

Preguntas de Tipler

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491

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- Energía (E) $\left(\text{kg} \cdot \frac{\text{m}^2}{\text{s}^2} \right)$

$E \propto \rho^a \cdot T^b \cdot R^c$

- Densidad (ρ) $\left(\text{kg} \cdot \text{L} \cdot \text{m}^3 \right)$

$M \cdot \frac{L^2}{T^2} = (M/L^3)^a (T)^b (L)^c$

- Tiempo (T) (s)

$M \cdot \frac{L^2}{T^2} = M^a \cdot L^{-3 \cdot a} \cdot T^b \cdot L^c$

- Radio (R) (m)

$M \cdot \frac{L^2}{T^2} = M^a \cdot L^{-3a+c} \cdot T^b$

$E = \left(M \cdot \frac{L^2}{T^2} \right)$

$M^1 = M^a \quad a = 1 \quad L^2 = L^{-3a+c} \quad c = 5$

$\rho = (M/L^3)$

$T^{-2} = T^b \quad b = -2$

$T = T$

$E(\rho, T, R) \propto E(\rho^1, T^{-2}, R^5)$

$R = L$

Dimensiones

- M = Kg, g, L (masa)
- T = h, s, m (tiempo)
- L = Km, m, cm (longitudes)