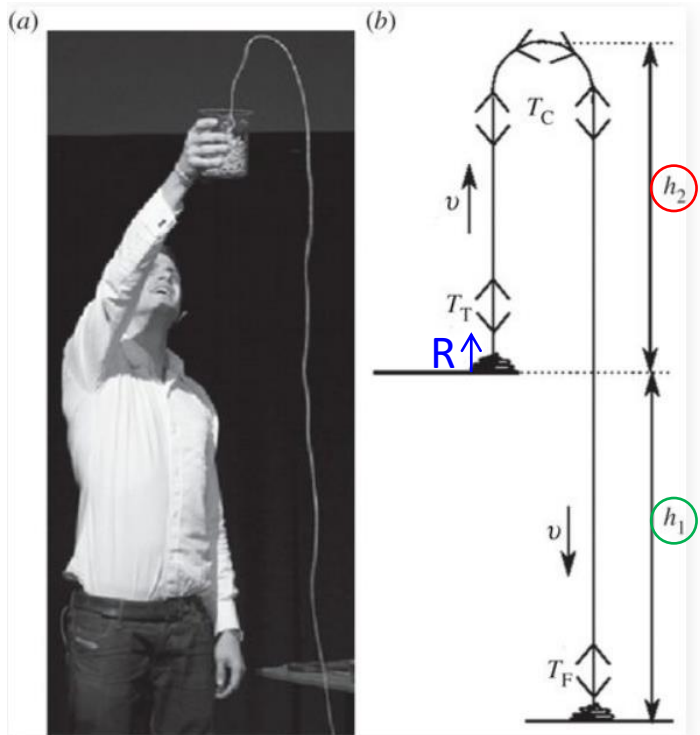


鎖の噴水



$$\frac{T_C}{r} = \frac{\lambda v^2}{r} \implies T_C = \lambda v^2.$$

$$T_C = T_T + \lambda h_2 g,$$

$$T_C = T_F + \lambda(h_2 + h_1)g,$$

$$v = \sqrt{h_1 g}.$$

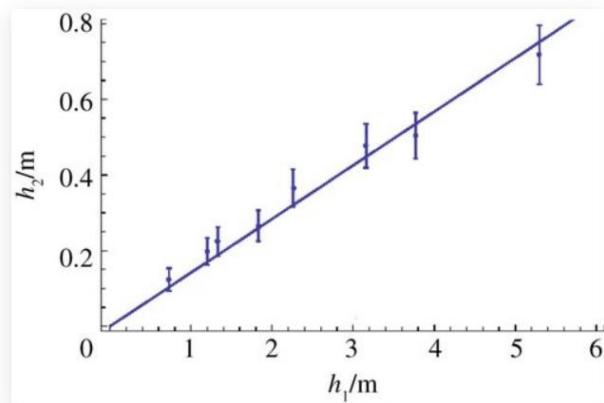
$$\frac{h_2}{h_1} = \frac{\alpha}{(1 - \alpha - \beta)}$$

$$\alpha = \frac{R}{\lambda v^2}$$

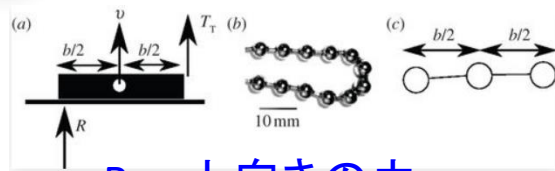
$$\beta = \frac{T_F}{\lambda v^2}$$

λ : 単位長さ当たりの質量

h_1 が高い程 h_2 が高い



出典: Biggins, J. S.; Warner, M. (15 January 2014). "Understanding the chain fountain". *Proceedings of the Royal Society A* **470**



R : 上向きの力