

The Final Theory Formula

Many physical phenomena can be explained with the fundamental natural constants of speed of light and the reduced Planck's quantum of action. In the new world model the following context constitutes the base of each physical event in the universe, and it can therefore be defined as a "final theory formula".

The global formula:

$$\boxed{\hbar \cdot c = \sqrt{10} \cdot 10^{-26}}$$

Speed of light with $c=299.792.458$ m/s

Reduced Planck constant with $\hbar = \frac{h}{2\pi}$.

The reduced Planck quantum of action has been modified by transforming the global formula with:

$$\hbar = \frac{\sqrt{10}}{c} \cdot 10^{-26} = 1,05482228647939 \cdot 10^{-34}$$

Planck's quantum of action is determined experimentally, and physical measurements are always associated with measurement errors. Even the most accurate measurement can not provide a precise value. The determination of Planck's quantum of action depends on many factors, so with the above reduced formula of the Planck constant was modified. The absolute deviation from the CODATA value is minimal and amounts: $0,00025056114310492 \cdot 10^{-34}$.

The global formula has the dimension of energy times length and thereby constitutes a universal relationship between energy content and length scale. It describes the amount of energy contained in the space balls and here, the quantized length amounts as modified Planck length $l_p = 10^{-26} m$. The dimension of the global formula with the general units eV in nuclear physics is:

$$\frac{\hbar \cdot c}{e} = \frac{\sqrt{10}}{e} \cdot l_p \Rightarrow 197,39208802178700 \text{ MeVfm}$$

Despite to the above modified \hbar , the modified value from the next Chapter was used for the elementary charge e.

The global formula $\hbar \cdot c = \sqrt{10} \cdot 10^{-26}$ means that the space balls with the diameter of l_p contain a certain amount of energy $\sqrt{10}$. The interaction between the space balls is done with the time factor contained in the speed of light and the smallest action \hbar .

The constant speed of light is used as the time factor in the pulse transmission and therefore, also the quantized action \hbar is constant. When asked which of the two existed at first (Hen-egg problem), we can say with certainty that the time factor which is measured from the speed of

light is given, and that h is directly dependent. In the Chapter "derivation of the speed of light," we will continue to discuss the phenomenon of the time factor.

The attraction in the space balls in the form of energy with $\sqrt{10}$ and the universal time factor with the speed of light, are the only basic elements with which the universe is built. The modified Planck quantum of action as the smallest effect also plays a big role, but this quantity directly depends on the speed of light and therefore can be derived from it.

With the "global formula" it is possible to make a clear and unambiguous description of the phenomena observed in nature. The simple formula also allows predictions about new phenomena.

The global formula is harmless and any concerns that zealous scientists could use it to play "God" with it and turn the world upside down, are unfounded. The left side of the formula contains natural constants that have long been known for a long time and are used daily in nuclear physics. My discovery relates to the right side of the formula, and it explains to what the fundamental constants of nature, the speed of light and the Planck constant can be attributed to.

According to the new world model, space and time is quantized in the universe. In addition to the elementary magnitudes such as the Planck mass, the Planck charge etc., also some fundamental constants of nature, and even the speed of light can be derived with the global formula. We also will gain new insights on the nature of time and the three-dimensionality of space.