

# Define Boltzmann's entropy definition formula extended to Kamu Universe and "Minus Entropy"

$$\text{entropy}_{D_0} \rightarrow \text{entropy}_{D\sqrt{-1}} \rightarrow \text{entropy}_{D\sqrt{-1}} \rightarrow \text{entropy}_{D_1} \rightarrow \text{entropy}_{D_2}$$

$$S_{D_0} \quad S_{D\sqrt{-1}} \quad \text{kamuutsushi } S_{D\sqrt{-1}} \quad S_{D_1} \quad S_{D_2}$$

$S \equiv \text{entropy}$   
(macroscopic states)

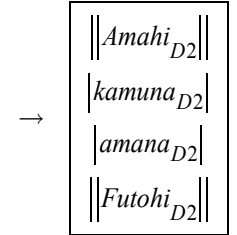
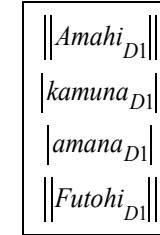
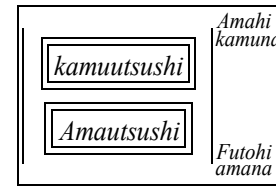
$S = k \log \Omega$   
(Boltzmann's Equation)

$$S = k \log \Omega_{D_0} \rightarrow S = k \log \Omega_{D\sqrt{-1}} \quad \text{kamuutsushi } S = k \log \Omega_{D\sqrt{-1}} \quad S = k \log \Omega_{D_1} \rightarrow S = k \log \Omega_{D_2}$$

$\Omega = \text{system quantity}$   
(macroscopic states)

$$\equiv \left| \begin{array}{c} E(\text{Energy}) \\ V(\text{Volume}) \\ N(\text{Number}) \end{array} \right| \equiv$$

$$\equiv \frac{\oint \left| \left| \text{kura}_{\partial} \text{Ka}_{D_0}^{\pm} \right| \right|}{\int \left| \text{kura}_{\partial} \text{Ma}_{D_0}^{\pm} \right|} \rightarrow \left| \left| \text{Amahi}_{D\sqrt{-1}} \right| \right|$$

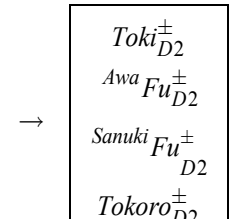
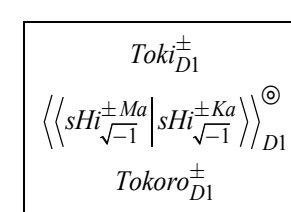
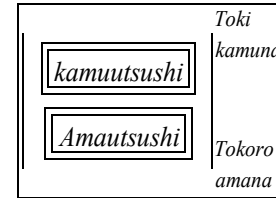


\*N (Number of Elementary Quantum)

$\Omega = \text{system quantity}$   
(microscopic states)

$$\equiv \left| \begin{array}{c} E(\text{Energy}) \\ V(\text{Volume}) \\ N(\text{Number}) \end{array} \right| \equiv$$

$$\equiv \frac{\tau_{D_0}^{\pm \text{Ka}}}{\tau_{D_0}^{\pm \text{Ma}}} \rightarrow \frac{\oint \tau_{D_0}^{+ \text{Ka}}}{\int \tau_{D_0}^{+ \text{Ma}}}$$



## Ω & Relativity-Capacitive-Amount

$\Omega$	= Information Volume	: Information Thermodynamics
$E$	= $mc^2$	: Relativity Theory
$E$	= Hamiltonian & Lagrangian	: Analytical Mechanics
$E$	= $H\nu$	: Quantum Mechanics
$E + V$	= Information	: Information Thermodynamics
$E + V + N$	= Relativity-Capacitive-Amount	: Kamu Number Theory

Define "Boltzmann's entropy definition formula" extended to Kamu Universe. As a result, we can analyze the state called "minus entropy". I may name "minus entropy" as "Kamu entropy", but also use "minus entropy" which is generally spread.

copyright © 2018.5.28 masaki Yoshino  
<https://kamu-number.com/>

## ( 4-4) Dimension 2 : Reforming Boltzmann's entropy definition formula and Information Thermodynamics