

Vázquez 465

Energía E $[\text{kg} \cdot \frac{\text{m}^2}{\text{s}^2}]$ $E \propto \rho^a T^b R^c$ $1^\circ A$

Densidad ρ $[\text{kg}/\text{m}^3]$ $E = \left[\text{m} \cdot \frac{\text{L}^2}{\text{T}^2} \right]$

Tiempo T $[\text{s}]$

$\rho = [M/L^3]$

Radio R $[M]$

$T = [T]$

$R = [L]$

$$\text{m} \frac{\text{L}^2}{\text{T}^2} = [M/L^3]^a \cdot [T]^b \cdot [L]^c$$

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

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

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

$$M^1: M^a$$

$$L^2: L^{-3a+c}$$

$$T^{-2}: T^b$$

$$1 = a$$

$$2 = -3 + c$$

$$-2 = b$$

$$5 = c$$

$$E \propto (P^a, T^b, R^c) \Rightarrow E(P^1, T^{-2}, R^5)$$

$$E \propto P^1 T^{-2} R^5$$