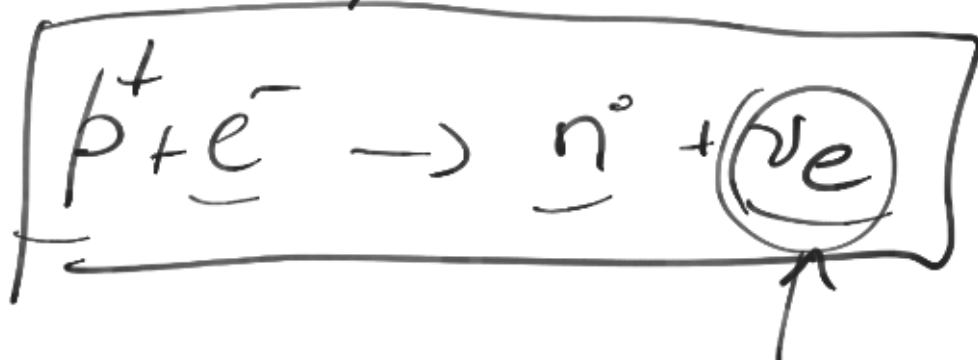


$3M_{\odot} \rightarrow \text{Fungio}$

88% \rightarrow Neutros



SN 1987A \rightarrow Nubes de Neutros

$$F_G = \frac{GmM}{r^2}$$



Fuerza Centrifuga

pero grav. no es inercial

$$\frac{GM}{r^2} = \frac{v^2}{r}$$

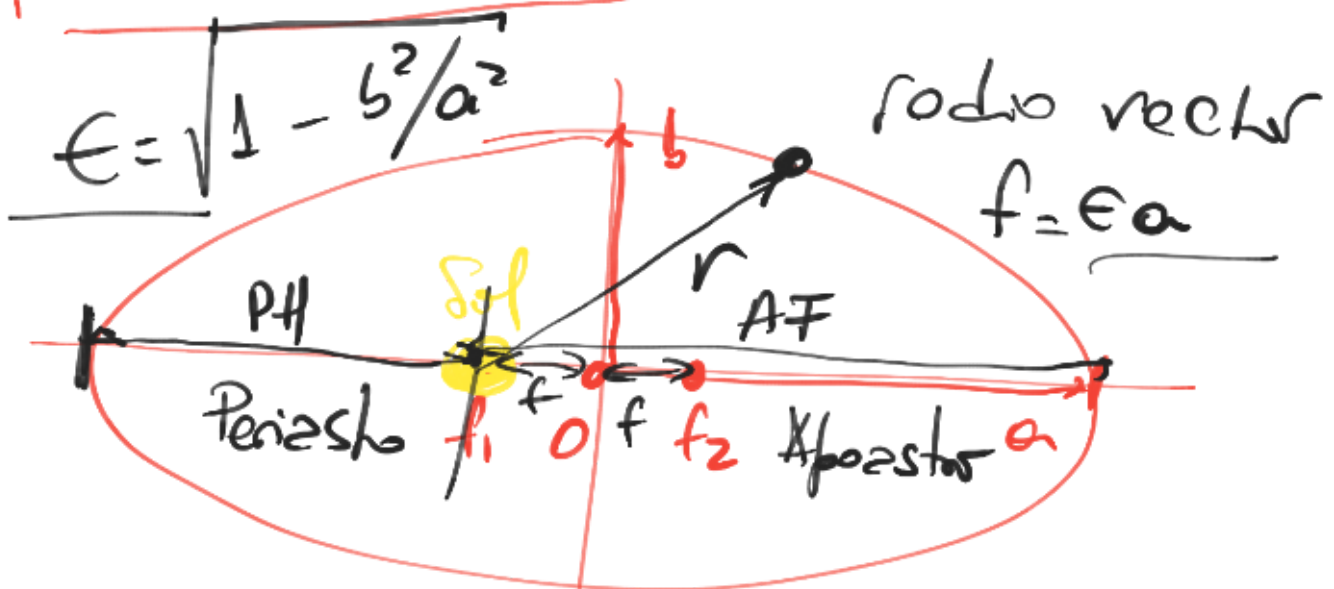
$$\frac{GM}{r} = v^2 \Rightarrow r_0 = \sqrt{\frac{GM}{r}}$$

