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New principle of strong interaction of elementary particles and his justification**Valentyn Nastasenko***Kherson State Maritime Academy, Ukraine*

Strong interactions is used to explain the processes of uniting elementary particles and the formation of atomic nuclei, for which the action of electromagnetic fields, as well as the forces of electrical, magnetic and gravitational interaction, turned insufficient. This is explained by the fact that electrostatic repulsive force of protons according to Coulomb's law is 36 orders of magnitude higher than the force of gravitational attraction according to Newton's law, what prevents them from approaching. Therefore, a theory of interaction in the nuclei of atoms of protons and neutrons, creating a nucleon, by the exchange pi-mesons has been proposed. However, the research of the Author has shown that in framework relationship between the fundamental physical constants $hGv^2/c^5 = 1$, where c is the speed of light in vacuum, h is Planck's constant, G is the gravitational constant, v is the frequency of wave oscillations of the gravitational (unified) field of the Universe, for frequencies of wave oscillations of protons, this equality can be ensured with an adequate change in the gravitational constant. On this basis, new values of the gravitational constant for the proton and the resulting gravitational and electrostatic forces were calculated. For these forces, energy was defined as the ability of a force to do work on the length of the radius of these particles. These energies absolutely exactly coincide with the energy mass of the electron, proton and neutron, which are found experimentally.

Conclusions: New principles of substantiation of the strong interaction of elementary particles are found.

Biography

Kherson State Maritime Academy Ukraine, faculties of Electrical engineering and electronics, the department of transport technologies and mechanical engineering. Dr. of technical sciences, Professor. A sphere of scientific interests includes quantum physics, the theory of gravitation, fundamentals of the material world and the birth of the Universe, the author of more than 70 scientific works in these spheres. <https://orcid.org/0000-0002-0330-1138>