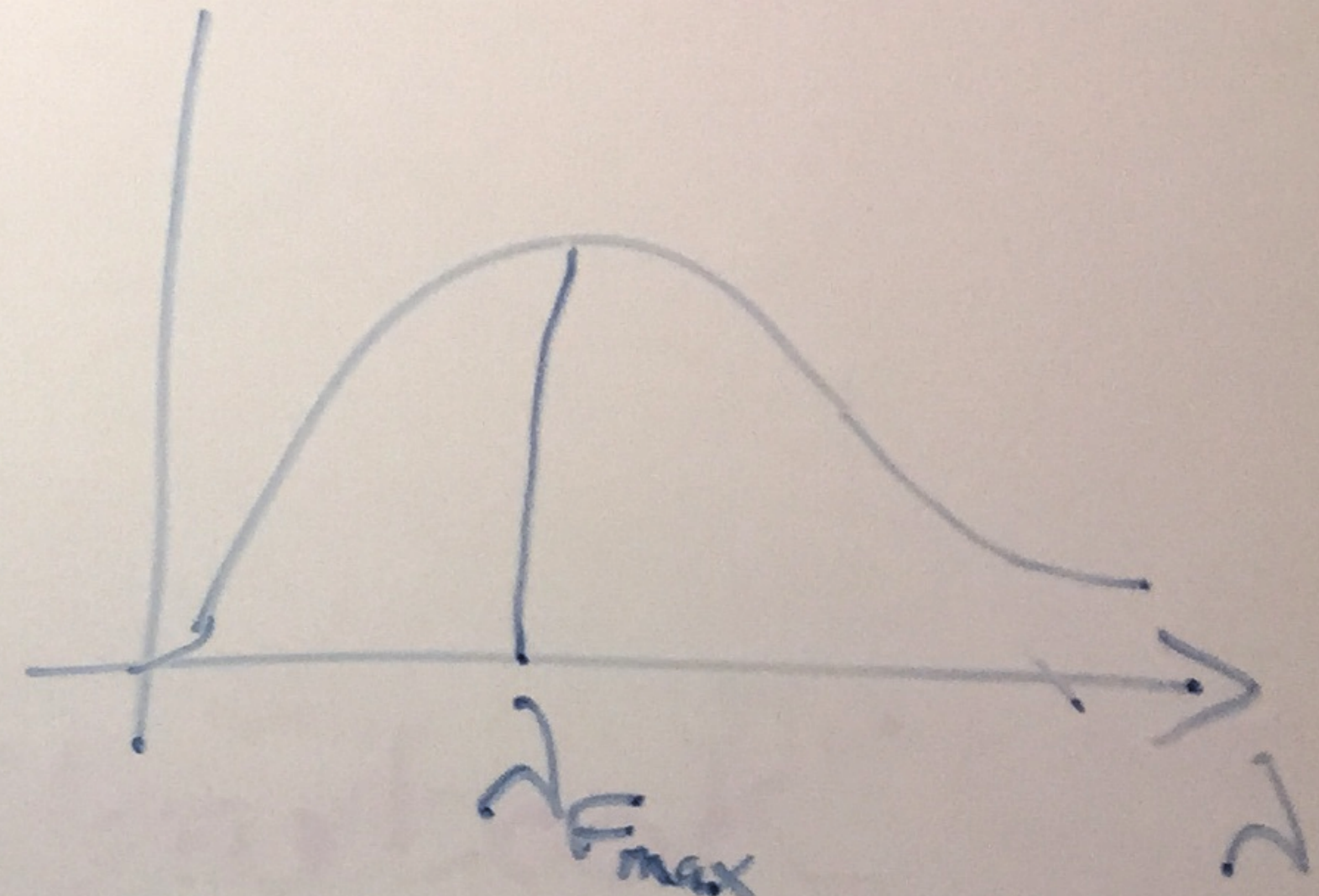


Spectral Shape



Total EM energy radiated (per unit surface area) : σT^4

$\sim \frac{1}{T}$
 $T [K]$

Energy [J]

$[kT_{kin}] \approx \frac{3}{2} kT$
 per atom

[eV] =

$\frac{h}{\lambda} = \frac{h}{2\pi r}$

1 eV = $1.6 \cdot 10^{-19}$ J

$h \cdot c = 197 \text{ eV} \cdot \text{nm}$

$hc = 2\pi \cdot 197 \text{ eV} \cdot \text{nm} \approx 1200$

Quantum Mechanics

→ makes predictions about probabilities, NOT trajectories

→ outcome of a measurement

EITHER uncertain
 OR quantized

Ex.: photons

Binding energy of electrons in atoms