$$\frac{2\pi r}{T} = v_0 = \sqrt{\frac{GM}{r}}$$

$$\frac{4\pi^2 r^2}{T^2} = \frac{GM}{r} \Rightarrow \left(\frac{4\pi^2}{GM} \right) = \frac{T^2}{r^3}$$

$$T^2 = K r^3$$

$$\langle r \rangle = a$$



$$T^2 = K a^3$$

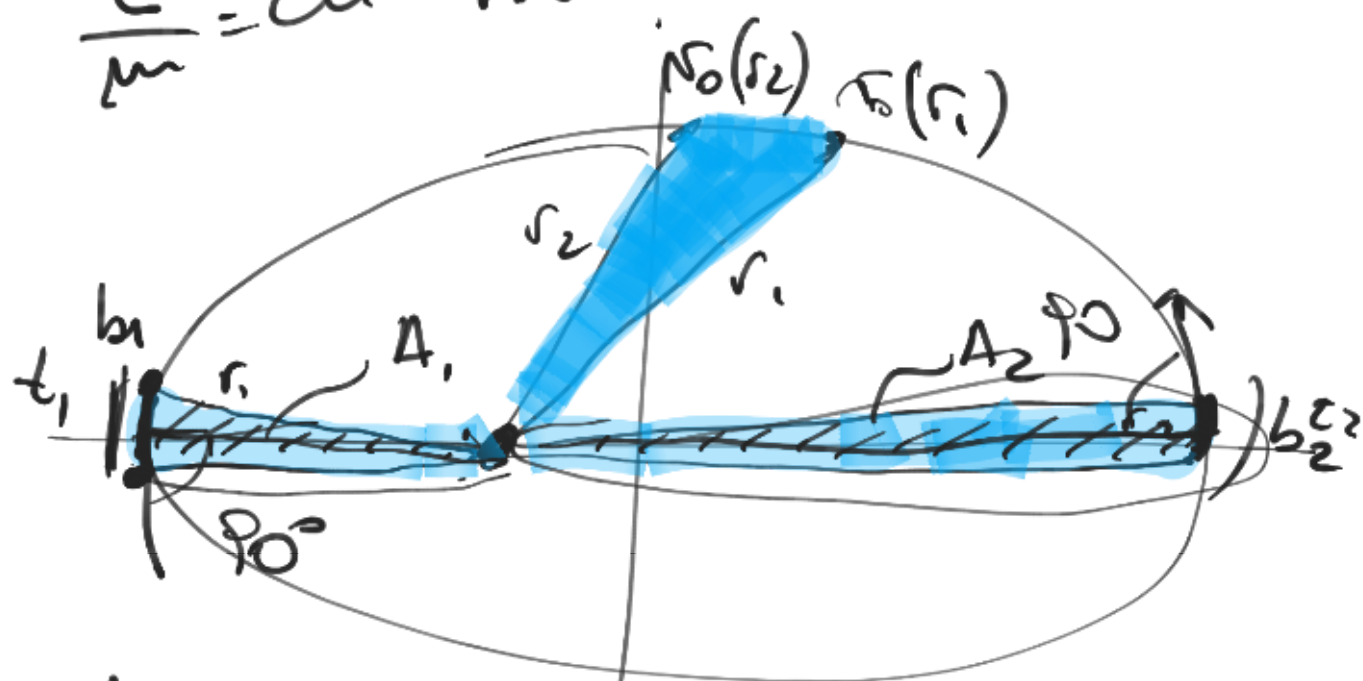
$$K = \frac{4\pi^2}{GM}$$

801 $\hat{r} \hat{v} \hat{r} \hat{\pi} \hat{j} \hat{s} \hat{u} \hat{n} \hat{p}$

$$\left(\frac{\Phi_H + \Phi_F}{2} \right) = a \quad r_0 = \sqrt{\frac{GM}{r}}$$

$$L = c t h \rightarrow L = (m) r v \quad r v = c t h$$

$$\frac{L}{m} = c t h = r \cdot v$$



$$\frac{\Delta A_1}{\Delta t} = \frac{\Delta A_2}{\Delta t}$$

$$\Delta A_1 = \frac{b_1 \cdot r_1}{2}$$

$$\Delta A_2 = \frac{b_2 \cdot r_2}{2}$$

$$\frac{b_1 \cdot r_1}{2 \Delta t} = \frac{b_2 \cdot r_2}{2 \Delta t}$$

$$\frac{\cancel{N_0(r_1)} \cdot \cancel{\Delta t} r_1}{\cancel{2 \Delta t}} = \frac{\cancel{N_0(r_2)} \cdot \cancel{\Delta t} \cdot r_2}{\cancel{2 \Delta t}}$$

$$N_0(r_1) \cdot r_1 = N_0(r_2) \cdot r_2$$

