

## Planteamiento problema de Taylor

Cadete Verdejo

$$\text{Energía} = \left[ \text{Kg} \cdot \frac{\text{m}^2}{\text{s}^2} \right] = \left[ \text{M} \cdot \frac{\text{L}^2}{\text{T}^2} \right]$$

(E)

10

$$\text{Densidad} = \left[ \frac{\text{Kg}}{\text{m}^3} \right] = \left[ \frac{\text{M}}{\text{L}^3} \right]$$

(ρ)

$$\text{Tiempo} = \text{s} = [\text{T}]$$

(s)

$$\text{Radio} = \text{m} = [\text{L}]$$

(m)

$$E = \rho^a \cdot T^b \cdot L^c$$

$$\text{M} \cdot \frac{\text{L}^2}{\text{T}^2} = \frac{\text{M}}{\text{L}^3} \cdot \text{T} \cdot \text{L}$$

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

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

$$\text{M}^1 = \text{M}^a$$

$$1 = a$$

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

$$-2 = b$$

$$\text{L}^2 = \text{L}^{-3a+c}$$

$$2 = -3a + c$$

$$2 = -3 + c \rightarrow c = 5$$

$$E = \rho^1 \cdot \text{T}^{-2} \cdot \text{L}^5$$