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Wien's Displacement Law

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See Unified Absolute Relativity Theory at:

www.wbabin.net/saraiva/saraiva105.pdf
www.wbabin.net/saraiva/saraiva223.pdf

Wien's law gives the wavelength or the frequency for the maximum intensity of a blackbody radiator with temperature.

But some thing is wrong because the wavelength and the frequency don't obey the relation:

$$xf = c \quad ; \quad \text{c – Light speed in vacuum}$$

$$x_{MAX} = \frac{F}{T} \quad \text{and} \quad F = 2.898 \times 10^{-3} \quad \text{(SI units)}$$

$$f_{MAX} = \frac{ukT}{h} \quad \text{and} \quad u = 2.82144$$

x - Wavelength; T – Temperature; f – Frequency; k – Boltzmann constant;
h – Planck constant.

F is a force:

$$F = \frac{q^2}{4\pi\varepsilon_0 R^2} \quad \text{and} \quad R = \frac{x_e}{2\pi}$$

q – Electron charge; ε_0 -- Vacuum permittivity; x_e -- Electron Compton wavelength;

True value of F:

$$F = 1.5485 \times 10^{-3} N$$

$$x_{MAX} = \frac{F}{T} \quad ; \quad f_{MAX} = \frac{cT}{F}$$

$$\frac{c}{F} = \frac{uk}{h} \quad \Leftrightarrow \quad u = 9.2958$$

Units:

$$I_S = \text{ Spectral irradiance} = V^5$$

$$I = \text{ Intensity} = LV^5$$

The square root of an intensity doesn't exist.

True Planck formulas:

$$I_S = \frac{2ckT}{x^4}\frac{1}{e^{hc/xkT}-1}$$

$$I = \frac{2ckT}{x^3}\frac{1}{e^{hc/xkT}-1}$$