$$\underbrace{m N(r_1) \cdot r_1}_{L_1} = \underbrace{m N(r_2) \cdot r_2}_{L_2}$$

$$\underline{L_1 = L_2 = \text{const.}}$$

$$\frac{T^2}{a^3} = \frac{4\pi^2}{\underbrace{GM_0}} = K_0$$

$$[K_0] = \text{s}^2/\text{m}^3$$

$$\left(\frac{T^2}{12 \pi^2} \right) / a^3 = \left(K_0 / a^3 \right)$$

.../a

$$\left(\frac{T^2}{\sigma \bar{\omega}^2}\right) \cdot \frac{UA^3}{a^3} = \frac{K_{\odot}}{2\bar{\omega}^2} \cdot UA^3$$

$$\left(\frac{T}{\sigma \bar{\omega}}\right)^2 / \left(a/UA\right)^3 = \underbrace{\frac{K_{\odot}}{2\bar{\omega}^2}}_1 (UA)^3$$

$$T_{\oplus} = 1 \text{ e}\bar{\omega}$$

$$a_{\oplus} = 1UA$$

$$\left(\frac{1 \text{ e}\bar{\omega}}{1 \text{ e}\bar{\omega}}\right)^2 / \left(\frac{1UA}{1UA}\right)^3 = 1 = \frac{K_{\odot}}{2\bar{\omega}} (UA)^3$$

$$\frac{4\pi^2}{G M_{\odot}} \frac{(1UA)^3}{(1 \text{ e}\bar{\omega})^2}$$

$$\begin{matrix} 1 & M & - & M_{\odot} \\ & 1 & - & K \end{matrix}$$

$$\left| \frac{T_{2\pi}^2}{a_{UA}^3} = \left(\frac{M_{\odot}}{M} \right) = \frac{1}{M_{M_{\odot}}} \right|$$

