Adibideak

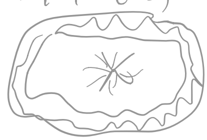
* GAS IDEALA ; monoatomikoa
  partikula puntualak

MULTZO ESTATISTIKO MIKROKANONIKOA

FASE ESPAZIOA

Makro $N, V, E\ (\approx E)$

Mikro

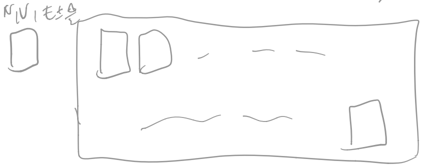


$\vec{q}^{\,N} \in V$

$E \in [E-\frac{1}{2}\Delta, E+\frac{1}{2}\Delta]$

$$w = \int \cdots \int d^{3N}q \, d^{3N}p$$

$N, V, E \pm \frac{\Delta}{2}$



q, p ; 3D

$$E = \sum_{i=1}^{N} \frac{1}{2m}\left(p_x^2 + p_y^2 + p_z^2\right)$$

$$\underbrace{\int \cdots \int d^3q}_{V^N} \qquad \underbrace{\int \cdots \int_{E-\frac{1}{2}\Delta \le \sum_{i=1}^{3N} \frac{p_i^2}{2m} \le E+\frac{1}{2}\Delta}}$$

interpretazioa
kalkulua

kalkuluaren emaitza

$$w \approx \frac{\Delta}{E} V^N \frac{(2\pi m E)^{\frac{3N}{2}}}{\left[\left(\frac{3N}{2}-1\right)!\right]}$$

fase-espazioko bolumena
mikroegoeren kopuruarekiko proportzioa

→ alderatu
aurreko parikoa
emaitzarekin
Mikroegoera kopurua

$$\Gamma = \frac{\omega}{\omega_0}$$

$\omega_0 = h^{\text{askatasun-graduen kopurua} \equiv N}$