

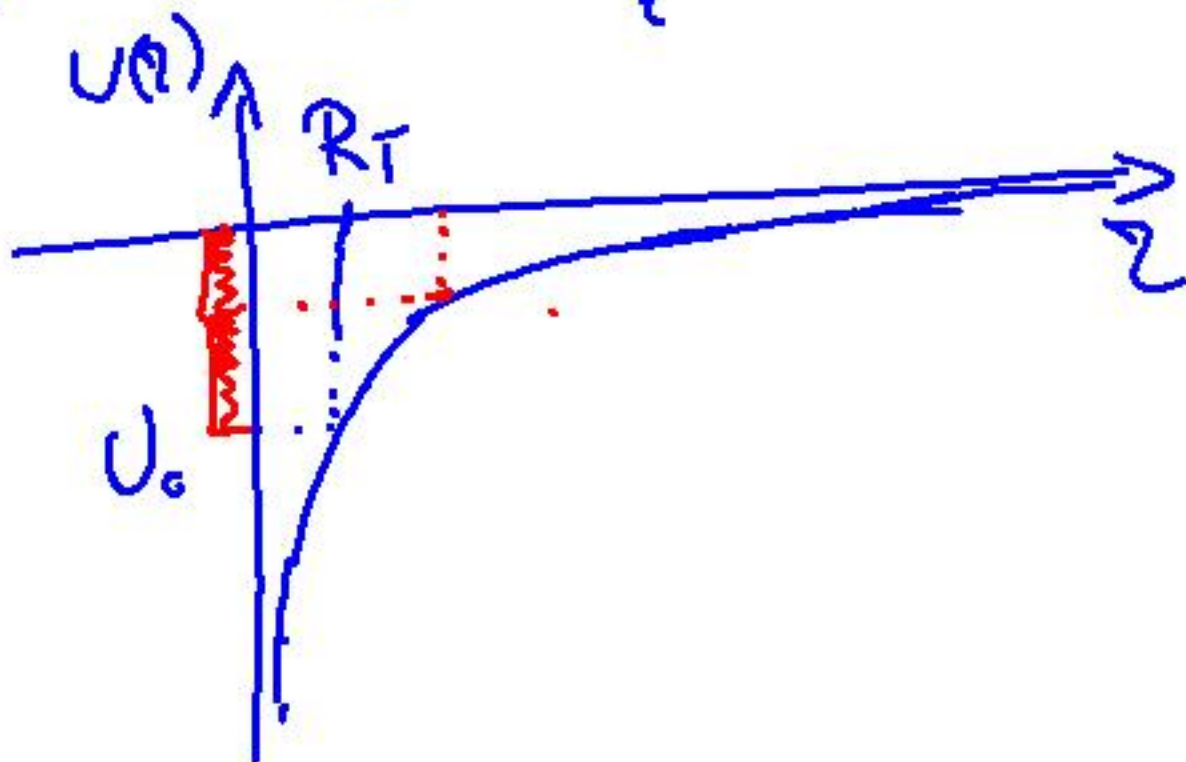
$$L = \Delta E_i$$

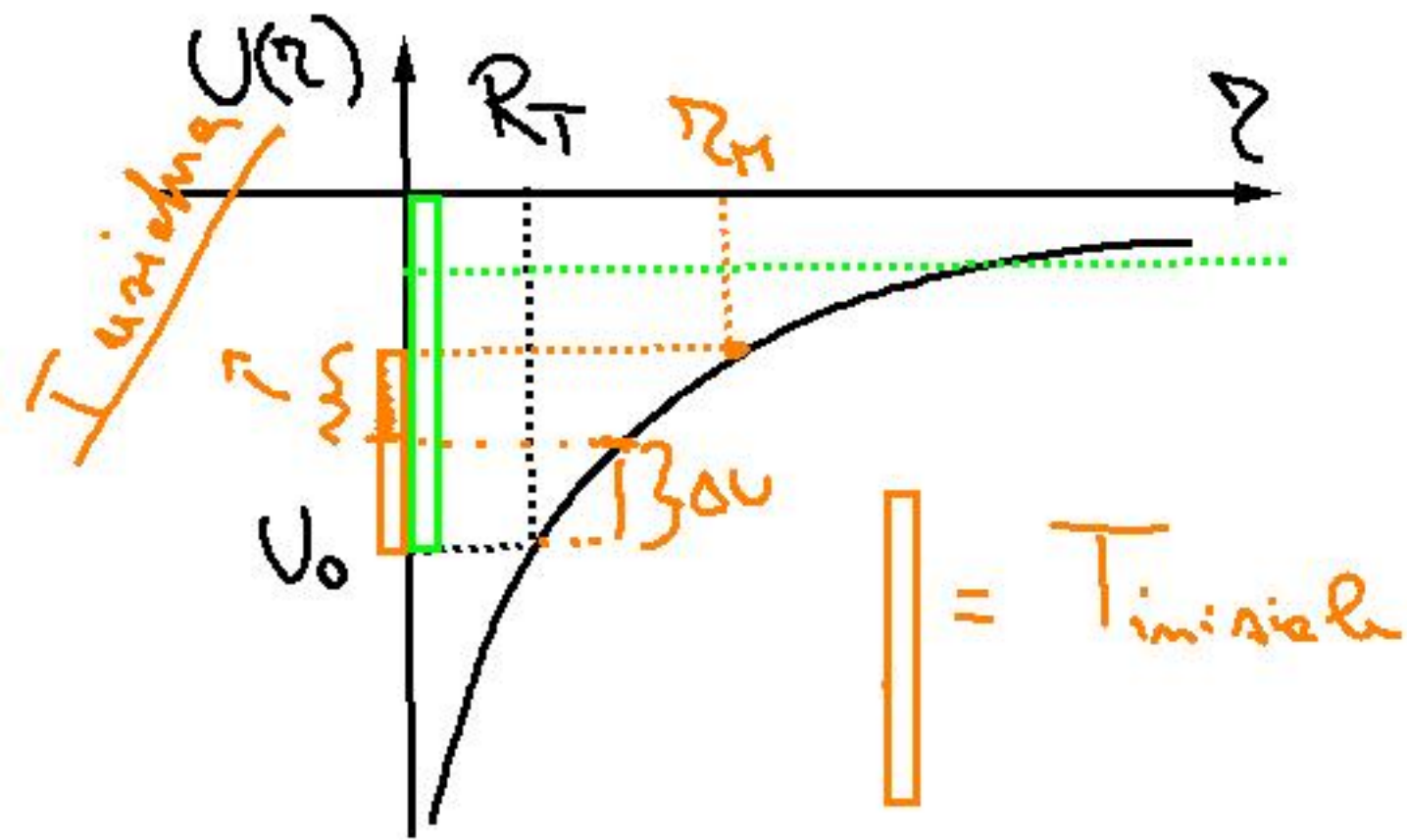
$$L = -\Delta U$$

$$y = U(\theta)$$

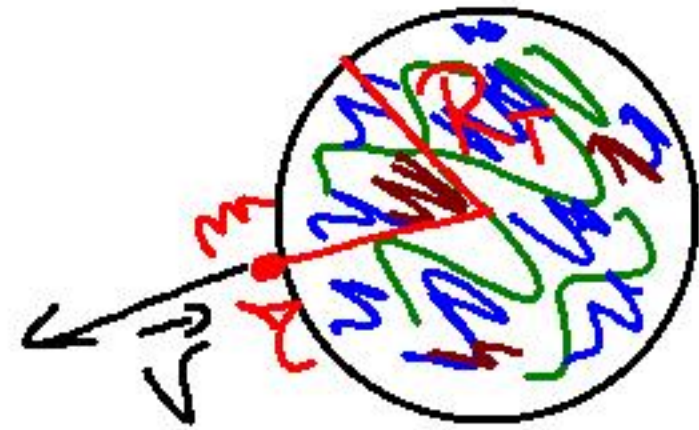
$$U = -mgh$$

$$U = -\frac{GmMm_1}{r}$$





$$U(r) = -\frac{G M_T m}{r}$$



$$T_{\text{minisiel}} = \frac{1}{2} m v^2$$

$$T + U = \text{const}$$

$$T_f = -U_0 = \frac{G M_T m}{R_T}$$

$$\frac{1}{2} m v_f^2 = \frac{G M_T m}{R_T} \rightarrow v_f = \sqrt{\frac{2 G M_T}{R_T}}$$