$$T^2 = \frac{1}{M} a^3$$

$$\Rightarrow T = \sqrt{\frac{a^3}{M}}$$

$$a = 1, 31 \text{ UA}$$

$$M = 0,99 M_{\odot}$$

$$T = 1,51 \text{ anni}$$



$$\frac{1}{4\pi\epsilon_0} \frac{Q_1 Q_2}{r^2} = m a$$

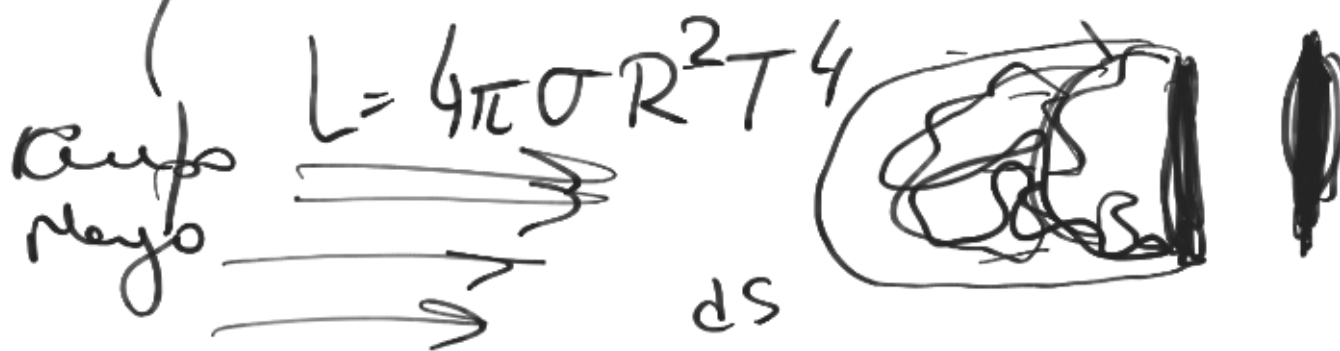
non gravitazione

$$a = \frac{1}{4\pi\epsilon_0} \frac{Q_1 Q_2}{m r^2}$$

$$\frac{GMm}{r^2} = m a$$

non inerziale

$$a \equiv g = \frac{GM}{r^2}$$



$$F = \frac{4\pi\sigma R^2 T^4}{4\pi d^2}$$

πr^2

A small scribbled circle is drawn above the πr^2 term.

$$E_{\oplus} = F \cdot A_{\oplus}$$

$$= \frac{4\pi\sigma R^2 T^4}{4\pi d^2} \cdot \pi r^2$$

$$E_{\oplus}^r = \frac{\sigma R^2 T^4 \cdot \pi r^2}{d^2}$$

$$E_{\oplus}^e = 4\pi r^2 \sigma T_{\oplus}^4$$

$$T_{\oplus} \mid E_{\oplus}^r = E_{\oplus}^e$$

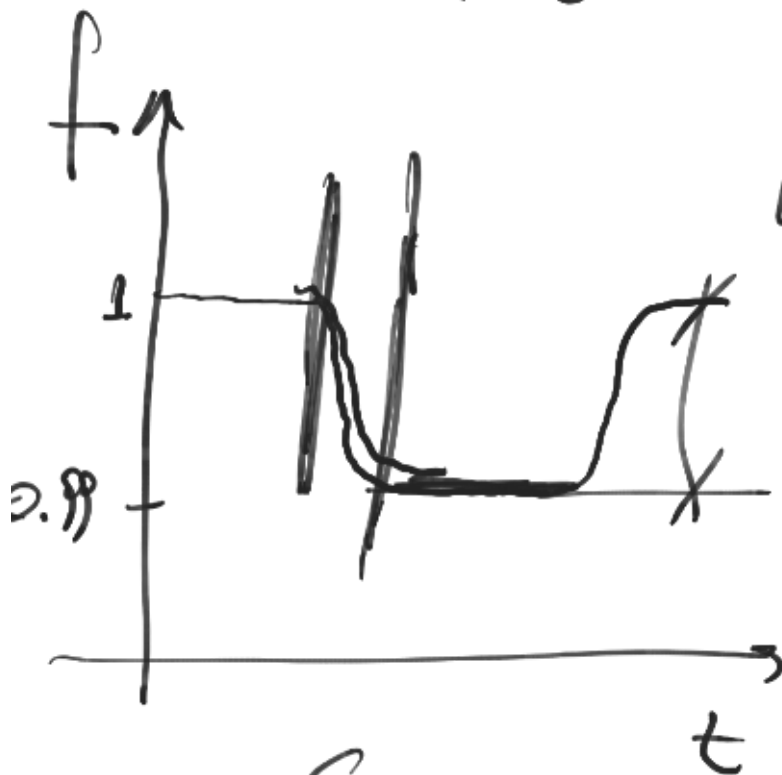
$$\frac{\cancel{\sigma} R^2 \cancel{T^4} \pi \cancel{r^2}}{d^2} = \frac{4\pi \cancel{r^2} \cancel{\sigma} T_{\oplus}^4}{\underline{\underline{4d^2}}}$$

$$T_{\oplus}^4 = \frac{R^2 T^4}{4d^2} \Rightarrow T_{\oplus} = \sqrt[4]{\frac{R^2 T^4}{4d^2}}$$

$$T_{\oplus} = \sqrt{\frac{RT^2}{2d}} \Rightarrow T_{\oplus} = \sqrt{\frac{R}{2d}} T$$

