Bureau
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Mesures

The International System of Units

9th edition 2019

The International System of Units (SI)

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des poids et mesures

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The International System of Units

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1.1. The SI and the defining constants

The Boltzmann constant k is a proportionality constant between the quantities temperature (with unit kelvin) and energy (with unit joule), whereby the numerical value is obtained from historical specifications of the temperature scale. The temperature of a system scales with the thermal energy, but not necessarily with the internal energy of a system. In statistical physics the Boltzmann constant connects the entropy S with the number Ω of quantum-mechanically accessible states,

$S = k \ln \Omega$ - jEuclid SVG curves (selecting text **not** working), font STIX2Math

$S = k \ln \Omega$ - text (selecting text working), font STIX2Math

$S = k \ln \Omega$ - text (selecting text working), font Times New Roman

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