the general science journal

Unified Force and Lorentz Equations

António Saraiva -- 2008-05-19
ajps2@hotmail.com

$$\begin{cases} F = \dfrac{khc}{x^4} = G\dfrac{m^2}{x^2} = \dfrac{kh(c^2 - v^2)^2 f_0^{\,4}}{c^3(w_0 + v)^4} \\ v = -\sqrt{\dfrac{Gm}{x}} \end{cases}$$

$$m = \frac{hcf}{w^3} = \frac{hc\sqrt{c^2 - w^2}}{\sqrt{k}w^3}$$

$$G = \frac{kw^4}{hc} = \frac{khc}{x^2}$$

$$v = c^2\frac{w - w_0}{c^2 - ww_0}$$

$$v = -\sqrt{kf^2} = -\sqrt{\frac{G}{x}} = -\sqrt{c^2 - w^2} \quad \Leftrightarrow \quad w = \sqrt{c^2 - v^2}$$

$$\Leftrightarrow \quad (c^2 - w^2)(c^2 - ww_0)^2 = c^4(w - w_0)^2$$

For m = 1kg

$$x = \sqrt[3]{\frac{kh}{c}} = 7.6 \times 10^{-26}; \quad G = 6.84 \times 10^{-9}; \quad v \approx -c$$

$$\begin{cases} x = \dfrac{x_0 + vt_0}{\sqrt{1 - v^2/c^2}} \\ t = \dfrac{t_0 + vx_0/c^2}{\sqrt{1 - v^2/c^2}} \\ w = \sqrt{c^2 - v^2} \end{cases} \quad \Leftrightarrow$$

$$\begin{cases} x = \dfrac{c\sqrt{k + x_0^{\,2}} + vx_0}{c} \\ t = \dfrac{\left(c^2 t_0 + v\sqrt{c^2 t_0^{\,2} - k}\right)^2}{c^3\left(\sqrt{c^2 t_0^{\,2} - k} + vt_0\right)} \end{cases}$$

$$k = 1.99257 \times 10^{-34}\, m^2$$

For x_0 and $ct_0 >> \sqrt{k}$:

$$\begin{cases} x = \dfrac{c + v}{c} x_0 \\ t = \dfrac{c + v}{c} t_0 \end{cases}$$

The Doppler effect.