$$\mathcal{Z}_1 = 1 + z \cdot Z_1(T,V)$$

↓ particio-funkcija kanonskog 1 patikule sustava

$$Z_1(T,V) \equiv \sum_{\epsilon} g(\epsilon)\, e^{-\epsilon/k_B T}$$

1 patikula sustava $\epsilon = -I$

$g(\epsilon) = 2$

$$Z_1(T,V) = 2e^{I/k_B T}$$

$$\mathcal{Z}_1 = 1 + z \cdot 2 \cdot e^{I/k_B T}$$

$\| \; \cdot e^{\frac{\mu}{k_B T}}$

$$\hat{\mathcal{Z}}_1 = 1 + 2\, e^{\left(\frac{\mu + I}{k_B T}\right)}$$

edozein patikula kopuruko sistemaren probabilitatea da (beti) particio-funtzio granekanonikoko patikula kopuruaren atalaren $\mathcal{Z}$

- ionizatuta egoteko probabilitatea (e^- ik gabe) $N=0$ $\Rightarrow$ $\left[\frac{1}{1 + 2e^{\frac{\mu+I}{k_B T}}}\right]$

- ionizatuta egoteko probabilitatea (e^- en barruan) $N=1$ $\Rightarrow$ $\frac{2e^{\frac{\mu+I}{k_B T}}}{1 + 2e^{\left(\frac{\mu+I}{k_B T}\right)}}$ edo $1 - P(N=)$