

Barometrická formule

$$dF = -m_0 g dN \quad m = m_0 N ; F = m g z$$

$$\frac{dF}{S} = -\frac{m_0 g dN}{S}$$

$$dp = -\frac{m_0 g dN}{S}$$

$$dp = -\frac{m_0 g p dV}{k T S}$$

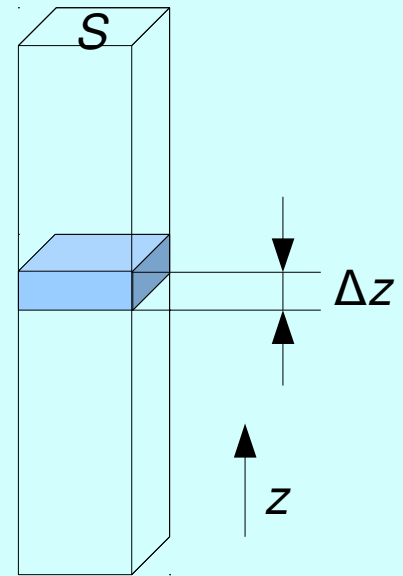
$$dp = -\frac{m_0 g p S dz}{k T S}$$

$$\frac{dp}{p} = -\frac{m_0 g dz}{k T}$$

$$p dV = dN k T$$

$$dN = \frac{p dV}{k T} \quad dV = S dz$$

$$\ln \frac{p}{p(0)} = \frac{-m_0 g z}{k T}$$



$$p(z) = p(0) e^{-\frac{m_0 g z}{k T}}$$