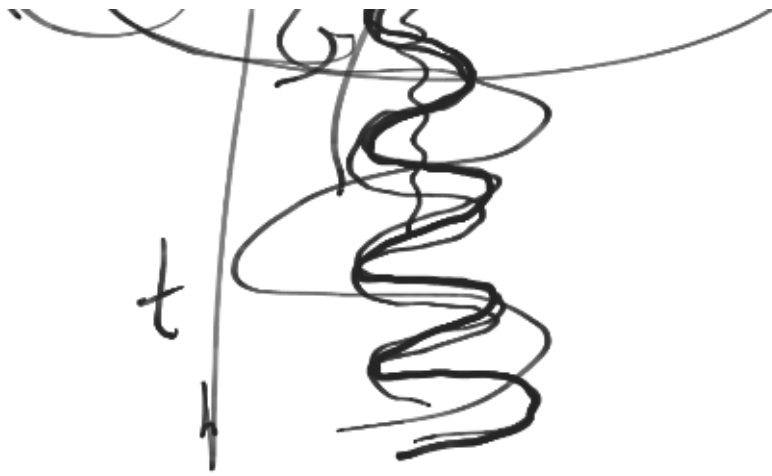
temperatura
Orbital

$$T_{\oplus} = \sqrt[4]{\frac{L_{\odot}}{16\pi\sigma d^2}} = \left(\sqrt[4]{\frac{1}{16\pi\sigma}} \right) \cdot \frac{\sqrt[4]{L_{\odot}}}{\sqrt{d}}$$



metab d eclipse

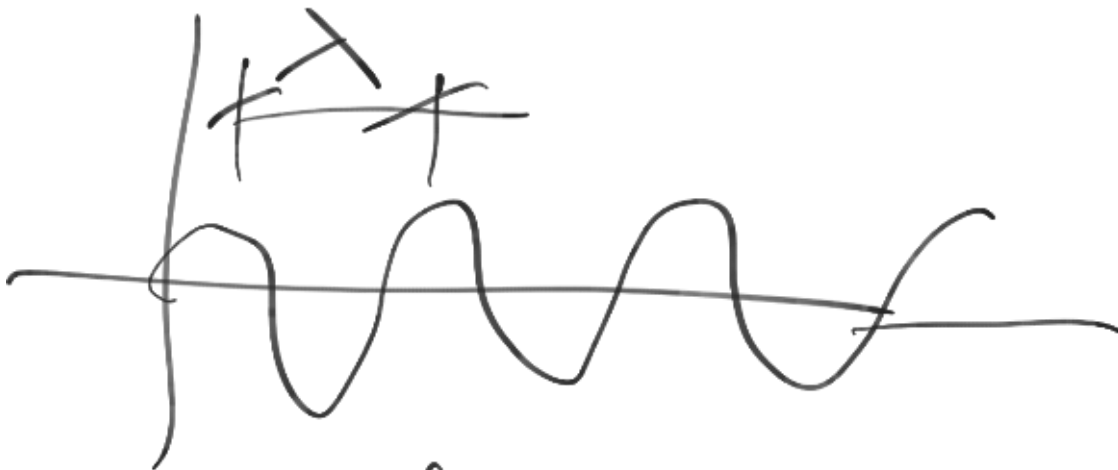




$$\lambda_{\max} = \frac{\Sigma}{\nabla} = \frac{3 \text{ mm } \cancel{\text{K}}}{300 \cancel{\text{K}}}$$

$$\lambda_{\max} = 0,03 \text{ m } \cancel{\text{K}} = 3 \mu\text{m} = \underline{300 \text{ nm.}}$$

in honojo



A hand-drawn sketch on a white background. It features a horizontal line with a thin, slightly wavy line above it. Below the horizontal line, there is a series of small, closely spaced, vertical, wavy lines. To the right of these, there is a larger, more pronounced wavy line that oscillates above and below the horizontal line. The drawing is done in a simple, sketchy style with dark lines.

Última modificación: 22:31