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Short Article

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Equivalence of Information and Squered Energy

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Abstract

The equivalence of Information and squered Energy is presented and a corresponding physical-mathematical formula is developed.

Keywords: Information, Squered Energy

Definition of Symbols Used in the Formulas

H = Shannons information entropy
E = Energy
t_p = PLANCK time
t = time
h = PLANCK quantum of action

Derivation of the Formula

The article "Equivalence of Information and Squered Time" is published in Applied Sciences Research Periodicals (ASRP), December 2024, Vol. 2, No. 10, pp. 16-17. There is the formula

$$H = (1/\ln 2 \cdot t_p^2) \cdot t^2 \quad (1)$$

with the formula

$$E = (h/t_p^2) \cdot t \quad [1] \quad (2)$$

you get to the formula

$$H = (t_p^2/\ln 2 \cdot h^2) \cdot E^2 \quad (3)$$

This is the Equivalence of Information and Squered Energy.

Application of the Formula (2)

Applications of formula (2) for experimental research or practical applications have not yet been carried out. However, applications to answer open questions in Theoretical Physics can be made indirectly. In addition to the two applications previously described in the article "Time is quantized" [2] the equivalence of information and squered energy contains also an application of formula (2). The application regarding to the present article "Equivalence of Information and Squered Energy" should be mentioned. The application in this case consists in checking the linear function of dark enegy depending on the age of the universe and the exact calculation of the numerical value of dark energy is still corrected or must be reconsidered.

Also the article "Energy is Relative" involves an application of formula (2).

Discussion

The concept of information has formd its way into physics at various points. So, it is not surprising that the concept of information is also important for the concept of time and energy. It is not surprising that the concept of information is also important for the concept of information and squered energy. It is amazing that the equivalence of information and squered energy could be found in this way. Information is increased energy [3,4].

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